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Prolec's range of genuine OEM approved circuit protection and power distribution products have been designed and tested to meet the demands of today and requirements of tomorrow. Whether that be on the highway, off road, in the field, on the battlefield, underground or on the water, Prolec has a suitable product solution for your application.

We are proud to represent some of the world's leading circuit protection and power distribution manufacturers whose products meet global industry standards and are manufactured in quality accredited facilities from materials are sourced from ethical suppliers whom have corporate governance, environmental and social policies. Prolec continues to invest in our people and inventory to ensure we offer the very best products and customer service.



#### **AUTHORISED AGENT FOR LEADING BRANDS**



Prolec proudly represents the worlds leading international brands of genuine, quality power distribution products used by major manufacturers around the world. These brands design, test and manufacture products unders strict quality guideline which are then approved to recognised international standards. The majority of products are manufactured using environmentally compliant materials which meet RoHS and Reach standards. Manufacturers data sheets are also available upon request.































# **MEMBER ORGANIZATIONS**



Prolec is a proud supporter and member of the following industry organisations which are the voice for automotive industry which includes component design, parts manufacturers, wholesalers, distributors, independent service and repair workshops and retailers.















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NTRODUCTION

#### **FUSES. FUSE KITS & FUSE PULLERS**

Cartridge Fuses, Multi-meter Fuses, Blade Fuses, Mini Type Devices, Fusible Links, Midi, Mega, ANL Fuses, Battery Fuses, Multi-Pole Fuses, Power Fuses, Electric Vehicle Fuses, EVSE Fuses, Fuse Kits, Fuse Caddy's, Fuse Pullers & Fuse Testers.

FUSES & FUSE KITS

#### **CIRCUIT BREAKERS & ACCESSORIES**

Bladed Breakers, Short Stop Breakers, Push Button Panel Mount Breakers, Rocker Switch Breakers, Battery Disconnect Switch Circuit Breakers, Mid Range, Hi-Amp Breakers & Marine Rated Circuit Breakers.

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PCB Mount Clips, PCB Mount Blocks, Panel Mount Holders, Inline Holders. Add-a-Circuit's, Fuse Taps, Ground Tap, Fuse Blocks, Fuse Panels, Fuse Blocks, Sealed Fuse Blocks, EV & EVSE Modular Fuse Blocks,

# **POWER DISTRIBUTION UNITS. BLOCKS & STUDS**

Battery Fuse Bars, Battery Fuse Blocks, Fused Distribution Blocks, Fused Distribution Units, Fuse & Relay Sealed PDM's, Fuse & Relay Kits, Fuse & Relay Modules, Terminal & Junction Blocks, Feeder Studs & Busbars. l 05

POWER DISTRIBUTION

# **RELAYS, SWITCHES, PANELS & TOOLS**

280 Relays, 280 Flasher Relays, ISO Relays, Weatherproof Relays, Fused Relays, High Power Relays, Relay Connectors, Rocker Switches, Switch Breaker Panels, Battery Disconnect Switches, Master Switches & Tools 163

RELAYS & SWITCHES

# TECHNICAL INFORMATION

Fuse & Circuit Breaker Information, Wire Gauge Selection, Ingress Protection Ratings, Imperial vs. Metric Bolt Sizes, Ignition Protection, Packaging Options, Part Number Index, Symbols & Markings, Battery Information.

#### **COMMUNITY SPONSORSHIP - MONASH MOTORSPORT**









Combustion

**Driverless** 

**Electric** 

#### THE COMPETITION

Formula SAE is the world's largest student engineering design competition. Students from Universities all around the world design, manufacture, test and compete with formula style racecars.

#### **COMPETITION STRUCTURE**

Formula Student is divided into distinct classes; Combustion, Driverless and Electric. At competitions each car competes separately and is judged in two types of events, Dynamic and Static.

Static events allow the team to demonstrate their knowledge behind the development of the cars and test industry skills such as entrepreneurialism, financial acumen and the holistic engineering design process behind the cars.

Dynamic events are the culmination of the design process, testing the performance of the cars in a variety of scenarios. These events require more than just the quickest car; they are a test of reliability, efficiency and driver skill.

#### **MONASH MOTORSPORT**

Last year, the team from Monash Motorsport (MMS) entered 2 cars in the competition; a petrol car and electric car. This year, the team entered 3 cars; a petrol car and two electric cars, one of which is autonomous. For the latest news from Monash Motorsport, visit their Facebook page: www.facebook.com/monashmotorsport

#### Formula SAE-A Team 2019 MMS Results:

1st Place - Electric Vehicle

1st Place - Internal Combustion Vehicle

#### Formula Student Sydney 2020 MMS Results:

Ist Place - Combined Overall Result 2nd Place - Skidpad Combustion

1st Place - Endurance Combustion 3rd Place - Technical Presentation

1st Place - Autocross Combustion





# Fuses, Fuse Kits & Fuse Pullers

# The original and still the best.



#### **FUSE SELECTION GUIDE**



Fuse Type	Characteristic	Amperage Range	I.R. @ Voltage	Ignition Protected	Ingress Rating	Page
SFE	Fast & Slow	50mA to 30A	TBA, 32VDC	-	-	10
AGC	Fast	IA to 35A	TBA, 32VDC	-	-	10
IAG & 7AG	Fast	500mA to 30A	TBA, 32VDC	-	-	10
3AG,3AB	Fast & Slow	200mA to 35A	Varies	-	-	- 11
AGU / 5AG	Fast	10A to 60A	TBA, 32VDC	-	-	12
GBC	Fast	5A to 25A	TBA, 32VDC	_	-	12
Multimeter Fuses	Fast	630mA to 20A	Varies	_	-	12
Micro2 - 32V	Fast	3A to 30A	I kA at 32VDC	_	_	13
Micro3 - 32V	Fast	3A to I5A	IkA at 32VDC	_	_	13
Low Pro. Minifuse	Fast	2A to 30A	IkA at 58VDC	_	_	14
Minifuse - 32V	Fast	2A to 30A	IkA at 32VDC	_	_	15
Minifuse - 58V	Fast	3A to 30A	IkA at 58VDC	-	-	16
Minifuse - 125V	Fast	3A to 15A	IkA at 125VDC			^
Autofuse - 32V	Fast	IA to 40A	IkA at 32VDC	_	_	17
Autofuse - 58V	Fast	0.5A to 40A	IkA at 58VDC	Ign.Pro*	_	^
Autofuse - 80V	Fast	IA to 40A	IkA at 80VDC	Ign.Pro*	-	16
Maxifuse - 32V	Slow	20A to 100A	IkA at 32VDC	Igii.F10	-	18
Maxifuse - 58V	Slow	20A to 100A	IkA at 58VDC	-	-	19
				-	-	^
Maxifuse - 80V	Slow	20A to 100A	I kA at 80VDC	-	-	19
MaxiCompact 32V	Slow	25A to 60A	IkA at 32VDC		-	^
M8 Compact - 32V	Slow	30A to 80A	IkA at 32VDC	-	-	
MCase - 32V	Slow	15A to 40A	I kA at 32VDC	-	-	20
Mcase + Slot - 32V	Slow	15A to 60A	I kA at 32VDC	-	-	20
Low P. JCase - 58V	Slow	20A to 60A	I kA at 58VDC	-	-	20
Jcase - 32V	Slow	20A to 80A	I kA at 32VDC	-	-	21
Fusible Links - 32V	Slow	20A to 140A	I kA at 32VDC	-	-	21-22
Midifuse - 32V	Slow	20A to 200A	I kA at 32VDC	-	-	24
Midifuse - 58V	Slow	20A to 200A	I kA at 58VDC	-	-	24
Strip Fuse Lug	Fast	30A to 150A	TBA at 36VDC	-	-	23
Strip Fuse Ring	Fast	30A to 175A	TBA at 32VDC	-	-	23
Megafuse - 32V	Slow	40A to 500A	2kA at 32VDC	-	-	25
Megafuse - 70V	Slow	40A to 500A	2.5kA at 70VDC	-	-	25
Powerval - 32V	Slow	150A to 180A	2kA at 32VDC	-	-	26
MRBF - 58V	Slow	30A to 300A	2kA at 58VDC	Ign.Pro	IP66	28
Zcase - 32V	Slow	40A to 600A	2kA at 32VDC	-	-	29
Multi-Pole Fuse	Slow	30A to 60A	IkA at 32VDC-58VDC	-	-	23
Battery Term Fuse	Slow	60A to 200A	I kA at 32VDC	-	-	30
FBT ´	Fast	30A to 800A	2.5kA at 48VDC-80VDC	-	-	26
ANL	Fast	35A to 750A	6kA - 2.7kA at 32VDC	Ign.Pro*	-	27
ANN	Very Fast	10A to 800A	2.7kA at 80VDC	-	-	27
JJN Class T	Very Fast	70A to 1200A	20kA at 160VDC	-	-	31
AE2	Very Fast	10A to 50A	20kA at 500VDC	-	-	31
AE5	Very Fast	50A to 700A	30kA at 500VDC	_	_	32
AE3	Very Fast	5A to 50A	20kA at 850VDC	-	_	33
AE7	Very Fast	60A to 600A	20kA at 800VDC	-	-	33
AE6 & AEX	Very Fast	5A to 600A	20-50kA at 1000VDC	_	-	34
FWH	Very Fast	35A to 800A	50kA at 500VDC	-		^
FWP	Very Fast	35A to 800A	50kA at 700VDC	-		^
FWI	Very Fast	35A to 800A	50kA at 800VDC	_	_	^
ATX		100A to 600A		-	-	^
EFZ	Very Fast		50kA at 1000VDC	-	-	^
EFZ	Very Fast	100A to 300A	30kA at 1500VDC	-	-	

Symbol References: \* Contact sales for verification. ^ Contact sales for product information.

#### ABYC Definition of Ignition Protection (Ign.Pro) E11.4.15.

The design and construction of a device such that under design operating conditions:

(a) It will not ignite a flammable hydrocarbon mixture surrounding the device when an ignition source causes an internal explosion, or (b) It is incapable of releasing sufficient electrical or thermal energy to ignite a hydrocarbon mixture, or (c) The source of ignition is hermetically sealed.

What does this mean? Ignition Protected devices are designed to prevent the release of electrical or thermal energy (ie. sparks or heat) which could start a fire when operating in environments containing a mixture of air with gasoline, propane or CNG vapour. So when replacing or installing electrical equipment in these environments, make sure the product is specifically designated "Ignition Protected". As you can see in the above table, there are very few fuses that will meet this requirement, however we have a large range of circuit breakers that are Ignition Protected.



#### **FUSE SELECTION CHART**

With an ever growing product range sometimes it can be hard to describe which fuse you need. So the following visual identification chart can help you identify some of the more common styles available. For a more comprehensive range please refer to the website www.prolecproducts.com which showcases over 300 different product images.

Ferrule Cartridge Glass & Ceramic Case (Pages 10-12)



2 6AC Cartridge Torpedo Type (Page 12)



Micro2 & Micro3 Fuses (Page 13)



4 Low Profile Mini & Minifuse (Pages 14-16)



Autofuse & Maxifuse (Pages 16-19)



Fusible Links
Female Terminal
(Pages 20-21)



7 Fusible Links Male Terminal (Page 22)



8 Multi-Pole Fusible Link (Page 23)



Fuse Strip Element Only (Page 23)



Midi Fuses Bolted Tag (Page 24)



Megafuses Bolted Tag (Pages 25)



Powerval Calibre
Bolted Tag
(Pages 26)



Battery Fuse Strip Slotted Tag M10 (Page 26)



Lift Truck Fuse Slotted Tag M8 (Page 27)



Battery Fuses
Bar Mount
(Pages 28-29)



Battery
Terminal Fuse
(Page 30)



High Power Fuse
Centre Bolted
(Page 31)



Threaded (Contact Sales)



EV Fuses
Cartridge
(Page 32-34)



20 EV Fuses Offset Bolted (Page 32-34)



EV Fuses Centre Bolted (Page 32-34)



Fuse Packs &
Assortment Kits
(Page 35-43)





#### **SFE GLASS CARTRIDGE FUSES 32V**



SFE fast acting automotive glass cartridge fuses are similar to the "AG" style fuses in that they have the same diameter however the length varies according to ampere rating to ensure accurate fuse replacement.

Part	Ampere	Imperial	Metric
Number	Rating	Length x Width	Length x Width
SFE004	4A	5/8" x 1/4"	15.90 x 6.35mm
SFE006	6A	3/4" x 1/4"	19.05 x 6.35mm
SFE07.5	7.5A	7/8" x 1/4"	22.24 x 6.35mm
SFE009	9A	7/8" x 1/4"	22.24 x 6.35mm
SFE014	I4A	I-I/I6" x I/4"	26.99 x 6.35mm
SFE020	20A	I-I/4" x I/4"	31.75 x 6.35mm
SFE030	30A	I-7/I6" x I/4"	36.51 x 6.35mm
SFE000AP	Assortme	nt Pack 10pcs	NEW
	4A, 6A, 7.	5A, 9A, 2x 14A, 2x	20A, 2x 30A





Voltage: 32VAC/32VDC (Factory certified)

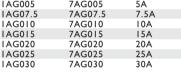
Pack Size: 5, 10, 100, 500, 1000

Assortment Pack

IAG / AGA

#### 1AG (AGA) / 7AG (AGW) GLASS FUSES 32V

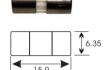
<u>Part Number</u>	<u>Part Number</u>	Ampere Rating
IAG.500	7AG.500	500mA
IAG00I	7AG001	IA
IAG002	7AG002	2A
IAG02.5	7AG02.5	2.5A
IAG003	7AG003	3A
IAG005	7AG005	5A
IAG07.5	7AG07.5	7.5A



Voltage: 32VAC / 32VDC (Factory certified)

Characteristic: Fast Acting Pack Size: 5, 10, 100

# **Littelfuse**





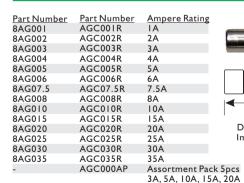


7AG / AGW

Dimensions in MM Imperial (7/8" x 1/4")

**Littelfuse** 

# 8AG (AGX) / 3AG (AGC) GLASS FUSES 32V



3AG / AGC 8AG / AGX 6.35 25.4 31.8 Dimensions in MM Dimensions in MM

Imperial (I" x I/4")

Imperial (I-I/4" x I/4")

Voltage: 32VAC / 32VDC (Factory certified)

Characteristic: Fast Acting Pack Size: 5, 10, 50, 100

Notes: Complete range of 3AG fuses see page 11. Approvals: 🕦 🌘 🕦 (E RoHS (Optional)

**RELATED PRODUCTS:** 

Assortment Pack



**Fuse Assortment** Fuse **Puller Trade Kits** (see p.44) (see p.38)



Fuse **Holders** (see p.69 - 71)



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# **3AG GLASS / 3AB CERAMIC CARTRIDGE FUSES**







Dimensions in MM (I-I/4" x I/4")



#### **3AG LBC FUSE GLASS BODY**

Fast Acting (F)	Slow Acting (T)	Ampere
Part Number	Part Number	Rating
3AGFB.200	3AGDA.200	200mA
3AGFB.250	3AGDA.250	250mA
3AGFB.300	3AGDA.300	300mA
3AGFB.375	3AGDA.375	375mA
3AGFB.500	3AGDA.500	500mA
3AGFB.600	3AGDA.600	600mA
3AGFB.750	3AGDA.750	750mA
3AGFB001	3AGDA001	IA
3AGFB01.5	3AGDA01.5	1.5A
3AGFB002	3AGDA002	2A
3AGFB02.5	3AGDA02.5	2.5A
3AGFB003	3AGDA003	3A
3AGFB004	3AGDA004	4A
3AGFB005	3AGDA005	5A
3AGFB006	3AGDA006	6A
	3AGDA6.25	6.25A
3AGFB007	3AGDA007	7A
3AGFB008	3AGDA008	8A
3AGFB010	3AGDA010	I0A
3AGFB012	3AGDA012	I2A
3AGFB015	3AGDA015	I5A
3AGFB020	3AGDA020	20A
3AGFB025	3AGDA025	25A
3AGFB030	3AGDA030	30A
_		35A

Glass Body Voltage Ratings

(Fast): 250VAC (200mA to 10A)

32VAC (12A to 35A) (Slow): 250VAC (200mA to 8A) 32VAC (9A to 30A)

I.R.: Contact sales for further information. Pack Size (bag): 5, 10, 100, 1000

Holders: Clips, Panel Mount, Inline & Blocks Notes: More ratings available, please contact sales.

\*Approvals may vary on the above.

\*Approvals Available: 💫 🐧 🧯 🤃 RoHS

#### **3AB HRC FUSE CERAMIC BODY**

Fast Acting (F)	Slow Acting (T)	Ampere
Part Number	Part Number	Rating
_	3ABDA.200	200mA
3AB.250	3ABDA.250	250mA
_	3ABDA.300	300mA
3AB.375	3ABDA.375	375mA
3AB.500	3ABDA.500	500mA
	3ABDA.600	600mA
3AB.750	3ABDA.750	750mA
3AB001	3ABDA001	IA
_	3ABDA01.5	1.5A
3AB002	3ABDA002	2A
_	3ABDA02.5	2.5A
3AB003	3ABDA003	3A
3AB004	3ABDA004	4A
3AB005	3ABDA005	5A
3AB006	3ABDA006	6A
	3ABDA6.25	6.25A
3AB007	3ABDA007	7A
3AB008	3ABDA008	8A
3AB010	3ABDA010	I0A
3AB012	3ABDA012	I2A
3AB015	3ABDA015	I5A
3AB020	3ABDA020	20A
3AB025	3ABDA025	25A
3AB030	3ABDA030	30A
	_	35A

Ceramic Body Voltage Ratings (Fast): 250VAC (250mA to 30A)

(Slow): 250VAC (200mA to 30A)

I.R.: Contact sales for further information. Pack Size (bag): 5, 10, 100, 1000

Holders: Clips, Panel Mount, Inline & Blocks Notes: More ratings available, please contact sales.

\*Approvals may vary on the above.

\*Approvals Available: 🕦 🏽 🤇 🤃 RoHS

#### **RELATED PRODUCTS:**



Cartridge Fuse Pullers (see p.44)



Panel Mount Fuse Holders (see p.69)



Inline Fuse Holders (see p.69 - 71)



Fused Terminal Blocks (see p. 149)



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# **5AG (AGU) GLASS CARTRIDGE FUSES 32V**



<b>Nickel Plated</b>	<b>Gold Plated</b>	Ampere
Part Number	Part Number	Rating
AGU010	-	IOA
AGU015	AGU015GP	I5A
AGU020	-	20A
AGU025	-	25A
AGU030	AGU030GP	30A
AGU035	AGU035GP	35A
AGU040	-	40A
AGU050	AGU050GP	50A
AGU060	_	60A



Nickel Plated



**Gold Plated** 



Dimensions in MM  $(1-1/2" \times 13/32")$ 

#### Voltage: 32VAC / 32VDC Pack Size: 5, 10, 25, 50, 100

Features: Glass case allows for visual element inspection. Holders: Clips, Panel Mount, Blocks, Inline & Fuse Carriers.

Notes: Widely used to protect automotive and marine audio systems.

#### **MULTIMETER CARTRIDGE FUSES**



Engineered and tested to provide the best protection and high breaking capacity in DMI (Digital Multimeter and Instrument) applications.

	Ampere	Voltage	Voltage	"A"
Part Number	Rating	AC	DC	(mm)
DMM.440	440mA	1000V	1000V	34.9
APE2150600	I5A	600V	600V	38. I
APE2200600	20A	600V	600V	38.1
MMF.500	500MA	1000V	1000V	38. I
MMF001	IA	1000V	1000V	38.1
MMF002	2A	1000V	1000V	38. I
MMF004	4A	1000V	1000V	38.1
MMF006	6A	1000V	1000V	38. I
MMF008	8A	1000V	1000V	38.1
MMF010	I0A	1000V	1000V	38. I
MMF011	HA	1000V	1000V	38.1
MMF012	I2A	1000V	1000V	38. I
MMF015	I5A	1000V	1000V	38.1

**DMM.440** 



10.3

Characteristic: Fast acting Pack Size (box): 1, 10, 100

# **GAC (GBC) EUROPEAN TORPEDO FUSE 32V**

Part Number	<b>Ampere Rating</b>	Body Co	lour	
GBC005	5A	Yellow		
GBC008	8A	White		
GBC016	16A	Red		
GBC025	25A	Blue		
GBC000AP	Assortment Pack 5pcs			
	5A 2 × 8A 16A 3	5Δ		



**Assortment Pack** 

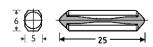
5A, 2 x 8A, 16A, 25A Voltage: 32VAC / 32VDC Characteristic: Fast Acting

Body: Thermoplastic, colour coded. Pack Size: 5, 10, 100

Holders: Inline fuse holders, contact sales.

Approvals: DIN 72581 Notes: Continental torpedo shaped fuse that was used in many older European cars.





Dimensions in MM



#### **MICRO2 FUSE SINGLE ELEMENT 32V**

# **Littelfuse**

#### Features:

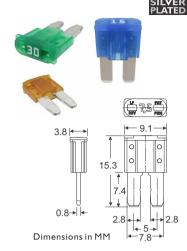
- Improved opening characteristics.
- Reduced footprint.

Part Number	Ampere Ratings	Body Colou	r
MICR2003	3A	Violet	NEW
MICR2005	5A	Tan	
MICR207.5	7.5A	Brown	PROLED
MICR2010	I0A	Red	MCROFEST ASSOCIABLE
MICR2015	I5A	Blue	Company Street
MICR2020	20A	Yellow	
MICR2025	25A	Natural	
MICR2030	30A	Green	
MICR2000AP	Assortment Pack	7pcs 🔒	Assortment Pack
	5A. 7.5A. 10A. 15A	. 20A. 25A. 30A	_

**Voltage:** 32VDC **I.R.:** 1000A at 32VDC

Characteristic: Fast Acting Terminals: Zinc alloy, silver plated. Pack Size: 5, 10, 100, 500

Approvals: SAE 2741 and ISO 8820-4. RoHS



#### **RELATED PRODUCTS:**















(see p.44)

Assortment Pack 35 (see p.36)

Assortment Kit (see p.37)

(see p.72)

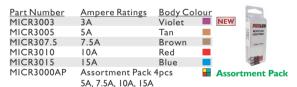
(see p.83)

(see p.86)

l ittelfuse

# **MICRO3 FUSE DUAL ELEMENT 32V**

The Micro3 fuse has 3 terminals and 2 fuse elements with a common center terminal. Its sub-miniature design meets the need for more circuits to be protected while utilizing less space and its ability to cope with high temperatures in adverse environments.



725-

Voltage: 32VDC I.R.: 1000A at 32VDC Characteristic: Fast Acting Terminals: Zinc alloy, silver plated. Pack Size: 5, 10, 100, 500

Approvals: RoHS

#### **RELATED PRODUCTS:**



Fuse Puller (see p.44)

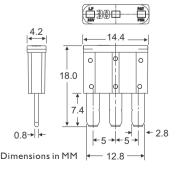


Assortment Kit (see p.37)



Add-a-circuit (see p.83)







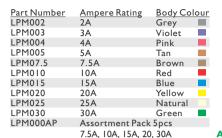
Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **LOW PROFILE MINI FUSE 58V**



The low profile Mini fuse features a lower overall height thereby reducing space requirements whilst still retaining similar performance characteristics to the standard Mini fuse.











3.81 → | ← 0.80 Dimensions in MM



Voltage: 58VDC I.R.: 1000A at 58VDC

Characteristic: Fast Acting Pack Size: 5, 10, 100, 1000

Terminals: Zinc alloy, silver plated.

Holders: PCB Clips and bases please contact sales.

Approvals: SAE ROHS

**RELATED** PRODUCTS:



**Fuse Holder** 





(see p.44)

(see p.72)

(see p.38)

Add-a-circuit (see p.83)

**MINI TYPE DEVICES** 

Diode / Resistor Shunt / Transorb



Bussmann

Diode, Resistor, Shunt and Transorb electrical protection devices easily install in common Mini fuse holders. Provide voltage and current limiting functionality to vehicle circuitry.

mber	Description	Profile	Brand	
)	Shunt - 20A Maximum continuous load rating.	Standard	Littelfuse	NEW
I3P	Diode - IA. Reverse current protector. Keyed. (400V PIV).	Standard	Littelfuse	
•	Diode - 6A. Reverse current protector. Keyed.	Tall	Bussmann	
V	Diode - 6A. Reverse current protector. Keyed + Wing.	Tall	Bussmann	
8	Resistor - 5W. Resistance: $68\Omega$ . Voltage drop device.	Tall	Bussmann	
.5	Transorb - Clamp Rating: 27VDC. Power Rating: I 500W.	Tall	Bussmann	
	Voltage spike protector.			
֡	13P V 8	Shunt - 20A Maximum continuous load rating.  Diode - IA. Reverse current protector. Keyed. (400V PIV).  Diode - 6A. Reverse current protector. Keyed.  Diode - 6A. Reverse current protector. Keyed + Wing.  Resistor - 5W. Resistance: 680. Voltage drop device.  Transorb - Clamp Rating: 27VDC. Power Rating: 1500W.	Shunt - 20A Maximum continuous load rating.  Standard Diode - IA. Reverse current protector. Keyed. (400V PIV). Diode - 6A. Reverse current protector. Keyed.  Diode - 6A. Reverse current protector. Keyed.  Tall Resistor - 5W. Resistance: 68Q. Voltage drop device. Tall Transorb - Clamp Rating: 27VDC. Power Rating: 1500W.  Tall	Shunt - 20A Maximum continuous load rating.  Standard Littelfuse Diode - IA. Reverse current protector. Keyed. (400V PIV). Diode - 6A. Reverse current protector. Keyed.  Diode - 6A. Reverse current protector. Keyed.  Diode - 6A. Reverse current protector. Keyed + Wing. Resistor - 5W. Resistance: 680. Voltage drop device. Tall Bussmann Transorb - Clamp Rating: 27VDC. Power Rating: 1500W. Tall Bussmann

Voltage: I2VDC or 24VDC

Materials: (02400113P) Thermoplastic housing, black.

(229xx series)Thermoplastic housing, grey with metal cover. Termination Type: 2.8mm blades. Compatible with ISO 280 blocks.

Diode Key Feature: Standard key denotes installation direction. Wing key available for error proof installation in Bussmann VEC.

Holders: Please refer to our holder compatibility table on our QR datasheet.

Pack Size: Stock lines Ipc. Indentitems contact sales.

Scan this **OR Code** for more information



QR Code: 3001

TVS

(- TZ -)



4 435



-w- l



Shunt 0297900

Diode 02400113P

Diode 22903-6

Diode 22903-6V

Resistor 22902-68

Transorb 22901-1.5



#### **MINI FUSE 32V**





Part Number	Ampere Rating	<b>Body Colou</b>	<u>r</u>
MIN002	2A	Grey	
MIN003	3A	Violet	
MIN004	4A	Pink	
MIN005	5A	Tan	
MIN07.5	7.5A	Brown	
MIN010	I0A	Red	
MIN015	I5A	Blue	PROLED
MIN020	20A	Yellow	MAINTEE ASSOCIATED
MIN025	25A	Natural	ASSUMBLY CONTROL
MIN030	30A	Green	
MIN000AP	Assortment Pack	5pcs	1000
	5A, 10A, 15A, 20,	30A	<b>Assortment Pack</b>





**=** 10 **=** 3.8 - 10.9 → 8.8 7.5 0.81 -

Dimensions in MM

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Fast Acting Terminals: Zinc alloy, silver plated.

Options: 80VDC & 125VDC versions contact sales.

Pack Size: 5, 10, 100, 500, 1000, 3000

Holders: Clips, PCB Blocks, Inline, Add-a-Circuits, Blocks & Power Distribution Modules.

Approvals: ISO 8820 / SAE | 2077 / UL 248 (4) SAE | RoHS

#### **RELATED PRODUCTS:**













2.8

(see p. 14)

(see p.36)

**Assortment Pack** 

**Assortment Kit** (see p.38)

**Inline Holders** (see p.72 - 73)

Add-a-Circuit (see p.83)

Power Distribution (see p.119-134)

#### MINI FUSE LED INDICATING 32V

This fuse uses a patented bi-directional LED technology to indicate when a fuse has blown. It is a drop-in replacement for non-indicating Mini fuses.

Part Number	Ampere Rating	Body Cold	our
MIND003-32V	3A	Violet	
MIND005-32V	5A	Tan	
MIND07.5-32V	7.5A	Brown	
MIND010-32V	10A	Red	
MIND015-32V	15A	Blue	
MIND020-32V	20A	Yellow	
MIND025-32V	25A	Natural	
MIND030-32V	30A	Green	
MIND000AP	Assortment Pack 5pcs		
	104 154 20 254 304		A

10A, 15A, 20, 25A, 30A



**Assortment Pack** 

**Normal state** 

8.0

Open fuse

**-**20 **-**3.8 - 10.93→ 8.8 7.5

Voltage: 32VDC

Characteristic: Fast Acting

Pack Size: 2, 5, 10, 100, 500, 1000

Holders: Clips, PCB Blocks, Inline, Blocks & Power Dist.

Compliance: SAE SAE |2077, ISO 8820-3

#### **RELATED** PRODUCTS:



**Assortment Pack** (see p.36)



**Assortment Kit** (see p.38)



**Fuse Puller** (see p.44)



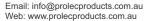
Dimensions in MM

Inline Holder (see p.73)



Power Dist. Modules (see p.119 - 134)





2.8

#### **MINI FUSE 58V**



Part Number	Ampere Rating	Body Colour
MIN002-58V	2A	Grey
MIN003-58V	3A	Violet
MIN004-58V	4A	Pink
MIN005-58V	5A	Tan
MIN07.5-58V	7.5A	Brown
MIN010-58V	10A	Red
MIN015-58V	15A	Blue
MIN020-58V	20A	Yellow
MIN025-58V	25A	Natural
MIN030-58V	30A	Green

Voltage: 58VDC
I.R.: 1000A at 58VDC
Characteristic: Fast Acting
Terminals: Zinc alloy, silver plated.

Pack Size: 5, 10, 100, 500, 1000, 3000

**Holders:** Fuse Clips, Fuse Blocks, Power Distribution Modules. **Options:** 80VDC and I 25VDC Ignition Protected contact sales.

Notes: \*Please contact sales for specifications.
Approvals: UL 248-14 RoHS

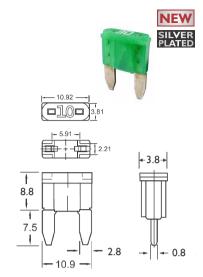
RELATED

PRODUCTS:



Fuse Puller (see p.44)

Power Dist. Modules (see p119 - 146)



Dimensions in MM

#### **AUTO FUSE 80V**



Voltage: 80VDC I.R.: 1000A at 80VDC

Characteristic: Fast Acting

Terminals: Copper alloy, tin plated. Pack Size: 10, 50, 100, 500, 1000

**Holders:** Fuse Clips, Fuse Blocks, Fused Terminal Blocks.

**Product Options:** 58VDC & I25VDC versions. Slotted body design also available.

Notes: \*Please contact sales for specifications.

Approvals: c Sus RoHS

RELATED PRODUCTS:



Fuse Puller (see p.44)



Power Dist. Modules (see p.93)

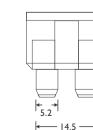




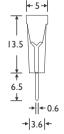




20.0



Dimensions in MM



# **AUTO FUSE 32V**



Part Number	Ampere Rating	Body Colou	r
ATOF001	IA	Black	
ATOF002	2A	Grey	
ATOF003	3A	Violet	
ATOF004	4A	Pink	
ATOF005	5A	Tan	
ATOF07.5	7.5A	Brown	
ATOF010	I0A	Red	7
ATOF015	15A	Blue	PROLEC
ATOF020	20A	Yellow	AUTOFUSE ASSORTMENT
ATOF025	25A	Natural	Connectificate
ATOF030	30A	Green	
ATOF035	35A	Blue/Green	
ATOF040	40A	Orange	
ATOF000AP	Assortment Pack 5A, 10A, 15A, 20A, 3		Assortment Page

ıck

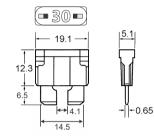
Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Fast Acting Terminals: Zinc alloy, tin plated. Options: ATOF Shunt # 0287900, White body, SPQ 2,000pcs.

Pack Size: 5, 10, 100, 500, 1000

Holders: PCB Mount Clips, Inline, Add-a-circuit, Fuse Panels, Fuse Blocks, Fused Terminal Blocks, Modular Blocks and PDM's.

Approvals: ISO 8820-3 ( RoHS



Dimensions in MM

#### **RELATED** PRODUCTS:











**Assortment Kit** (see p.39)

**Fuse Puller** (see p.44)

Inline Holder (see p.74 - 78)

Add-a-Circuit (see p.83)

**Fuse Blocks** (see p.87 - 93, 137)

#### **AUTO FUSE LED INDICATING 32V**

This fuse uses a patented bi-directional LED technology to indicate when a fuse has blown. It is a drop-in replacement for non-indicating Auto fuses.

Ampere Rating	Body Colo	<u>ur</u>
3A	Violet	
5A	Tan	
7.5A	Brown	REGLEC
10A	Red	AUTOFUSE ASSORTMENT
15A	Blue	Contact ( Pertit
20A	Yellow	
25A	Natural	
30A	Green	
Assortment Pack 5pcs		<b>Assortment Pack</b>
10A, 15A, 20A, 25A, 30A		
	3A 5A 7.5A 10A 15A 20A 25A 30A Assortment Pack 5pcs	3A Violet 5A Tan 7.5A Brown 10A Red 15A Blue 20A Yellow 25A Natural 30A Green Assortment Pack 5pcs

Voltage: 32VDC

Characteristic: Fast Acting

Pack Size: 2, 5, 10, 100, 500, 1000

Holders: Clips, PCB Mount, Inline, Add-a-circuit, Panels, Fuse Blocks, Fused Terminal Blocks & Modular Blocks. Compliance: SAE SAE J1284, ISO 8820-3 HF RoHS





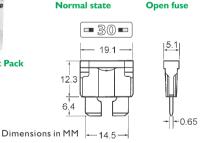
**Assortment Pack** (see p.36)



**Assortment Kit** (see p.39)



**Inline Holders** (see p.74 - 79)





Various Blocks & Panels (see p.87-93, 116-117, 138)



#### **MAXI FUSE 32V**



Part Number	Ampere Rating	Body Colour
MAX020	20A	Yellow
MAX025	25A	Grey
MAX030	30A	Green
MAX035	35A	Brown
MAX040	40A	Orange
MAX050	50A	Red
MAX060	60A	Blue
MAX070	70A	Tan
MAX080	80A	Natural
MAXI00*	100A	Violet
MAX000AP	Assortment Pacl	k 7pcs 🖶

MAD BLADE ASSOCIMENT CONTROL FROM

**Assortment Pack** 

NEW





20A, 30A, 40A, 50A, 60A, 70A, 80A

Voltage: 32VDC I.R.: 1000A at 32VDC Characteristic: Slow Acting Terminals: Zinc alloy, silver plated. Pack Size: 1, 7, 10, 100, 500, 1200

Holders: Fuse Clips, Inline, Power Distribution Modules.
Options: 58VDC & 80VDC versions contact sales.
Notes: \*Terminals Zinc alloy, tin plated.

Approvals (20A to 80A): SAE JI 888 / ISO 8820 RoHS

# RELATED PRODUCTS:



**Fuse Puller** 







(see p.79 - 80)



(see p.44) (see p.39)

(see p.80)

Power Distribution (see p.112 & 138)

# **MAXI FUSE INDICATING 32V**



Part Number	Ampere Rating	Body Colour
MAXD020	20A	Yellow
MAXD030	30A	Green
MAXD040	40A	Orange =
MAXD050	50A	Red
MAXD060	60A	Blue
MAXD070	70A	Tan
MAXD080	80A	Natural
MAXD100	100A	Violet





Normal state

Open fuse

Voltage: 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100, 500, 1000

**Holders:** Fuse Clips, Inline, Fuse Blocks & Power Dist. **Features:** Maxi fuse with blown fault LED indicator.

RELATED PRODUCTS:





29.2 + 8.9 21.6 + 8.9 12.7 + 0.84

Clear Cover Inline Fuse Holder (see p.80)

Clear Cover Inline Fuse Holder (see p.79 - 80)

Dimensions in MM

#### **MAXI FUSE 58V**

**A** adled

The BF6 58V Maxi blade fuses are specially designed for EV applications. Protects battery packs, traction inverters, energy storage, power conversion, battery disconnect units, charging, primary & auxiliary fuse.





Part Number	Ampere Rating	Body Colour
MAX030-58V	30A	Green
MAX040-58V	40A	Orange =
MAX050-58V	50A	Red
MAX060-58V	60A	Blue
MAX080-58V	80A	Natural

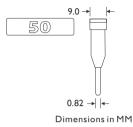
Voltage: 58VDC I.R.: 1.5kA at 58VDC

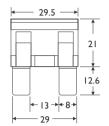
Characteristic: Slow Acting

Temperature Range: -40°C to +105°C

Features: Element window. Terminals: Zinc alloy. Pack Size: 100, 500, 1000.

Complies With: ISO 8820-3 RoHS





#### **MAXICOMPACT FUSE 32V**



The MaxiCompact fuse is new standard for vehicle circuit protection. Its miniature design meets the need for more circuits to be protected while utilizing less space, and its ability to cope with high temperatures in adverse environments makes the MaxiCompact fuse of recommended choice for protection.









Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting

Temperature Range: -40°C to +125°C Terminals: Zinc alloy, silver plated.

Features: Maxi fuse opaque case to see fuse element. Holders: Fuse Clips, Inline, PDM's contact sales for details.

Pack Size: 1, 10, 50, 100, 500, 1000 Approvals: ISO 8820-10: 2020

# <u>- 50 </u>-18.5 8.5 6.3 0.8-1 15.45

Dimensions in MM

#### **RELATED PRODUCTS:**



Fuse & Relay Module (# 01695)



Inline Fuse Holder # 0101881 Fuse Holder

# 0101882 Fuse Cover # 00395 Mounting Pin



#### **Holder Terminals F630E**

# 08500BK (0.35 - 0.5mm<sup>2</sup>) # 08501BK (0.75 - 1.5mm<sup>2</sup>)

# 08502BK (2.0 - 3.0mm<sup>2</sup>) # 08503BK (4.0 - 6.0mm<sup>2</sup>)

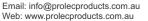


PDM MEC25 (# 0301452)



**Fuse Puller** (see p.44)





# MCASE UNSLOTTED FUSE LINKS 32V



2.8mm Term. Part Number MJC015 MJC020 MJC025 MJC030	Ampere Rating 15A 20A 25A 30A	Body Colour Grey Lt.Blue White Pink	
MJC040 0695900.PXP	40A 30A Shunt ST	Green Black	
MJC000AP	Assortment Pac 15A, 20A, 25A, 30		





**Assortment Pack** 

Outputs to Accessories

Top Side 4 10 7 →

Rear Side

12.5



Voltage: 32VDC I.R.: 1000A at 32VDC Fuse Characteristic: Slow Acting

Pack Size: 1, 10, 100, 2000

Approvals: RoHS

**PRODUCTS:** 

**RELATED** 



(see p.44)



(see p.40)

**Mcase Adaptor** Converts to Minifuse

(# 875-584)

Dimensions in MM

# **MCASE SLOTTED FUSE LINKS 32V**

#### 6.35mm Term. Ampere Body Part Number Rating Colour MCPS015 15A Grey MCPS020 20A Lt.Blue MCPS025 25A White MCPS030 30A Pink MCPS040 40A Green MCPS050 50A Red Yellow

MCPS060 60A 0695900.PXPS 50A Shunt ST Black MCPS000AP Assortment Pack 7pcs 15A, 20A, 25A, 30A,

40A, 50A, 60A

Voltage: 32VDC I.R.: 1000A at 32VDC Fuse Characteristic: Slow Acting Pack Size: 1, 10, 100, 2000 Holders: MiniFLEC see p. 144 Notes: The Mcase Slotted fuse can be mounted directly onto a comb busbar.

Approvals: RoHS



Assortment

Pack

Input Busbar





**NEW** 



**Littelfuse** 

Mcase **Slotted Shunt** 

Mcase Slotted Fuse

Top Side







Dimensions in MM

*PEC* 

# **LOW PROFILE JCASE FUSE LINKS 58V**

6.35mm Term.	Ampere	Body
Part Number	Rating	Colour
LJC020	20A	Lt. Blue
LJC025	25A	White _
LÍC030	30A	Pink
LÍC040	40A	Green
LÍC050	50A	Red
LÍC060	60A	Yellow
,		

Voltage: 58VDC I.R.: 1000A at 58VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100

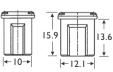
Holders: Inline, Panel Mount & Modules.

Approvals: RoHS









Dimensions in MM



# **JCASE FUSE LINK 32V**



6.35mm Term.	Ampere	Body
Part Number	Rating	Colour
JTF020	20A	Lt. Blue
JTF025	25A	White NEW
JTF030	30A	Pink
JTF040	40A	Green
JTF050	50A	Red
JTF060	60A	Yellow
JTF070	70A	Brown NEW
JTF080	80A	Black NEW
0495900	50A Shunt	Black NEW

Voltage: 32VDC I.R.: 1000A at 32VDC

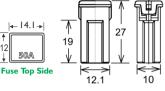
Fuse Characteristic: Slow Acting

Shunt: 50A Max Continuous Load Rating (ST) Holders: Inline & Power Fuse / Relay Dist. Module.

Pack Size: 1, 10, 100, 500

Approvals: ISO 8820 / JASO D612 RoHS







**Shunt Top Side** 





**ICASE** Fuse

**ICASE Shunt** 

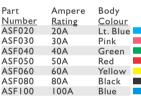
RELATED **PRODUCTS:** 

**Assortment Kit** (see p.40)

Inline Holders (see p.81)

**Power Distribution** (see p.110, 119, 136 & 139)

# **LARGE FUSE LINK 32V**



Voltage: 32VDC I.R.: 1000A at 32VDC Characteristic: Slow Acting

Pack Size: 1, 10, 100, 500

Approvals: ISO 8820 / JASO D612 RoHS

# < 22.2 > **Top Side**







4 PEC

Dimensions in MM



#### **FUSE LINK WITH LOCK 32V**

Part	Ampere	Body	Body
Number	Rating	Type	Colour
SHF025	25A	Small	Lt. Brown
SHF030	30A	Small	Lt. Green
LHF045	45A	Large	Red
LHF065	65A	Large	Black
LHF075	75A	Large	Grev

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100

Approvals: ISO 8820 / JASO D612 RoHS







4 PEC

**Small Body** 









Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **FUSE LINK BENT MALE TERMINAL 32V**

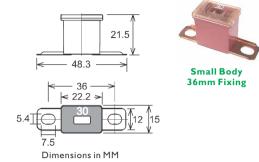


Small Body Part Number	Ampere Rating	Body Type	Body <u>Colour</u>	_
SBF030 SBF040	30A 40A	Small Small	Pink Green	
SBF050	50A	Small	Red	
SBF060	60A	Small	Yellow	
SBF070	70A	Small	Brown	
SBF080	80A	Small	Black	
SBF100	100A	Small	Blue	
SBF120	120A	Small	White	
SBF140	140A	Small	Maroon	



Characteristic: Slow Acting Pack Size: 1, 10, 100

Approvals: ISO 8820 / JASO D612 RoHS

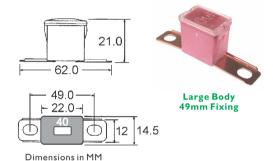


Large Body	Ampere	Body	Body	
Part Number	Rating	Type	Colour	
LBF030	30A	Large	Pink	
LBF040	40A	Large	Green	
LBF050	50A	Large	Red	
LBF060	60A	Large	Yellow	
LBF070	70A	Large	Brown	
LBF080	80A	Large	Black	
LBF100	100A	Large	Blue	
LBFI20	120A	Large	White	
LBF140	140A	Large	Maroon	

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100

Approvals: ISO 8820 / JASO D612 RoHS



FUSE LINK STRAIGHT MALE TERMINAL 32V

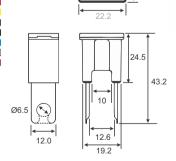
	PEC
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<b>B</b> olt Hole	Cut Out			
Terminal	Terminal	Ampere	Body	
Part Number	Part Number	Rating	Colour	
BTF030	BTCF030	30A	Pink	
BTF040	BTCF040	40A	Green	
BTF050	BTCF050	50A	Red	
BTF060	BTCF060	60A	Yellow	
BTF070	BTCF070	70A	Brown	
BTF080	BTCF080	80A	Black	
BTF100	BTCF100	100A	Blue	
BTF120	BTCF120	120A	White	
BTF140	BTCF140	140A	Maroon	

Voltage: 32VDC I.R.: 1000A at 32VDC

Characteristic: Slow Acting Pack Size: 1, 5, 10, 100

Approvals: ISO 8820 / JASO D612 RoHS



Dimensions in MM



BTFC Series Cut Out Hole



Bussmann multi-pole fuses (MPF) are cartridge fuses containing three fuse elements of the same or differing ampere ratings for protecting three circuits with a single design. They are the OEM equivalent to the fuses used on popular Infiniti, Lexus, Nissan and Toyota vehicles manufactured since 2002.



Part Number	Ampere Ratings	Voltage	Colour Code
MPF-433X	40A + 30A + 30A	32VDC	Pink
MPF-444X	40A + 40A + 40A	32VDC	Green
MPF-533X	50A + 30A + 30A	32VDC	Red
MPF-534X	50A + 30A + 30A 50A + 30A + 40A	32VDC 32VDC	
	00/11/00/11/10/1		
MPF-633X	60A + 30A + 30A	32VDC	Yellow
MPF2-324X	30A + 20A + 40A	58VDC	Yellow
MPF2-433X	40A + 30A + 30A	58VDC	Pink
MPF2-444X	40A + 40A + 40A	58VDC	Green
MPF2-533X	50A + 30A + 30A	58VDC	Red
MPF2-534X	50A + 30A + 40A	58VDC	Blue
MPF2-535X	50A + 30A + 50A	58VDC	Black
MPF2-555X	50A + 50A + 50A	58VDC	Maroon









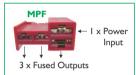
MPF (32VDC) 32.6 x 15.6 x 28mm  $(L \times W \times H)$ 

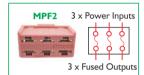
**MPF2 (58VDC)** 28.5 x 16 x 16mm  $(L \times W \times H)$ 

Voltage: See table I.R.: 1000A at rated voltage Element: Copper Alloy Feature: Element Window Housing Flammability: UL 94

Pack Size: Varies, please contact sales.

Approvals: ISO8820-4, JASO D612-4 RoHS





# **FUSE STRIP LUG TYPE WITHOUT HOUSING 36V**



Part Number	Ampere Rating
FBM030	30A
FBM040	40A*
FBM050	50A
FBM060	60A*
FBM070	70A*
FBM080	80A
FBM100	100A
FBM125	125A*
FBM150	150A*

90° Fork Type Lugs



Dimensions in MM

Voltage: 36VDC I.R.: 625A

Material: Zinc Mounting: M5 studs.

Holders: In-Line Holder & Blocks (Midi fuse type)

Pack Size: 10, 100, 2000

Notes: Can be replaced by Midi fuse 58V M5 (see p.24) Approvals: DIN 72581/2 \*Not DIN standard. RoHS

#### **FUSE STRIP RING TYPE WITHOUT HOUSING 32V**

**∠** Littelfuse ∠

Original equipment fuses suitable for older model Volkswagen, Audi, Seat, Skoda cars.

Part Number Assortment Pack Contains 8pcs 00940402ZP

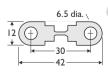
30A, 40A, 50A, 60A, 80A, 110A, 150A, 175A

Voltage: 32VDC I.R.: 1000A

Material: Zinc Alloy Mounting: M6 studs. Notes: Can be replaced by Midifuse 58V M6 (see p.24)

Approvals: DIN 72581/2 RoHS





Dimensions in MM







**NEW** 

#### MIDI FUSE M5 32V

# **14** Littelfuse

- Space saving fuse provides for high current wiring protection.
- Bolted fixing ensures optimum electrical connection.
- · Low to high amperage ratings.

Part Number	Ampere Rating	Font Colour
MID023-32V	23A	White
MID030-32V	30A	Orange
MID040-32V	40A	Green
MID050-32V	50A	Red
MID060-32V	60A	Yellow
MID070-32V	70A	Brown
MID080-32V	80A	White
MID100-32V	100A	Blue
MID125-32V	125A	Pink
MID150-32V*	150A	Lt. Grey
MID175-32V*	175A	Dark Grey
MID200-32V*	200A	Violet

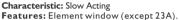
41 Ø 5.5 16 30

Dimensions in MM

Amp Ratings 23A-80A 4.0 8.0 100A-200A 0.63 4.3 8.3

Mounting: M5 stud only.





Terminal: Tin plated copper. Options: Shunt Midi. contact sales.

I.R.: 2kA at 32VDC. Voltage: 32VDC

Holders: In-line, Fuse Blocks & Fused Power Distribution Units.

Pack Size: 1, 10, 100, 500, 1000

Notes: \* Short circuit protector only.

Approvals: ISO 8820-5 RoHS

#### RELATED **PRODUCTS:**



(see p.41)

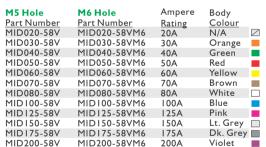




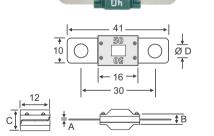
Inline Fuse Holder (see p.81 - 82)

Fuse Blocks & PDM (see p.94 - 118)

# MIDI FUSE M5 & M6 58V







I.R.: 1.5kA at 32VDC and 1.0kA at 58VDC

Characteristic: Slow Acting.

Features: Element window (except 20A).

Terminal: Tin plated copper.

Options: 70V version M6 - 36mm fixing centers -70VSF36.

Pack Size: 1, 10, 100, 500, 1000 Approvals: ISO 8820-5 RoHS

Dimensions in MM Amp Ratings 20A-80A 041 4 0 8054 100A-200A 0.63 4.3 8.3 6.2

Mounting: M5 or M6 stud.





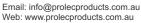
**Fuse Blocks** (see p.94 & p.98)





(see p.110 - 117)





#### **MEGA FUSE RIVETED 32V**



The original Littelfuse designed and patented MEGA fuse is ideal for battery, alternator connectors and other heavy gauge cables.

32V	Ampere	Font	
Part Number	Rating	Colour	
0298040	40A	White	
0298060	60A	White	
0298080	80A	Red	
0298100	100A	Yellow	
0298125	125A	Green	
0298150	150A	Orange	
0298175	175A	White	
0298200	200A	Blue	
0298225	225A	Tan	
0298250	250A	Pink	
0298300*	300A	Grey	
0298350*	350A	Green	
0298400*	400A	Purple	
0298450*	450A	Orange	

50.8 0 0 19.05 16.26 29.23 ---68.58 8.64 R

Dimensions in MM

Amp Ratings 40A - 250A 1.02 9.9 300A - 500A 1.83 10.67

500A Voltage: 32VDC I.R.: 2kA at 32VDC.

Characteristic: Slow Acting \* Short circuit protectors only.
Terminals: 40A & 60A Silver Plated Brass, 80A - 500A Copper.

Brown =

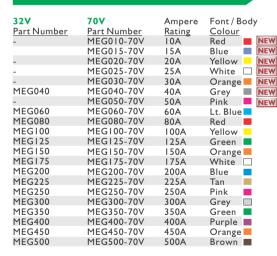
Mounting: M8 or 5/16" studs. Pack Size: 1, 10, 100, 500 Approvals: ISO 8820-5 RoHS

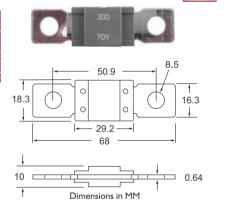
0298500\*

#### **MEGAFUSE 32V & 70V**



**NEW** 





Voltage (32VDC): I.R.: I.0kA at 32VDC Voltage (70VDC): I.R.: 2.5kA at 70VDC

Characteristic: Slow Acting Pack Size: 1, 10, 100, 400 Mounting: M8 or 5/16" studs. Approvals: ISO 20934 RoHS

RELATED

PRODUCTS:



**Inline Fuse Holder** (see p.82)



**Fuse Blocks** (see p.96 - 101)



**Bussed Fuse Blocks** (see p.96, 99, 113)



Fused PDM's (see p113 - 115)



**Fuse Kit** (see p.41)

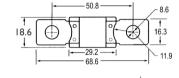


#### **POWERVAL CALIBRE FUSE 32V**

- Designed for high current circuit protection to protect starter cables.
- Ideal for starter and alternator connectors.
- These fuses allow the load of a starter motor or winch to operate without blowing the fuse, however they will open in the case of a direct short.







Dimensions in MM

Voltage: 32VDC I.R.: 2000A at 32VDC

Characteristic: Slow Acting Mounting: M8 or 5/16" studs

Terminal: (POWCALI - 2) Tin Plated Zinc Alloy. (POWCAL3 - 5) Tin plated Copper.

Pack Size: 1.10.100

Holders: Inline, Fuse Blocks, Power Dist. Unit.

Approvals: REACH ROHS

**RELATED** 

PRODUCTS:



Inline Fuse Holder (see p.82)



**Fuse Block** (see p.96-101)

NEW



**Fused PDU** (see p.111-115)





QR Code: 3004

# **FUSE STRIP WITH HOUSING 48V - 80V**

Part Number FBT030 FBT035 FBT040 FBT060 FBT080 FBT100 FBT125 FBT130 FBT150 FBT175 FBT200	Ampers Rating 30A 35A 40A 50A 60A 80A 100A 125A 130A 150A 175A 200A	e NEW	Part Number FBT250 FBT275 FBT300 FBT325 FBT350 FBT355 FBT400 FBT425 FBT500 FBT675 FBT600 FBT675 FBT750	Ampere Rating 250A 275A 300A 325A 350A 355A 400A 425A 500A 600A 675A 750A
FBT225	200A 225A		FBT750 FBT800	750A 800A
FB1225	225A		FR1800	800A



Straight Fork and 90 Degree Type Lugs

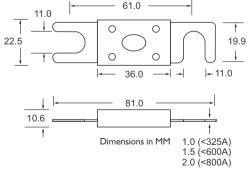
Voltage: 48VDC (30A-425A), 80VDC (500A-800A) I.R.: 2.5kA at 48VDC. 3kA at 80VDC. Characteristic: Fast Acting Mounting: MIO or 3/8" studs.

Pack Size: 1, 10, 20, 50

# Feature: Element window. Approvals: DIN 43560, IEC60269-4, TUV A UL 248 (4) RoHS RELATED PRODUCTS:



**Fuse Block** Fuse Block & Cover (see p.101) (see p.101)





Forklift truck and battery isolator fuses are specially designed for the heavy duty loads associated with DC battery powered equipment such as forklift trucks, hand trucks, motorized work platforms, and other DC battery operated systems. Rugged construction and stud mounted bolt-in design assure a long life in adverse conditions.

Part Number ANL035 ANL040 ANL050 ANL060 ANL080 ANL100 ANL100 ANL125 ANL130	Ampere Rating 35A 40A 50A 60A 80A 100A 125A 130A	Part Number ANL225 ANL250 ANL275 ANL300 ANL325 ANL350 ANL400 ANL500	Ampere Rating 225A 250A 275A 300A 325A 350A 400A 500A
ANLI25	125A	ANL400	400A

I.R.: 6kA (35A to 500A, 32VAC), 2.7kA (600A to 750A, 32VAC) 2.7kA (All ratings, 80VDC)

Voltage: 32VAC / 80VDC Characteristic: Fast Acting

Features: Ignition Proof (<500A). Silver plated copper link.

Mounting: M8 or 5/16" studs

Features: Element visible inspection mica window.

Holders: Block. Pack Size: 1, 5, 10, 100

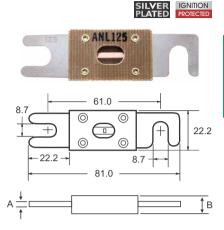
Approvals: SAE Ignition Protected (35A to 500A) **9** (600A, 675A & 750A ratings) RoHS

**RELATED** 

PRODUCTS: Fuse Block

(see p. 101)





ANL Series	Dimensions in MN	
Ampere Rating	<u>A</u>	<u>B</u>
35A to 200A	0.45	7.55
225A to 325A	1.40	8.70
350A to 675A	2.70	9.50
750A	3.35	10.9

■ ANN250 ■

#### **ANN LIFT TRUCK FUSES 80V**

Part	Ampere	Part	Ampere
Number	Rating	Number	Rating
ANN010	I0A	ANN225	225A
ANN035	35A	ANN250	250A
ANN040	40A	ANN275	275A
ANN050	50A	ANN300	300A
ANN060	60A	ANN325	325A
ANN080	80A	ANN350	350A
ANN090	90A	ANN400	400A
ANN100	100A	ANN500	500A
ANN 125	125A	ANN600	600A
ANN I 50	150A	ANN700	700A
ANN 175	175A	ANN800	A008
ANN200	200A		

I.R.: 2.5kA (125VAC), 2.7kA (80VDC) Voltage: 125VAC / 80VDC

Characteristic: Very Fast Acting Mounting: M8 or 5/16" studs

Features: Element visible inspection mica window.

Holders: Block. Pack Size: 1, 5, 10, 100 Notes: ANN series is not ignition proof

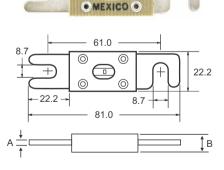
Approvals: (35A-400A, 500A DC only)

**RELATED** PRODUCTS:

**Fuse Block** (see p. 101)



#### FAT.N Bussmann



ANN Series	Dimension	ons in MM
Ampere Rating	A	<u>B</u>
10A to 300A	1.19	9.12
325A to 600A	4.47	12.70
700A to 800A	5.94	13.49



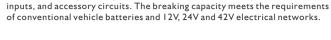
# Bussmann











Marine Rated Battery Fuses - Designed for the most demanding environment to provide high current protection for the tightest space constraints. Suitable for main and auxiliary circuit protection such as alternator outputs, starter motor

#### Features

- Extensive amperage range 30A to 300A.
- Voltage rating 58VDC max.
- Ignition protected per SAE II I I 7.
- Weatherproof (IP66).
- Functional after 500 hours salt spray and salt fog test.
- Clear element window, visual indication of blown condition.
- Colour coded for easy amperage identification.
- Several mounting options. Accept mounting terminal size M8 max.
- Performance requirements per ISO8820-6.

Part Number	Ampere Rating	Face Colour
MRBF030	30A	Lt. Green
MRBF040	40A	Lt. Blue
MRBF050	50A	Red
MRBF060	60A	Gold
MRBF075	75A	Brown
MRBF080	80A	Lime
MRBF090	90A	Purple
MRBF100	100A	Yellow
MRBF125	125A	Green
MRBF150	150A	Orange =

White MRBF175 175A MRBF200 200A Blue MRBF225 225A Tan MRBF250 250A Pink MRBE300 300A Grey

Voltage: 58VDC

I.R.: 2kA at 58VDC, 5kA at 32VDC, 10kA at 14 VDC

Characteristic: Slow Acting

Pack Size: 1, 10, 100

Housing: UL-rated 94V0 thermoplastic

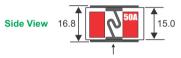
Body: Ceramic

Ring Terminals: Tin plated Holders: Battery Fuse Bar. Mounting: 1/4"-20 or M8 studs Approvals: ISO8820-6 SAE

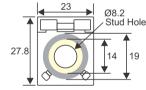




Transparent cover with colour coded front face.



Fuse Element



Dimensions in MM

#### Scan this OR Code for more information



#### **RELATED PRODUCTS:**



**Marine Rated Battery Fuse Assortment Kit** (see p.41)



Fuse Bar Single Pole Kit (see p.106)



Fuse Bar **Double Pole Kit** (see p. 106)

**Top View** 



#### **BATTERY FUSE - ZCASE STARTER FUSE 32V**



The Zcase Single Mega Starter Fuse is a minimal footprint bolt down fuse with a wide rating range up to 600A in the same packaging size. The Time Current characteristic is similar to the well known Mega fuse and fuse ratings up to 250A can used for full wire protection. Higher fuse ratings mostly used for typically Starter Fuse application as a protector fuse. The fuse can used directly on a battery post or busbar connection. Littlefuse is offering a complete solution for the necessary stud and different busbar connections including some battery clamps.

NEW

#### Features:

- Extensive amperage range 40A to 600A.
- Voltage rating 32VDC max.
- Accept mounting terminal size M8 max.
- Several mounting options, stud and post

•	Multi position	busbar fed fu	se blocks availab	ole.

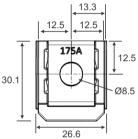
140 D 11 1	A	
M8 Part Number	Ampere Rating	Wire Size
3298040	40A	4mm <sup>2</sup>
3298060	60A	6mm <sup>2</sup>
3298080	80A	10mm <sup>2</sup>
3298100	100A	16mm <sup>2</sup>
3298125	125A	16mm²
3298150	150A	25mm <sup>2</sup>
3298175	175A	25mm <sup>2</sup>
3298200	200A	35mm <sup>2</sup>
3298225	225A	35mm <sup>2</sup>
3298250	250A	50mm <sup>2</sup>
3298300	300A	35mm <sup>2</sup>
3298350	350A	35mm <sup>2</sup>
3298400	400A	50mm <sup>2</sup>
3298500	500A	50mm <sup>2</sup>
3298600	600A	50mm <sup>2</sup>
3298900	Shunt	50mm <sup>2</sup>

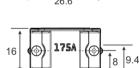




**ZCASE Shunt** 

ZCASE Fuse





Dimensions in MM

Voltage: 32VDC I.R.: 2kA at 32VDC

Characteristic: Slow Acting Cover / Base: PPA (33% GF) Operating Temp: -40°C to 125°C. Insulating Tube: Ceramic Terminal: Copper Tin Plated

**Mounting:** M6 or M8 stud (40A - 250A), M8 stud (300A - 600A).

Pack Size: 1, 5, 10, 100, 480

Holders: Stud Terminal Mount 1 Way and 2 Stacked.
Top Post Terminal Mount 2 and 3 Way.

Fuse Block 5 and 7 Way.

#### Zcase Options with MIO Mounting Terminal Type:

Battery Fuse Zcase MI0: 32V (80A to 600A), #3298xxx.ZXMI0.

•Battery Shunt Zcase M10: 32V, #3298900.ZXM10.

Please contact sales for further information on all of the above variants.

#### **RELATED PRODUCTS:**



Terminal Stackable Fuse Bar & Cover Stud Mount (p. 107)



Fuse Bar & Cover
Post Mount (p.107 & 109)



Multi-Pole 5 & 7 Way Bussed Fuse Blocks Surface Mount (p. 108 - 109)



Post Mount 2-3 Way Fuse Bar & Cover Stud Mount (p.109)



# **MULTI-POLE BATTERY TERMINAL FUSES 32V**

FATON

Russmann

NEW

Battery terminal fuses are fuses containing one or more fuse elements of different ampere ratings for protecting circuits directly from the battery's terminal. Their function is to protect the conductors and not the devices on the circuit(s). They are the OEM equivalent to those part numbers used on popular models of Chrysler, Ford, Lexus, Lincoln, Mitsubishi, Nissan, Subaru, Suzuki, and Toyota vehicles since 2001.

Part	Nbr.	Ampere
Number	Poles	Ratings
BTF-1P-80	1	80A
BTF-1P-100	I	100A
BTF-1P-120	1	120A
BTF-1P-140	1	140A
BTF-2P-180120	2	180A, 120A
BTF-2P-200100	2	200A, 100A
BTF-2P-250125	2	250A, I25A
BTF-3P-1206080	3	120A, 60A, 80A
BTF-3P-1208080	3	120A, 80A, 80A
BTF-5P-1010868	5	100A, 100A, 80A, 60A, 80A
BTF-5P-1210868	5	120A, 100A, 80A, 60A, 80A
BTF-5P-141010108	5	140A, 100A, 100A, 100A, 80A
BTF-5P-25010888	5	250A, 100A, 80A, 80A, 80A
BTF-5P-225106108	5	225A, 100A, 60A, 100A, 80A





Fused Fused Output Output Fuse Fuse Input

Fused Outputs

Input

Fused

Output







BTF-5P Contact sales for circuit diagram.

# **MULTI SLOW BLOW FUSES 32V**

Approvals: ISO8820-4, JASO D612-4 RoHS

Operating Temperature: -40°C to + I 20°C.

Voltage: 32VDC I.R.: 1000A at 32VDC

Body: PS-S-GF35 Element: Copper Alloy Clear Fuse Cover: Amp stamp

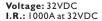
Pack Size: 1.3.5

**EAT•N** Bussmann

The new line of Bussmann series multi slow-blow fuses address the automotive manufacturers' move to design custom circuit protection technology for their vehicles.



Part Number	Nbr. Poles	Ampere
MUSB-AI	2	Ratings 100A, 70A
MUSB-A2	2	120A, 70A
MUSB-A3	2	100A, 40A
MUSB-A4	2	120A, 40A
MUSB-L1-2	6	70A, 30A, 40A, 20A, 30A, 100A
MUSB-L1-4	6	70A, 40A, 20A, 40A, 30A, 120A
MUSB-L3-I	4	20A, 20A, 20A, 20A
MUSB-L3-3	4	30A, 30A, 30A, 30A
MUSB-L3-5	4	30A, 40A, 30A, 40A
MUSB-M2-I	11	50A, 60A, 60A, 30A, 30A, 30A,
		30A, 40A, 30A, 20A, 20A
MUSB-M4-I	10	50A, 60A, 60A, 50A, 30A, 30A,
		40A, 30A, 30A, 40A
MUSB-T I	4	125A, 100A, 325A, Shunt
MUSB-T4	4	125A, 80A, 300A, Shunt
MUSB-T5	4	Shunt, 285A, 200A, 125A



Clear Fuse Cover: Element window

Pack Size: To be confirmed.



**MUSB-A** 



MUSB-M2



**MUSB-T** 



MUSB-M4



**MUSB-LI** 



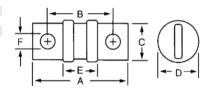
#### Features

- Circuit protection for devices including most inverter manufacturers.
- High interrupt capacity for large battery banks including Lithium-Ion and TPPL batteries.
- Current limitation for non-inductive circuits. Current-limiting response to short-circuit conditions.
- 200kA interrupting rating provides high ratings at all circuit locations.
- Small footprint allows more efficient use of available space.

Part Number	Ampere Rating
IIN070	70A
IIN080	80A
IIN090	90A
IIN100	100A
IINI IO	IIOA
IIN125	125A
JN 150	150A
JN 175	175A
JIN200	200A
ĨN225	225A
JN250	250A

Part Number	Ampere Rating
JJN300	300A
JJN350	350A
JJN400	400A
JJN450	450A
JJN500	500A
JJN600	600A
JJN700	700A
JJN800	800A
JJN I 000	1000A
JJN I 200	1200A





Dimensions in MM

Voltage VDC: 160VDC (70A to 600A), 170VDC (700A to 1200A)

I.R.: 20kA at 160VDC (70A to 600A), 100kA (700A to 1200A)

Voltage VAC: 300VAC I.R.: 200kA at 300VAC

Characteristic: Very fast acting

Extended Ratings: IA-60A contact sales.

Pack Size: Varies 1, 5, 10. Approvals: (i) (f (RoHS)



Ampere Rating	A	В	С	D	Е	F
70Å to 100A	54.8	39.7	19.1	20.6	21.4	7.2
110A to 200A	61.9	42.9	22.2	27.0	21.4	8.7
225A to 400A	69.9	46.8	25.4	33.3	21.0	10.3
450A to 600A	77.8	51.6	31.8	40.5	22.4	12.3
700A to 800A	85.9	56.4	44.5	TBC	23.4	14.3
1000A	101.7	64.3	50.8	TBC	27.5	15.5
1200A	101.7	64.3	50.8	TBC	27.5	15.5

RELATED PRODUCTS: **Modular Fuse Blocks** (see p. 104)

# **ELECTRIC VEHICLE FUSES - INTRODUCTION**



Like regular cars, electric vehicles (EV's) contain electrical components that need to be protected from dangerous overcurrents and short circuits. In addition, EV's also have high voltage DC parts like high-capacity battery packs, power conversion devices and other auxiliary circuits. Fuses for EV applications must meet special requirements to ensure safe and reliable operation. The same applies to EV fast charging stations which are able to deliver high DC currents. ADLER has developed a complete range of EV fuse products to suit the different demands of Automotive EV applications.

Regular semiconductor fuses with ceramic bodies are simply not suitable for the high mechanical & thermal stresses endured by vehicles. Adler EV fuses are designed in compliance with automotive standards such as ISO 8820-8 and JASO D622. Additionally, they are available with melamine laminated glass fibre bodies to withstand mechanical shocks and vibrations and avoid long-term damage. Adler fuses range from 200VDC to 1500VDC. Prolec can provide you with the right fuse for your application be it EV main, EV auxiliary circuits, EV charging stations or DC converters. Please contact sales for further information.

#### SMD, PCB, Cartridge Fuses **Fuse Blocks & Fuse Clips**







Amperage	<u>&amp; V</u>	<u>'olta</u>	ge R	ang
30A - 800A	@	80\	/dc	
40A - 500A	@	70V	/dc	
10A - 50A	@	200	Vdc	
IA - 50A	@	500	Vdc	
5A - 50A	@	850	Vdc	
0 0 4 4 0 4	(m)	100	<b>U//</b> 4	_

Flush Tag Fuses Fuse Blocks





**Threaded & Centre Tag Fuses Fuse Blocks** 







Amperage & Voltage Range 50A - 700A @ 500Vdc 60A - 600A @ 800Vdc 5A - 50A @ 850Vdc 10A - 800A @ 1000Vdc 100A - 300A @ 1500Vdc



#### **ELECTRIC VEHICLE AUXILIARY FUSES AE2 500V**

General purpose fuse for EV / HEV auxiliary protection.





Ferrule Cartridge

Flush Bolted Tag

65.9

Voltage: 500VDC I.R.: 20kA at 500VDC.

Time Constant: I-3ms

Holders (Cartridge): Clips, Blocks & Inline.

Holders (Flush Bolted): Fuse block. Terminal Options: PCB Mount & Centre tag.

Approvals: ♥ UL 248-20, ▲ TUV, ISO 8820-8; GB/T 31465.6

#### **RELATED PRODUCTS:**

Cartridge Fuse Clips BC800 (see p.68)



Cartridge Fuse Block BH114-IC (see p.102) BH114-CN (see p.102)





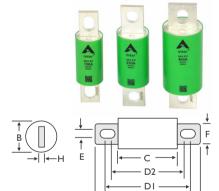


#### **ELECTRIC VEHICLE PDU FUSES AE5 500V**

**A**adler

Special purpose fuse for EV / HEV automotive use. Ideal for high power EV PDU and battery protection.

Part Number	Ampere Rating	Dia.
AE52500620	50A	21
AE52600620	60A	21
AE52700620	70A	21
AE52800620	80A	21
AE53100620	100A	21
AE53125620	125A	21
AE53150620	150A	21
AE53100625	100A	25
AE53125625	125A	25
AE53150625	150A	25
AE53175625	175A	25
AE53200625	200A	25
AE53225625	225A	25
AE53250625	250A	25
AE53200631	200A	31
AE53225631	225A	3 I
AE53250631	250A	3
AE53300631	300A	3 I
AE53350631	350A	31
AE53400631	400A	3 I
AE53400638	400A	38
AE53500638	500A	38
AE53500651	500A	5 I
AE53600651	600A	5 I
AE53700651	700A	5 I
AE53800651	800A	5 I



Dimensions in MM

Series	Amperage	Α	В	С	DΙ	D2	Е	F	Н
AE5620	50A-150A	81	21	40	66	57	8.5	15	3.2
AE5625	100A-250A	89	25	44	73	7 I	9.0	18	3.2
AE5631	200A-400A	92	3 I	53	76	69	8.5	22	5
AE5638	400A-500A	110	38	53	88	70	10.5	24.8	6
AE5651	500A-800A	110	5 I	53	90	7 I	10.5	38	6

I.R.: 50kA (Self Cert.), 30kA (TUV) at 500VDC

Voltage: 500VDC

Time Constant: (L/R) 2 +/- 0.5ms Ref: JASO D622, ISO 8820-8, GB/T 3 | 465

Approvals: ▲ TUV (50A-400A) RoHS REACT

RELATED PRODUCTS:



(see p103.)

Modular Fuse Blocks (see p104.)



# **ELECTRIC VEHICLE AUXILIARY FUSES AE3 850V**

A adler



NEW

General purpose fuse for EV / HEV auxiliary protection.

Cartridge	Flush Bolted	
Part Number	Part Number	<b>Ampere Rating</b>
AE31500i07	AE31500i05	5A
AE31800i07	AE31800i05	8A
AE32100i07	AE32100i05	I0A
AE32150i07	AE32150i05	15A
AE32200i07	AE32200i05	20A
AE32250i07	AE32250i05	25A
AE32300i07	AE32300i05	30A
AE32350i07	AE32350i05	35A
AE32400i07	AE32400i05	40A
AE32450i07	AE32450i05	45A
AE32500i07	AE32500i05	50A

Voltage: 850VDC I.R.: 20kA at 850VDC.

Time Constant: I-3ms

Pack Size: 10pcs.

Holders (Cartridge): Fuse clips, blocks & Inline.

Holders (Flush Bolted): Fuse block.

Terminal Options: PCB Mount & Centre tag also available.

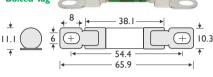
Approvals: UL Certified (E506666)

IASO D622, ISO 8820-8; GB/T 31465.6 RoHS REACH



# 10.3 Flush **Bolted Tag**

**Ferrule** Cartridge



#### **RELATED PRODUCTS:**

**Fuse Clips** BC800 (see p.68)



Cartridge Fuse Block BH114-IC (see p.102) BH114-CN (see p.102)



Flush Tag Fuse Block BH114-IM (see p.102) BH114-CN (see p.102)



#### **ELECTRIC VEHICLE PDU FUSES AE7 800V**





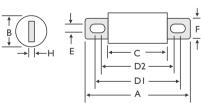




Part Number	Ampere Rating
AE72600i25	60A
AE72700i25	70A
AE72800i25	80A
AE73100i25	100A
AE73125i25	125A
AE73150i25	150A
AE73175i38	175A
AE73200i38	200A
AE73250i38	250A
AE73300i38	300A
AE73350i38	350A
AE73400i38	400A
AE73450i51	450A
AE73500i51	500A
AE73560i51	560A
AE73600i51	600A

Voltage: 800VDC I.R.: 50kA at 800VDC Time Constant: (L/R) 2 +/- 0.5ms Holders: Modular fuse blocks. Approvals: UL Certified (E506666) (4) UL248-20, IEC 60269-4 ROHS REACH





#### Dimensions in MM

Series	Amperage	Α	В	C	DΙ	D2	<u>E</u>	F	Н
AE7i25	60A-150A	111	25	66	95	93	9	18	3
AE7i38	175A-400A	129	38	72	107	89	10.5	25	6
AE7i5 I	450A-600A	129	5 I	72	109	90	10.5	38	6

**RELATED** 

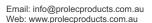
PRODUCTS: **Fixed Fuse Blocks** (see p103.)



**Modular Fuse Blocks** (see p104.)







# **ELECTRIC VEHICLE PDU FUSES AE6 1000V**



Engineered to provide auxiliary and high performance protection for hybrid and electric vehicles.



65

Cartridge	Flush Tag	Ampere	Cap
Part Number	Part Number	Rating	Dia.
AE61500A00	AE61500A02	5A	10
AE61600A00	AE61600A02	6A	10
AE61800A00	AE61800A02	8A	10
AE62100A00	AE62100A02	I0A	10
AE62150A00	AE62150A02	I5A	10
AE62200A00	AE62200A02	20A	10
AE62250A00	AE62250A02	25A	10
AE62300A00	AE62300A02	30A	10
	AE62200B02	20A	14
	AE62250B02	25A	14
	AE62300B02	30A	14
AE62350B00	AE62350B02	35A	14
AE62400C00	AE62400C02	40A	14
AE62500C00	AE62500C02	50A	14
AE62600C00	AE62600C02	60A	14

Ferrule
Cartridge

A
A
B
AE6...A00 5A-30A 10 38
AE6...B00 20A-35A 14 51

40A - 60A

Flush Bolted Tag

Voltage: I000VDC I.R.: 20kA at I000VDC.

Time Constant: 2 ± 0.5 ms

**Terminal Options:** Centre tag, PCB mount & vertical mount. **Approvals:** ISO 8820-8; GB/T 31465.6; UL 248-20, JASO D622

#### **RELATED PRODUCTS:**







RoHS REACH

Modular Fuse Blocks (see p.104)

Dimensions in MM

AE6...C00

<u>eries</u>	<u>Amperage</u>	<u>A</u>	В	<u>C</u>	$\overline{\nu}$	드	<u> </u>	G
AE6A02	5A - 15A	10.3	38	53.5	64	5.3	12	7
AE6B02	20A -35A	14.2	5 I	72.0	86	6.5	12	9.4
\E6C02	40A - 60A	14.2	65	87.0	101	6.5	12	9.4

# **ELECTRIC VEHICLE PDU FUSES AEX 1000V**



NEW

Designed for EV / HEV automotive use such as high power EV PDU & battery protection.

Part Number	Ampere Rating	Dia.
AEX2700731	70Å	3
AEX2800731	80A	3 I
AEX2900731	90A	3 I
AEX3100731	100A	3 I
AEX3125738	125A	38
AEX3150738	150A	38
AEX3175738	175A	38
AEX3200738	200A	38
AEX3250751	250A	51
AEX3300751	300A	5 I
AEX3350751	350A	51
AEX3400751	400A	5 I
AEX3500751	500A	51
AEX3600764	600A	64
AEX3700C64	700A	64
AEX3800C64	800A	64

Voltage: 1000VDC 1.R.: 50kA at 1000VDC

Time Constant:  $(L/R) 2 \pm 0.5 ms$ 

**Approvals:** IEC 60269-4; UL 248-20 RoHS €€ (€

# DEV UPDATE!

DΙ

Dimensions in MM

#### **RELATED PRODUCTS:**



Fixed Fuse Blocks (see p.103)



Modular Fuse Blocks (see p. 104)

<u>Series</u>	Amperage	<u>A</u>	В	<u>C</u>	DI	D2	<u>E</u>	F	H
AEX731	70A-100A	125	3 I	86	109	102	8.5	22	5
AEX738	125A-200A	140	38	83	118	100	10.5	25	6
AEX751	250A-500A	146	5 I	89	126	107	10.5	38	6
AEX764	600A	196	64	88	162	122	13	50	10
AEXC64	700A-800A	122	64	64	102	92.5	10.5	38	10



#### **EMERGENCY MULTI FUSE ASSORTMENT PACKS**



Assortment of genuine original equipment fuse types. Suits most models. Ideal for glove box offering instant replacement when on the road. The clear plastic container features a snap lock closing lid.



#### Micro2, Micro3 & MCase Slotted Fuse Pack - 18pcs

Part Number MICRS00AP

Pack Contains

Micro 2 Blade Fuses: MICR2 (Ipc): 5A, 7.5A, IOA, I5A, 20A, 25A, 30A

Micro3 Blade Fuses: MICR3 (Ipc): 5A, 7.5A, IOA, I5A

Mcase Slotted Fuse Links: MCPS (Ipc): 15A, 20A, 25A, 30A, 40A, 50A, 60A



#### Micro2, Micro3 & MCase Fuse Pack - 16pcs

Part Number MICR000AP

Pack Contains

Micro 2 Blade Fuses: MICR2 (Ipc): 5A, 7.5A, IOA, I5A, 20A, 25A, 30A

Micro3 Blade Fuses: MICR3 (Ipc): 5A, 7.5A, IOA, I5A

Mcase Fuse Links: MJC (1pc): 15A, 20A, 25A, 30A, 40A



#### Auto & Mini Fuse Pack - 15pcs

Part Number

Pack Contains

ATMN000AP Auto Fuses: ATOF (Ipc): 5A, I0A, I5A, 20A, 25A, 30A

Mini Fuses: MIN (Ipc): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Fuse Puller: Auto / Mini (Ipc)



#### Chrysler, Dodge, Jeep Fuse Pack - 16pcs

Part Number

CDI000AP

Pack Contains

Mini Blade Fuses: MIN (Ipc): 7.5A, 25A, 30A, (3pcs): I0A, I5A, (2pcs) 20A

Icase Fuse Links: ITF (Ipc): 20A, 30A, 40A, 50A

Fuse Puller: (Ipc) Mini, Icase



#### Ford & GM Fuse Pack - 20pcs

Part Number FDGM000AP

Pack Contains

Mini Blade Fuses: MIN (1pc): 7.5A, 25A, 30A, (3pcs): 10A, 15A, (2pcs) 20A

Low Profile Mini Fuses: LPM (Ipc): 10A, 15A Low Profile Jcase Fuse Links: LJC (1pc):30A, 40A case Fuse Links: |TF (1pc):20A, 30A, 40A, 50A Fuse Puller: (Ipc) Mini, Low Profile Mini, Jcase



#### Hyundai, Kia, Genesis Fuse Pack - 24pcs

Part Number HYD000AP

Pack Contains

Micro2 Blade Fuses: MICR2 (Ipc): IOA, I5A, 20A, 25A, 30A

Mini Fuses: MIN (Ipc): 10A, 15A, 20A, 25A, 30A

Low Profile Mini Fuses: LPM (Ipc): 7.5A, I0A, I5A, 20A, 25A, 30A

Low Profile Icase Fuse Links: LIC (Ipc):20A, 30A, 40A

Jcase Fuse Links: JTF (Ipc):30A, 40A, 50A Fuse Puller: (Ipc) Micro 2, Mini, Low Profile Mini Fuse Puller: (Ipc) | case, Low Profile | case



#### Nissan & Infiniti Fuse Pack - 29pcs

Part Number NSN000AP

Pack Contains

Auto Fuses: ATOF (Ipc): 5A, 7.5A, I0A, I5A, 20A, 30A, 40A

Mini Fuses: MIN (Ipc): 2A, 3A, 4A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A Micro 2 Blade Fuses: MICR2 (Ipc): 5A, IOA, I5A, 20A, 30A

Mcase Slotted Fuse Links: MCPS (1pc):30A, 40A, 50A, 60A Fuse Pullers: (Ipc) Micro2, Auto, Mini, (Ipc) Mcase



#### Toyota & Lexus Fuse Pack - 15pcs

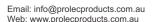
Part Number TYT000AP

Pack Contains

Micro 2 Blade Fuses: MICR2 (Ipc): 5A, 7.5A, IOA, I5A, 20A, 25A, 30A Low Profile Mini Fuses: LPM (Ipc): 5A, 7.5A, 10A, 15A, 20A, 30A

Fuse Puller: (Ipc) Micro2, Low Profile Mini







#### **BLADE FUSE ASSORTMENT PACKS**



#### Features:

- Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit retail peg boards and counter stands.
- Detailed product information on rear side.

# Micro2 Blade Fuse Assortment Pack - 35pcs

Part Number Pack Contains

MICR2-KIT2 MICR2 (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A





Snap Lockable

# **Low Profile Mini Blade Fuse Assortment Pack - 35pcs**

Part Number Pack Contains

LPM (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A LPM-KIT2



Part Number Pack Contains

MIN (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A MINI-KIT2





**5 Cavities** 

#### **Auto Blade Fuse Assortment Pack - 35pcs**

Pack Contains Part Number

AUTO-KIT2 ATOF (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

#### **LED INDICATING FUSE ASSORTMENT PACKS**



Prolec's LED indicating blade fuse assortment packs were a finalist in the Australian Automotive Aftermarket Associations product category for the Most Innovative New Packaging.

#### **LED Mini Blade Fuse Assortment Pack - 16pcs**

Part Number Pack Contains

MIND-KIT2 MIND (2pcs): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Bonus Fuse Puller (Ipc): FP-7AM



**LED Mini** 







**Front** 

#### **LED Auto Blade Fuse Assortment Pack - 16pcs**

Part Number Pack Contains

ATFD (2pcs): 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A ATFD-KIT2

Bonus Fuse Puller (Ipc): FP-7AM



**Fuse Puller** 

Bonus **Fuse Puller** 



**LED Auto** 



**Product Details** 



5 Cavities



### FUSE ASSORTMENT KITS - MICRO2, MICRO3 & MCASE



- Genuine original equipment fuses.
- Clear plastic re-sealable container.
- Designed and kitted in Australia. · Custom kits are also available.
- Suit workshop, store or mobile van.
- Product information on label.

### Micro 2 Blade Fuse Kit - 90pcs

Part Number MICR2-KIT

### Kit Contains

Micro2 Blade Fuses;

MICR2 (10pcs): 5A, 7.5A, 15A, 25A, 30A

MICR2 (20pcs): 10A, 20A



Micro<sub>2</sub>





### Micro2 & Micro3 Blade Fuse Kit - 55pcs

Part Number MICR2+3-KIT

### Kit Contains

Micro2 Blade Fuses;

MICR2 (5pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A



MICR3 (5pcs): 5A, 7.5A, 10A, 15A



Micro2



Micro3

Micro Fuse Range Kit - 136pcs

Part Number MICROASST-KIT

Kit Contains Micro2 Blade Fuses;

MICR2 (10pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

### Micro3 Blade Fuses;

MICR3 (10pcs): 5A, 7.5A 10A, 15A

### Mcase Unslotted Fuse Links;

MJC (5pc): 15A, 20A, 25A, 30A, 40A

Micro2 / Micro3 Fuse Puller:

00970025 (Ipc)



Micro2

Micro<sub>2</sub>



Micro3



INN

Mcase Unslotted



**Fuse Puller** 

NEW

### Micro Plus Fuse Range Kit - 146pcs

Part Number MICROPLUS-KIT

### Kit Contains

Micro2 Blade Fuses;

MICR2 (10pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

### Micro3 Blade Fuses;

MICR3 (10pcs): 5A, 7.5A 10A, 15A

### Mcase Slotted Fuse Links;

MCPS (5pc): I5A, 20A, 25A, 30A, 40A, 50A, 60A

### Micro2 / Micro3 Fuse Puller;

00970025 (Ipc)





Micro3



**Mcase Slotted** 



**Fuse Puller** 







### FUSE ASSORTMENT KITS - AGC, LOW PROFILE MINI & MINI



- Features: Genuine original equipment fuses.
  - Clear plastic re-sealable container.
  - Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

### AGC 3AG Fuse Kit - 100pcs

Part Number AGC-KIT

### Kit Contains AGC / 3AG Fuses:

AGC (10pcs): IA, 3A, 5A, 7.5A AGC (10pcs):10A, 15A, 20A AGC (10pcs): 25A, 30A, 35A Note: Imperial (I-I/4" x I/4")

Metric (6.35 x 31.8mm)







### Low Profile Mini Blade Fuse Kit - 100pcs

**UPDATED** 

### Part Number LPM-KIT

Kit Contains Low Profile Mini Blade Fuses; LPM (10pcs): 3A, 5A, 7.5A LPM (10pcs): 15A, 25A, 30A LPM (20pcs): 10A, 20A



(Ipc): FP-7AM







**Fuse Puller** 



### Mini Blade Fuse Kit - 100pcs

Part Number MINI-KIT

### Kit Contains

Mini Blade Fuses: MIN (10pcs): 3A, 5A, 7.5A MIN (10pcs):15A, 25A, 30A

MIN (20pcs): 10A, 20A







### **LED Mini Blade Fuse Kit - 80pcs**

Part Number MIND-KIT

Kit Contains LED Mini Blade Fuses; MIND (10pcs): 3A, 5A, 7.5A, 10A, MIND (10pcs):15A, 20A, 25A, 30A

**Bonus Fuse Puller;** 

(Ipc): FP-7AM









**Fuse Puller** 



### **FUSE ASSORTMENT KITS - AUTO & MAXI BLADE**



- Features: Genuine original equipment fuses.
  - Clear plastic re-sealable container.
  - Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

### **Auto Blade Fuse Kit - 100pcs**

### Part Number AUTO-KIT

### Kit Contains Auto Blade Fuses;

ATOF (10pcs): 3A, 5A, 7.5A ATOF (10pcs): 15A, 25A, 30A ATOF (20pcs): 10A, 20A







### **LED Auto Blade Fuse Kit - 90pcs**

Part Number ATFD-KIT

### Kit Contains

**LED Auto Blade Fuses**; ATFD (10pcs): 3A, 5A, 7.5A ATFD (10pcs): 10A, 15A, 20A

ATFD (10pcs): 25A, 30A



(Ipc): FP-7AM





Fuse Puller





NEW

### Maxi Blade Fuse Kit - 32pcs

Part Number MAXI-KIT

### Kit Contains Maxi Blade Fuses;

MAX (4pcs): 20A, 30A, 40A MAX (4pcs): 50A, 60A, 70A

MAX (4pcs): 80A, 100A







### **LED Maxi Blade Fuse Kit - 17pcs**

Part Number MAXD-KIT

Kit Contains LED Maxi Blade Fuses; MAXD (2pcs): 20A, 30A, 40A MAXD (2pcs): 50A, 60A, 70A

MAXD (2pcs): 80A, 100A

Fuse Puller; (Ipc): 00970026





**Fuse Puller** 









NEW

### FUSE ASSORTMENT KITS - MCASE'S, L.P JCASE, JCASE



- Features: Genuine original equipment fuses.
  - Clear plastic re-sealable container.
  - Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

### **Mcase Slotted Fuse Kit - 29pcs**



### Part Number

MCASEPS-KIT

### Kit Contains Mcase Slotted Fuses;

MCPS (4pcs): 15A, 20A, 25A MCPS (4pcs): 30A, 40A, 50A,

MCPS (4pcs): 60A

Fuse Puller; (lpc): 00970054





**Fuse Puller** 





### Mcase Unslotted Fuse Kit - 50pcs

Part Number MCASE-KIT

### Kit Contains

Mcase Unslotted Fuses: MJC (10pcs): 15A, 20A, 25A MJC (10pcs): 30A, 40A







### Low Profile Jcase Fuse Kit - 25pcs

Part Number LPJCASE-KIT25

Kit Contains Low Profile Jcase Fuses; LJC (4pcs): 20A, 25A, 30A LIC (4pcs): 40A, 50A, 60A

Fuse Puller: (Ipc): 00970053





**Fuse Puller** 





NEW

NEW

### Jcase Fuse Kit - 15pcs

Part Number ICASE-KIT15

Kit Contains Icase Fuses:

TF (2pcs): 20A, 40A, 50A, 60A JTF (4pcs):30A

TF (Ipcs): 70A, 80A

Fuse Puller: (Ipc): 00970053





**Fuse Puller** 







### FUSE ASSORTMENT KITS - MIDI, MEGA & BATTERY FUSE



- Features: Genuine original equipment fuses.
  - Clear plastic re-sealable container.
  - Australian designed and kitted locally.
- Custom kits are also available upon request.
- Suit trade workshop, store or mobile van.
- Detailed product information on rear side.

### Midi Fuse Kit - 20pcs

### Part Number MIDI-KIT2



### Kit Contains Midi Fuses:

MID (2pcs): 30A, 40A, 50A, 60A MID (2pcs): 70A, 80A, 100A MID (2pcs): 125A, 150A, 200A





### Midi Fuse & Fuse Block Installer Kit - 51pcs



### Part Number MIDIPRO-KIT

### Kit Contains

### Midi Fuses:

MID (4pcs): 23A, 30A, 40A MID (4pcs): 50A, 60A, 70A MID (4pcs): 80A, 100A, 125A MID (4pcs): 150A, 175A, 200A



MIDFBB (2pcs): 125A Rated 0101499 (Ipc): 200A Rated











**MIDFBB** 

### Mega Fuse Kit - 20pcs

### Part Number MEGA-KIT2

### Kit Contains Mega Fuses:

MEG (2pcs): 80A, 100A, 125A MEG (2pcs): 150A, 175A, 200A MEG (2pcs): 225A, 250A, 300A

MEG (2pcs): 500A





### **Battery Fuse Kit - 28pcs**

### Part Number MRBF-KIT

### Kit Contains

### Marine Rated Battery Fuses;

MRBF (2pcs): 30A, 40A, 50A, 60A MRBF (2pcs): 75A, 80A, 100A MRBF (2pcs): 125A, 150A, 175A MRBF (2pcs): 200A, 225A, 250A, 300A









### **MULTI FUSE ASSORTMENT KITS**



- Genuine original equipment fuses.
- Designed and assembled locally.
- Custom kits are also available upon request.
- Contact Prolec for further information.

### **Blade Fuse Kit - 300pcs**

Part Number BLADE-KIT300 Kit Contains

Low Profile Mini Fuses;

LPM (10pcs): 7.5A, 10A, 15A, 20A, 25A, 30A

Mini Fuses:

MIN (20pcs): 7.5A, 10A, 15A, 20A, 25A, 30A

**Auto Fuses:** 

ATOF (20pcs): 5A, 10A, 15A, 20A, 25A, 30A



Low Profile Mini



Mini Auto





### Maxi, Jcase & Fuse Link Kit - 36pcs

Part Number LINK-KIT36

Kit Contains

Maxi Blade Fuses;

MAX (2pcs): 20A, 30A, 40A MAX (4pcs): 50A, 60A, 80A

Icase Fuse Links: ITF (2pcs): 30A

ASF Fuse Links;

ASF (2pcs): 30A, 60A ASF (4pcs): 40A

BTF Fuse Links;

BTF (2pcs): 60A, 80A, 100A



Maxi



ASF



Icase



BTF



NEW

NEW



304 2 255 I

208 2

### **Commercial & Fleet Fuse Kit - 50pcs**

Part Number CFA-KIT

Kit Contains

Mini (2pcs): 2A, 3A, 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Auto Fuses (2pcs): 5A, 7.5A, 10A, 15A, 20A, 25A, 30A

Maxi Fuses (2pcs): 20A, 25A, 30A, 40A, 50A

Midi Fuses (Ipc): 30A, 100A, 125A, 150A, 175A, 200A

Mega Fuses (Ipc): I50A, 250A

Bonus Fuse Pullers (Ipc): Mini / Auto, (Ipc): Maxi









Auto



Maxi



FUSE PULLER

MINI / ATO MAXI

EA 2 2NA 2 2NA 1 199A 1 7.5A 2 2NA 2 199A 1 179A 1 16A 2 30A 2 12SA 1 206A 1

160A 1

2A 2 10A 3A 2 15A 5A 2 20A 7.5A 2 25A



Midi Mega





### **FUSE ASSORTMENT CADDY 5 TRAY - 275PCS**

### Bussmann

Fuse caddies offer a full array of fuses for automotive repair facilities to meet your automotive fuse replacement needs. Each caddy is specially stocked to cover the majority of cars, light trucks, SUVs and RVs on the road today. Easy to transport with folding handle and security latch. Replacement trays & individual product refills can be ordered as required.

### Features:

- The 5 kit capacity caddy contains 275 fuses in popular ratings.
- 4 x ten-cavity kits contain ATM, low-profile ATM, ATC and MAX fuses.
- Ix five-cavity kits contains FMX fuses.

Part Number FUSE-CADDYI **Dimensions in MM** 188 (W) x 114 (D) x 198 (H)





ATM Mini Fuses



ATM-LP Low Profile Mini Fuses



ATC Auto Fuses



MAX Maxi Fuses



FMX Jcase Fuses

Bussmann

### **FUSE ASSORTMENT CADDY 10 TRAY - 372PCS**

### Features

- $\bullet$  The 10 kit capacity caddy contains 372 fuses in popular ratings.
- 7 x kits contain an assortment of ATM, Low-Profile ATM, ATC, MAX, FMM, Low-Profile FMX, FLF, FLS, ATR, ATL Micro fuses.
- 3 x kits contain FMX, FLB, FLD, FLM, AMG & AMI fuses.
- Together, all ten kits meet virtually any automotive blade and high amp fuse replacement need.

### Part Number FUSE-CADDY2

**ATM** 

**Mini Fuses** 

### **Dimensions in mm** 376 (W) x | 14 (D) x | 198 (H)



ATM-LP
Low Profile Mini Fuses



ATC Auto Fuses



MAX Maxi Fuses



ATR & ATL Micro 2 & 3



FMM & FMX-LP Mcase U/S, L.P.Jcase



FLF & FLS
Female Fusible Links



FMX Icase Fuses



FLB, FLD & FLM Male Fusible Links



AMI & AMG Midi & Mega Fuses



Winner of the Australian Auto Aftermarket Innovation Award for Most Innovative New Packaging.



Scan this QR Code for more information



QR Code: 3002



### **BLADE FUSE, FUSIBLE LINK & BLADED BREAKER PULLERS**



### Features

- Fuse pullers allow quick and easy removal of a fuse.
- They can also be used to replace a fuse.

Part Number	Extracts Various Fuse Types & Bladed Circuit Breakers
00358	Mini, Low Profile Mini, Auto, MaxiCompact Fuses
FP-7AM	Mini, Low Profile Mini & Auto Blade Fuses
00970025	Micro2 & Micro3 Blade Fuses
00970026	Maxi Blade Fuses (Previously # 097027)
00970054	Mcase Slotted & Unslotted Fusible Links
00970053	Jcase, Low Profile Jcase, Mini & Low Profile Mini Fuses
32013BS	Mini, Low Profile Mini Fuses & Mini Circuit Breakers



Pack Size: 1, 10, 100



### **CARTRIDGE & AUTO BLADE FUSE PULLERS**

### Bussmann

### **Features**

- Quick, safe and easy way to extract fuses.
- FP-A3 extracts both cartridge and auto blade fuses.

### Part

Number Extracts Various Fuse Types
FP-A3 Cartridge 'AG' 6.35mm Dia. & Auto Fuse

FP-2 Cartridge 'AB' 10.3mm Diameter Fuse

Pack Size: 1, 10, 100
Auto
Blade Fuse







AGC / SFE 5AB / Midget EV Cartridge Fuse Cartridge Fuse

### **BLADE FUSE PULLER & FUSE TESTER**

### **Features**

- Combination fuse puller and fuse tester.
- Designed for easy one-handed use.
- Prevents fuse clip terminal & fuse holder damage.
- LED glows when fuse is good.
- Replaceable battery included.
- Tests Low Profile Mini, Mini, Auto, Maxi and various dimension Glass Cartridge Fuses.

Part Number Extracts Various Fuse Types Low Profile Mini, Mini, Auto & Maxi

Voltage: 24VDC max. Pack Size: 1, 10, 100

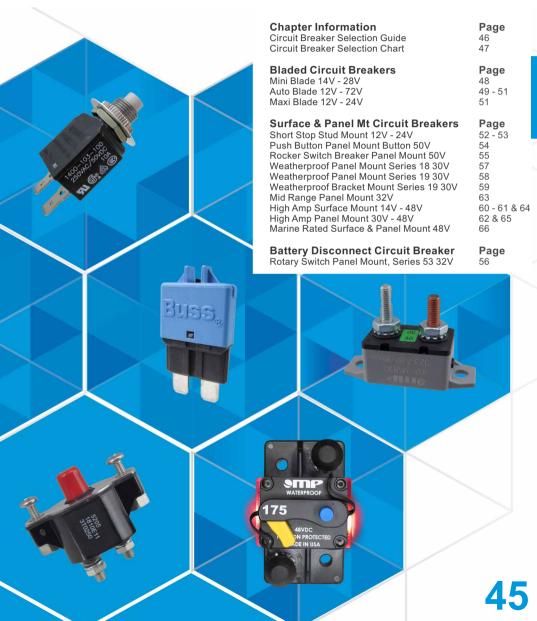
Notes: Do NOT test electrical fuses in the fuse panel.





# Circuit Breakers & Accessories

### Innovation is where we begin.



### **CIRCUIT BREAKER SELECTION GUIDE**

Series & Type	Reset	Ampere	Voltage	I.R. at Voltage	Ignition	IP	Page
71	Action	Range			Protect	Rating	
211 - Mini Blade	Automatic	5A to 30A	14Vdc	I 50A to 450A at I 4Vdc	-	-	48
212 - Mini Blade	Modified	5A to 30A	14Vdc	150A to 450A at 14Vdc	-	-	48
233 - Mini Blade	Manual	5A to 30A	28Vdc	100A to 300A at 28Vdc	_	-	48
227 - Auto Blade	Manual	5A to 30A	28Vdc	2kA at 28Vdc	Ign.Pro	-	49
435T -Auto Blade	Manual / PTT	250mA to 10A	72Vdc	2kA at 72Vdc	-	-	49
221 - Auto Blade	Automatic	5A to 30A	I4Vdc	150A to 450A at 14Vdc	Ign.Pro	-	50
222 - Auto Blade	Modified	5A to 30A	14Vdc	150A to 450A at 14Vdc	Ign.Pro	-	50
AT I - Auto Blade	Automatic	5A to 30A	28Vdc	2kA at 28Vdc	Ign. Pro	-	50
UCB - Auto Blade	Automatic	6A to 30A	12Vdc	TBA	-	-	51
191 - Maxi Blade	Automatic	8A to 50A	14Vdc	150A to 750A at 14Vdc	Ign.Pro	-	51
192 - Maxi Blade	Modified	8A to 40A	14Vdc	150A to 600A at 14Vdc	Ign.Pro	-	#
193 - Maxi Blade	Manual	8A to 50A	28Vdc	150A to 750A at 14Vdc	Ign.Pro	-	51
194 - Maxi Blade	Automatic	8A to 50A	28Vdc	150A to 750A at 14Vdc	Ign.Pro	-	51
195 - Maxi Blade	Modified	8A to 40A	28Vdc	150A to 600A at 14Vdc	Ign.Pro	-	#
321 - Stud Mt.	Automatic	3A to 50A	12Vdc	2.5kA at 12Vdc	Ign.Pro*	IP66 ^	53
323 - Stud Mt.	Manual	3A to 50A	24Vdc	2.5kA at 12Vdc	Ign.Pro*	IP66 ^	53
121 - Stud Mt.	Automatic	5A to 50A	14Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	IP66 ^	52
122 - Stud Mt.	Modified	5A to 50A	14Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	-	#
I 23 - Stud Mt.	Manual	5A to 50A	28Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	IP66	52
124 - Stud Mt.	Automatic	5A to 50A	28Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	IP66 ^	#
125 - Stud Mt.	Modified	5A to 50A	28Vdc	1.5kA - 2.5kA at 12Vdc*	Ign.Pro*	-	#
14 - Panel Mt.	Manual	3A to 20A	50Vdc	IkA at 50Vdc, 3kA at 32Vdc	Ign.Pro	-	54
15 - Panel Mt.	Manual	3A to 40A	50Vdc	IkA at 50Vdc	Ign.Pro	-	54
16 - Panel Mt.	Manual	500mA to 70A	50Vdc	IkA at 50Vdc, 3kA at 32Vdc	Ign.Pro	-	#
24 - Panel Mt.	Manual / PTT	100mA to 30A	50Vdc	TBA	-	IP54*	55
53 - Panel Mt.	Manual / PTT	10A to 60A	32Vdc	3kA at 14Vdc	Ign.Pro	IP67	56
1801 - Panel Mt.	Automatic	5A to 40A	32Vdc	3kA at 32Vdc	Ign.Pro	IP66	#
1811 - Panel Mt.	Automatic	10A to 70A	32Vdc	5kA at 32Vdc	Ign.Pro	IP66	#
1800 - Panel Mt.	Manual	5A to 40A	32Vdc	3kA at 32Vdc	Ign.Pro	IP66	57
1810 - Panel Mt.	Manual	10A to 70A	32Vdc	5kA at 32Vdc	Ign.Pro	IP66	57
19A - Panel Mt.	Automatic	25A to 200A	30Vdc	2.5kA at 30Vdc	Ign.Pro	IP69K	58
19M - Panel Mt.	Manual	25A to 200A	30Vdc	2.5kA at 14Vdc*	Ign.Pro	IP69K	58
251 - Panel Mt.	Automatic	10A to 50A	32Vdc	2.5kA at 32Vdc	Ign.Pro	IP66	63
255 - Panel Mt.	Manual / PTT	10A to 50A	32Vdc	2.5kA at 32Vdc	Ign.Pro	IP66	63
171 - Panel Mt.	Automatic	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	62
171 - Surface Mt.	Automatic	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	60
171 - Panel Mt.	Automatic	225A to 300A	12Vdc	2.5kA at 14Vdc	Ign.Pro	IP67	62
171 - Surface Mt.	Automatic	225A to 300A	12Vdc	2.5kA at 14Vdc	Ign.Pro	IP67	60
175 - Panel Mt.	Manual / PTT	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	62
175 - Surface Mt.	Manual / PTT	25A to 200A	48Vdc*	3kA at 30Vdc*	Ign.Pro	IP67	60-6
174 - Panel Mt.	Manual	225A to 250A	12Vdc	I.5kA at I4Vdc	Ign.Pro	IP67	62
174 - Surface Mt.	Manual	225A to 250A	12Vdc	I.5kA at I4Vdc	Ign.Pro	IP67	60-6
875-Smd & Pnl Mt		25A to 250A	48Vdc	5kA at 14Vdc	Ign.Pro	IP67	#
181 - Panel Mt.	Automatic	25A to 150A	30Vdc	3kA at 30Vdc	Ign.Pro	IP67	#
181 - Surface Mt	Manual	25A to 150A	30Vdc	3kA at 30Vdc	Ign.Pro	IP67	64
184-Smd & Pnl Mt		25A to 150A	42Vdc	3kA at 30Vdc*	Ign.Pro	IP67	#
185 - Panel Mt.	Manual / PTT	25A to 150A	42Vdc	3kA at 30Vdc*	Ign.Pro	IP67	#
185 - Surface Mt.	Manual / PTT	25A to 150A	42Vdc	3kA at 30Vdc*	Ign.Pro	IP67	#
285 - Panel Mt.	Manual / PTT	25A to 150A	48Vdc	3kA at 48Vdc	Ign.Pro	IP67	65
285 - Surface Mt.	Manual / PTT	25A to 150A	48Vdc	3kA at 48Vdc	Ign.Pro	IP67	64
187 - Panel Mt.	Manual / PTT	25A to 130A	48Vdc*	5kA at 14Vdc*	Ign.Pro	IP66	66
187 - Surface Mt.	Manual / PTT	25A to 200A 25A to 200A	48Vdc*	5kA at 14Vdc*	Ign.Pro	IP66	66
107 - Juliace Fit.	i iuliuai/ i I I	23/10 200/A	.0140	Contact sales f			

### ABYC Definition of Ignition Protection (Ign.Pro) E11.4.15.

(\*) verification. The design and construction of a device such that under design operating conditions: (^)Plastic cover only. (a) It will not ignite a flammable hydrocarbon mixture surrounding the device when an ignition source causes an internal explosion, or (b) It is incapable of releasing sufficient electrical or thermal energy to ignite a hydrocarbon mixture, or (c) The source of ignition is hermetically sealed.

What does this mean? Ignition Protected devices are designed to prevent the release of electrical or thermal energy (ie. sparks or heat) which could start a fire when operating in environments containing a mixture of air with gasoline, propane or CNG vapour. So when replacing or installing electrical equipment in these environments, make sure the product is specifically designated "Ignition Protected". As you can see in the above table, there are very few fuses that will meet this requirement, however we have a large range of circuit breakers that are Ignition Protected.



### **CIRCUIT BREAKER SELECTION CHART**

With an ever growing product range sometimes it can be hard to describe which circuit breaker you need. So the following visual identification chart can help you identify some of the more common styles available. For a more comprehensive range please refer to the website www.prolecproducts.com which showcases over 300 different product images.

Fuse Clip Cartridge CBF AGC Replacement Type II (Contact sales)



Low Profile Mini Type III (Contact sales)



Mini Blade Auto Blade Snap Blade Type I, II & III Type I (Page 48) (Page 51)



Auto Blade Low Profile Type I (Page 50)



Auto Blade Type I & II (Page 50)



Auto Blade Type III (Page 49)



Auto Blade Type III PTT (Page 49)



Maxi Blade Type I & III (Page 51)





**Short Stop** 10 Type I & III (Pages 52-53)





Push Button 3A-40A Type III (Page 54)



Push Button 0.5A-70A 12 Type III (Contact Sales)



Rocker Style Panel Type III PTŤ (Page 55)



Rotary Style Panel Type III PTT (Page 56)





Series 18 Type I & III (Page 57)



16 Series 19 Type I & III (Page 58)



Series 19 With Bracket Type I & III (Page 59)



**Hi Amp Surface** 18 Type I & III PTT (Pages 60 & 64)



Hi Amp Surface SxS Type III PTT (Page 61)



20 Mid Range Panel Type I & III PTT (Page 63)



Hi Amp Panel Type I & III PTT (Page 62 & 65)



**Marine Rated** Type III Switchable (Page 66)







### **CIRCUIT BREAKERS - MINI BLADE 14V**

14VDC	14VDC	
Automatic TI	Modified TII	Ampere
Part Number	Part Number	Rating
21105-00	21205-00	5A
21175-00	21275-00	7.5A
21110-00	21210-00	I0A
21115-00	21215-00	I5A
21120-00	21220-00	20A
21125-00	21225-00	25A
21130-00	21230-00	30A

Voltage: I4VDC

I. R.: 150A at 14VDC (5A to 10A) 225A at 14VDC (15A) 300A at I4VDC (20A) 450A at I4VDC (25A to 30A)

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C Pack Size: 1, 10, 100pcs Approvals: SAE J553 RoHS

### **RELATED PRODUCTS**



Mini Breaker Puller

(see p.44)



(see p.77)

Inline Holder



(see p.120 - 146)

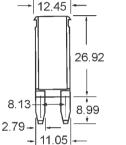
Bussmann

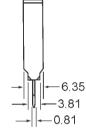


Automatic TI



**Modified TII** 





### **CIRCUIT BREAKERS - MINI BLADE 28V**

- Cover is colour coded to amperage ratings.
- Matches Mini fuse footprint, 2.8mm wide blades.
- Manual reset button on top face.

28VDC		
Manual TIII	Ampere	Body
Part Number	Rating	Colour
23305-00	5A	Tan 🔳
23375-00	7.5A	Brown 🔳
23310-00	I0A	Red
23315-00	I5A	Blue
23320-00	20A	Yellow
23325-00	25A	White $\square$

30A

Voltage: 28VDC

23330-00

I. R.: 100A at 28VDC (5A to 10A) 150A at 28VDC (15A) 200A at 28VDC (20A) 300A at 28VDC (25A to 30A) Operating Temp: -40°C to 85°C

Storage Temp: -40°C to 125°C Pack Size: 1, 10, 100pcs Approvals: SAE J553

**RELATED** PRODUCTS:







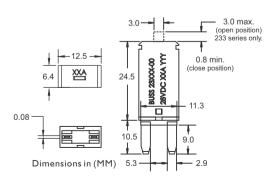
Green |

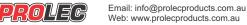
**PDM** (see p.120 - 146)

### **Bussmann**



Manual TIII





### **CIRCUIT BREAKERS - AUTO BLADE L.P 28V**

### Bussmann

### Features:

- Low profile design.
- Ignition Protected.
- Colour coded body matches amperage ratings.
- Matches auto fuse footprint of 5.2mm wide blades making it compatible with existing auto fuse fuse blocks and panels.
- Manual reset button with protective walls.

### 28VDC

Manual TIII	Ampere	Body
Part Number	Rating	Colour
22705-00	5A	Tan 🔳
22706-00	6A	Green
22775-00	7.5A	Brown
22710-00	I0A	Red
22715-00	I5A	Blue
22720-00	20A	Yellow
22725-00	25A	White
22730-00	30A	Green

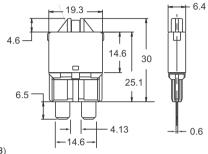
Voltage: 28VDC I.R.: 2000A @ 28VDC Reset Mechanism: Type III, Manual Reset. Body: UL-Rated 94V-0 thermoplastic. Terminals: Tin plated copper alloy. Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C

Pack Size: 1, 10, 100, 250

Holders: Inline, Blocks, Panels & Fused terminal blocks (Page 148)

Approvals: SAE J553, J1171.





Dimensions are in MM

### **CIRCUIT BREAKERS - AUTO BLADE 72V**

### Features:

- Low to middle amperages.
- Suitable for both AC and DC Voltage.
- Manual push on push off button.
- Reliable snap-acting and trip-free mechanism.
- Labeling feature. Equivalent to E-T-A 1180

### 72VDC

Manual TIII - PTT	Ampere
Part Number	Rating
435T0025	250mA
435T0050	500mA
435T0100	IA
435T0200	2A
435T0300	3A
435T0400	4A
435T0600	6A
435T0800	8A
435T1000	I0A

**Voltage:** 250VAC / 72VDC (UL & CSA), 250VAC / 65VDC (VDE)

I.R.: 2000A @ rated voltage (UL)

Reset Mechanism: Type III, Manual Reset / Manual Trip Typical life: 6,000 operations at 1 x In (low-inductance)

3,000 operations at 1 x ln (inductive) 500 operations at 2 x ln (inductive)

Operating Temp: -20°C to 60°C

Pack Size: Stock lines I pc, indent items 20pcs.

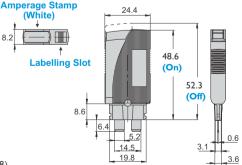
Holders: DIN rail mount fused terminal blocks (Page 148)

Approvals: (1) (1) CBE standard EN/IEC 60934

PROLEG







Dimensions are in MM

### **CIRCUIT BREAKERS - AUTO BLADE TYPE**

### Russmann

IGNITION

12VDC	12VDC	
Automatic TI	Modified TII	Ampere
Part Number	Part Number	Rating
22105-400	22205-400	5A
22175-400	22275-400	7.5A
22110-400	22210-400	I0A
22115-400	22215-400	I5A
22120-400	22220-400	20A
22125-400	22225-400	25A
22130-400	22230-400	30A

Voltage: I4VDC

I. R.: 150A at 14VDC (5A to 10A) 225A at 14VDC (15A) 300A at 14VDC (20A) 450A at I4VDC (25A to 30A)

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C Material: UL 94-V0 Thermoplastic housing. Type I (Gold Metal Cover),

Type II (Silver Metal Cover) Features: Ignition Protected

Holders: Blocks

Pack Size: Stocked lines 1, Indentitems 250pcs.

Approvals: SAE |553, |1171

### **RELATED** PRODUCTS:



Clips & Bases (see p.68)



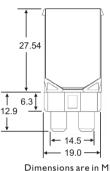
Inline Holders (see p.77)



**Automatic TI** 



**Modified TII** 



Dimensions are in MM



**NEW** IGNITION

### **CIRCUIT BREAKERS - AUTO BLADE LOW PROFILE** PROLEG

Fuse Panels

(see p.87 & 92)

### 24VDC

Automatic TI	Ampere	Body
Part Number	Rating	Colour
AT1-005	5A	Tan 🔳
AT1-075	7.5A	Brown 🔳
AT1-010	I0A	Red
AT1-015	I5A	Blue
AT1-020	20A	Yellow
AT1-025	25A	White $\square$
AT1-030	30A	Green

Voltage: 28VDC I. R.: 2000A at 28VDC

Reset Mechanism: Type I, Automatic Reset

Operating Temp: -30°C to 75°C Storage Temp: -30°C to 105°C

Material: UL 94-V0 Thermoplastic housing. Features: Ignition Protected, Low Profile Housing

Holders: Blocks

Pack Size: 1, 10, 100, 250pcs. Compliance: SAEJ553, SAEJ1171

### **RELATED PRODUCTS:**



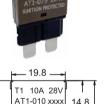
Clips & Bases (see p.68)

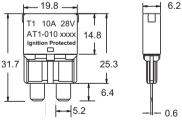


**Inline Holders** (see p.77)



**Fuse Panels** (see p.87)





Dimensions are in MM



**Fuse Blocks** (see p.92)



### **CIRCUIT BREAKERS - AUTO BLADE TYPE**

### Bussmann

### Features:

- Use in place of the ATO and ATC type fuses.
- Colour coded cover to match amperage ratings.
- UCB breakers feature "snap-off" universal blades to fit tight fuse block spacing or recessed fuse terminals.

### 12VDC

Automatic TI	Ampere	Body
Part Number	Rating	Colour
UCB-6	6A	Plain 🔳
UCB-8	8A	Brown
UCB-10	I0A	Red
UCB-15	I5A	Blue
UCB-20	20A	Yellow
UCB-25	25A	Plain 🔳
UCB-30	30A	Green

Voltage: I2VDC

Reset Mechanism: Type I, Automatic Reset Termination: Auto fuse footprint. Brass.

Pack Size: 1, 5, 10, 100, 250 Approvals: SAE 1553

# 21.33 — 17.80 — 10.5 Dimensions are in MM

### **CIRCUIT BREAKERS - MAXI BLADE TYPE**

12VDC	24VDC	12/24VDC	
Automatic TI	Automatic TI	Manual TIII	Ampere
Part Number	Part Number	Part Number	Rating
19108-01M	19408-01M	19308-01M	8A
19110-01M	19410-01M	19310-01M	I0A
19115-01M	19415-01M	19315-01M	I5A
19120-01M	19420-01M	19320-01M	20A
19125-01M	19425-01M	19325-01M	25A
19130-01M	19430-01M	19330-01M	30A
19135-01M	19435-01M	19335-01M	35A
19140-01M	19440-01M	19340-01M	40A
19150-01M	19450-01M	19350-01M	50A

**Voltage:** 14VDC (191 & 193 series) 28VDC (193 & 194 series)

I. R.: 150A at 14VDC (8A to 10A), 225A at 14VDC (15A) 300A at 14VDC (20A), 450A at 14VDC (25A to 30A) 600A at 14VDC (35A to 40A), 750A at 14VDC (50A)

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C Features: Ignition Protected

Pack Size: Stock lines 1 pc, indent items 250 pcs Termination Notes: Also available with auto blade terminals. Contact sales for further information.

Notes: Metal cover aids heat dissipation.

**Option:** Manual reset button available in two colour choices. Part Number suffix - I (Black) and -2 (White).

Approvals: SAE J553, J1171

### **RELATED PRODUCTS:**







Covers and Brackets (see p.140)

### Bussmann

IGNITION

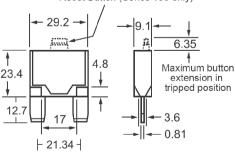


Automatic TI
(No Button)



Manual TIII
(With Reset Button)

Reset Button (Series 193 only)



Blade Width 12.7

Dimensions are in MM



Applications include battery chargers, 4x4's, caravans, RV's, trucks, buses, trolling motors, etc.











12VDC Automatic TI	12VDC - 24VDC Manual TIII	I 2VDC Automatic T I	12VDC Automatic T1	
Plastic Cover	Plastic Cover	Metal Cover	Metal Cover	
Parallel Bracket	Parallel Bracket	Parallel Bracket	Cross Bracket	Ampere
Part Number	Part Number	Part Number	Part Number	Rating
121A05-B2P	123A05-B2P	121A05-B2M	121A05-A2M	5A
121A08-B2P	I 23A08-B2P	121A08-B2M	121A08-A2M	8A
121A10-B2P	123A10-B2P	121A10-B2M	121A10-A2M	I0A
121A15-B2P	123A15-B2P	121A15-B2M	121A15-A2M	I5A
121A20-B2P	I 23A20-B2P	121A20-B2M	121A20-A2M	20A
121A25-B2P	I 23A25-B2P	121A25-B2M	121A25-A2M	25A
121A30-B2P	123A30-B2P	121A30-B2M	121A30-A2M	30A
121A35-B2P	123A35-B2P	121A35-B2M	121A35-A2M	35A
121A40-B2P	123A40-B2P	121A40-B2M	121A40-A2M	40A
121A50-B2P	123A50-B2P	121A50-B2M	121A50-A2M	50A

Voltage: 14VDC (121 Series), 28VDC (123 & 124 series)

I.R.: 2.5kA @ 12VDC (Branch circuit protection). Contact sales for further info.

Operating Temperature: -40°C to 85°C. Storage Temp. -40°C to 125°C

Features: Ignition Protected

Ingress Protection Rating: IP66\* (Plastic cover only, except terminals).

Mounting Hole: Bracket mounting holes 4.98 mm diameter.

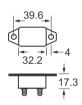
**Pack Size:** Stock lines 1 pc, indent items 250 pcs. **Notes:** Keps lock nuts included with circuit breakers.

Approvals: SAE | 1553, | 1171

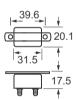
### Terminal Specs: 2 x #10-32 studs



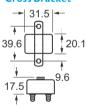
### Plastic Cover Parallel Bracket



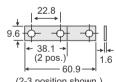
### Metal Cover Parallel Bracket



### Metal Cover Cross Bracket



Connect the short stud to battery (+), connect the long stud to auxiliary circuit(s).



(2-3 position shown.) Hole Slot 5.08 x 7.36mm

### **RELATED PRODUCTS:**

Part Number	Description
CBBP	Clear Cover Parallel TIII
CBBR	Red Terminal Boot PVC
CBBB2	Busbar 2 Position Brass Tin
CBBB3	Busbar 3 Position Brass Tin
CBBB4	Busbar 4 Position Brass Tin
CBBB5	Busbar 5 Position Brass Tin
CBBB6	Busbar 6 Position Brass Tin
CBBB8	Busbar 8 Position Brass Tin

### Clear Cover











Notes: CBBP covers are IP64 water resistant. They protect the manual reset circuit breaker button against dust and water. The CBBR PVC boots protect terminal connections from accidental shorts. Use to comply with ABYC E-9, USCG 33pl & ISO 10133. Fits breakers with or without brackets. Both T1 & TIII. Cable entry 18-10AWG. Busbars suitable for breakers fitted with a parallel bracket or without bracket.



### **CIRCUIT BREAKERS - SERIES 32 COLOUR CODED**



### Features:

• Three mounting styles: Parallel mounting bracket, cross bracket or no bracket.

• Three reset options: automatic (TI), modified reset (TII) and manual reset (TIII).

• Single pole thermal circuit breakers are available in ratings 5 to 50 Amps.

• Laser etched brand, part number, amperage, voltage and batch code.

• Includes colour coded amperage stamped sticker.

12VDC Automatic TI	12-24VDC Manual TIII	12-24VDC Manual TIII	Colour Code
Parallel Brkt	Parallel Brkt	Splash Proof Kit	Ampere
Part Number	Part Number	Part Number	Rating
321-A2P-05	323-A2P-05	CB3K-05	5A
321-A2P-10	323-A2P-10	CB3K-10	I0A
321-A2P-15	323-A2P-15	CB3K-15	I5A
321-A2P-20	323-A2P-20	CB3K-20	20A
321-A2P-25	323-A2P-25	CB3K-25	25A
321-A2P-30	323-A2P-30	CB3K-30	30A
321-A2P-35	323-A2P-35	CB3K-35	35A
321-A2P-40	323-A2P-40	CB3K-40	40A
321-A2P-50	323-A2P-50	CB3K-50	50A

Voltage: I2VDC (Type I), I2-24VDC (Type III).

I.R.: 2.5kA @ 12VDC.

Operating Temp: -10°C to 60°C Body Type: Plastic. Metal body Optional.

Features: Ignition Protected

IP Rating Automatic Reset: IP66\* (Except terminations).

IP Rating Manual Reset: IP64\* Cover & Boot Fitted (Except terminations). CB3K Kit Includes: Manual reset Type III, plastic body parallel bracket

circuit breaker, clear cover & red terminal boot in a retail clamshell package. Reset Overload Capacity: 6 x rated current.

Pack Size: Stock lines I pc. Indentitems 500 pcs.

Hardware: Keps lock nuts included. Approvals: **SAE** |553, | | | 7 | RoHS

Extended Product Options: Indent Only.

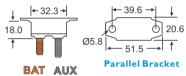
### **FACTORY PRODUCT OPTIONS AND PART NUMBER MATRIX.**

Reset Type	Mounting Options	<b>Body Type Options</b>
32 <u>I</u> (TI, 12VDC)	32x-A0 (No Bracket)	32x-AxM (Metal TI & TII)
32 <u>2</u> (TII 12VDC)	32x-AI (Cross Bracket)	32x-AxP (Plastic TI & TIII)
323 (TIII 24VDC)	32x-A2 (Parallel Bracket)	32x-AxS (Metal Sealed TI & TII)





Circuit Breaker Kit CBK-(amp) **Includes Circuit Breaker, Boot & Cover** 





Dimensions in MM

Terminal Specs 2 x # I 0-32 studs



**9MP** 25A 12VDC 321-A2P-25 521

Connect the short stud to battery (+). Connect the long stud to auxiliary circuit(s).

### RELATED PRODUCTS:

Part Number	Description
CBBP	Clear Cover Parallel TIII
CBBR	Red Terminal Boot PVC
CBBB2	Busbar 2 Position Brass Tin
CBBB3	Busbar 3 Position Brass Tin
CBBB4	Busbar 4 Position Brass Tin
CBBB5	Busbar 5 Position Brass Tin
CBBB6	Busbar 6 Position Brass Tin
CBBB8	Busbar 8 Position Brass Tin





**Clear Cover Fitted Manual Reset Button** 



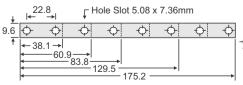
**Red Terminal Boot** Protects connections from accidental shorts







**Busbars** Common power for multiple breakers







### **CIRCUIT BREAKERS - SERIES 14 & 15**

### Features:

- Miniature size panel mount or dash mount. Snap mount also available upon request.
- Wide range of common amperages 3A-40A suitable for both AC & DC voltages.
- Custom versions with alternative termination, mounting, button and reset options are also available.



3/8"-27 Bushing	3/8"-27 Bushing	7/16"-28 Bushing	
I/4" QC Straight	# Screw - Bent 90°	I/4" QC Straight	
Terminal (TIII)	Terminal (TIII)	Terminal (TIII)	Ampere
Part Number	Part Number	Part Number	Rating
1480-103-030	1480-123-030	1400-103-030	3A
1480-103-040	1480-123-040	1400-103-040	4A
1480-103-050	1480-123-050	1400-103-050	5A
1480-103-060	1480-123-060	1400-103-060	6A
1480-103-070	1480-123-070	1400-103-070	7A
1480-103-080	1480-123-080	1400-103-080	8A
1480-103-100	1480-123-100	1400-103-100	I0A
1480-103-120	1480-123-120	1400-103-120	I2A
1480-103-150	1480-123-150	1400-103-150	I5A
1480-103-160	1480-123-160	1400-103-160	I6A
1480-103-200	1480-123-200	1400-103-200	20A
1580-101-250	1580-131-250	1500-101-250	25A
1580-101-300	1580-131-300	1500-101-300	30A
1580-101-350	1580-131-350	1500-101-350	35A
1580-101-400	1580-131-400	1500-101-400	40A



#6-32 & #8-32 Screw Bent 90° Terminal

### Weatherproof Boot Options\*

Part Number Description 1680-318-1 3/8"-27 Clear 1680-330-1 3/8"-27 Black 1600-382-1 7/16"-28 Clear 1600-382-2 7/16"-28 Black





**|**+15.7+|

Black

Rear





A Closed

Voltage: 250VAC / 50VDC. I.R.: IkA at 250VAC / 50VDC.

Reset Mechanism: Type III, Manual Reset.

**Button:** White button with black ampere rating stamp. Mounting: Panel mount - includes Pal nut & Knurl nut.

Terminals (Quick Connect): 3A-40A (6.3mm).

Terminals (Screw): 3A-20A (#6-32), 25A-40A (#8-32).

Screw terminals include screws & lock washers.

Features: Ignition Protected UL 1500.

Optional: Ampere ratings (500mA-2.5A & 45A-70A). Pack Size: Stock lines I pc, Indent items 50pcs.

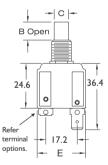
Approvals: RoHS

(5A to 20A at 250VAC / 50VDC) (1) (2) (25A to 40A at 250VAC / 50VDC) (1) (1) (1)



D → 13.47 ← 3.56 Dim. 'E' Series





**Panel Cutout** 3/8"-27 Bushing

Reset Button W/Amp Stamp





**Panel Cutout** 

7/16"-28 Bushing

Reset Button W/Amp Stamp



Dimensions in MM

Bushing 6.10 10.3 0.76 6.10 3/8"-27 7/16"-28 4.07 8.64 7.63 12.8







### **RELATED PRODUCTS:**

**Breaker Panels** Unpopulated 12 position



### **Hardware Options**







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information

Code for more

QR Code: 10001



### **CIRCUIT BREAKERS - SERIES 24 ROCKER**

- Rocker style, switchable circuit breaker offering trip-free protection.
- It operates as a latched mechanism in which the switch function (Power On / Off) is independent of the trip function (Overload Protection). The latch mechanism is extremely simple in design providing reliable operation and provides the convenience of a switch and circuit breaker in one device. Fewer components means less space and therefore a more compact equipment design. UL 1500 Ignition Protection.
- Designed for use in compact, snap-in panel mount applications. Amperage range 100mA to 30A.

### **Custom Ordering Options:**

- As a switch, circuit breaker or combined switch / breaker. One or two pole device.
- Switch guard options; (a) standard rocker, (b) rocker + splash guard, (c) standard rocker + actuator guard, (d) rocker with splash and actuator guard.
- With a variety of switch markings & colours, green, red, amber & white translucent actuators for both lit and unlit applications, as well as unlit black. With or without illumination (incandescent or neon).
- Ouick connect or screw terminations.
- Two panel cut-out sizes: 50.5 x 21.6mm (Standard), 44.5 x 21.6mm (Optional).
- Complete range of ampere ratings also available upon request; I 00mA, 200mA, 300mA, 400mA, 500mA, 600mA, 800mA, 1A, 1.25A, 1.5A, 2A, 2.5A, 3A, 3.5A, 4A, 4.5A, 5A, 6A, 7A, 8A, 10A, 12A, 14A, 15A, 16A, 18A, 20A, 25A, 30A.

### Single Pole Breaker 50VDC (TIII-PTT) Black Switch (I/O marking)

Part Number 2410-100-159-050 2410-100-159-100 2410-100-159-150 2410-100-159-200 2410-100-159-250	Ampere Rating 5A 10A 15A 20A 25A
2410-100-159-300	30A



Voltage: 250VAC / 50VDC Max.

Short Circuit Rating (IEC): 2.5A to 20A: 150A (1 pole). Reset Mechanism: Type III, Manual Reset Switchable

Dielectric Strength: 2000V (IEC)

Terminals (Combination): 2 x 2.8mm or 6.3mm Q.C.

Operating Temp: -30°C to 60°C Ingress Protection\*: IPxx Ratings

IP00 for the terminal area, per IEC 529/DIN 40050.

IP40 for the operating area. IP54 with splash protection.

Pack Size: Stocked items I pc.

Notes: \*Red illuminated switch features an incandescent light which requires 10 to 14VDC to operate.

Lamp current draw is 38mA at 12VDC.

Approvals: W UL 1077 recognised, @ certified

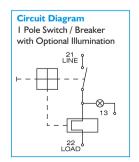
♠ (0.5A to 20A), IEC (0.5A to 20A), ((0.5A to 20A))

### **RELATED PRODUCTS:**

### **Switch Breaker Panels**

Custom made & standard 4, 6 & 8 way switch breaker panels see page 175.

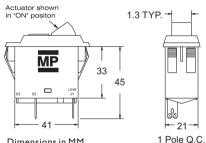




### Single Pole Breaker 10-14VDC (TIII-PTT) Red Illuminated Switch\* (no marking)

	Ampere
Part Number	Rating
2410-102-120-050	5A
2410-102-120-100	I0A
2410-102-120-150	I5A
2410-102-120-200	20A
2410-102-120-250	25A
2410-102-120-300	30A





Dimensions in MM

### **Panel Cutout** Front Face Fits panels up

to 5.3mm thick 55 50.5 n 1.8R 21.6









### **BATTERY DISCONNECT CIRCUIT BREAKER SERIES 53**



The Series 53 Branch Disconnect / Circuit Breaker incorporates into a single device both traditional battery disconnect switching (non-engine) and circuit protection. This unique combination of features in a single rotary switch allows OEM cost savings by eliminating the added components, material and labour of a separate battery switch and circuit breaker / fuse. For the end user or maintenance personnel, the Series 53 provides a quick means to disconnect traditional downstream circuit(s) while preventing unintentional battery drain or allowing for disconnected battery power during storage and/or maintenance.

### **IGNITION**























(With Inserts)



533 Series With Standoff Surface Mount

AWARDS

Voltage: 32VDC.

**Features** 

Part Number

533-P0-010

533-P0-015

533-P0-020

533-P0-030

533-P0-035

533-P0-040

533-P0-045

533-P0-050

533-P0-060

I.R. Per SAE |553 & UL 1077\* (U3) at 14 & 28VDC,

• One piece terminal stud design never loosens over time.

Ampere Rating

Designed and manufactured in USA.

IOA

15A

20A

30A

35A

40A

45A

50A

60A

• 3 Mounting options. Front panel, rear panel & surface mount. • Ignition protected and weatherproof (IP66 & IP67).

1.5kA @ 14VDC per ABYC (SAE 1553 & UL1077\* U3), 3kA @ 14VDC.

Operating Temperature: -40°C to 85°C

Mounting Options (3): Rear & Front panel mount. Surface mount with standoff.

Mounting eyelet hole size #10 with #8-32 nuts pre-installed.

Ingress Protection Rating: IP66 / IP67. (IEC 60529).

Ignition Protection: ISO 8846\*, USCG, ABYC, UL1500\* and SAE J1171

Dielectric Strength: 2000VAC minimum ULII07. Housing: Thermoplastic.

Shock, Vibration, Corrosion: MIL-STD-202, ULI077\*, ULI107\*

Endurance: Per SAE J553 (100 overload trip cycles at 400% of rated current at 28VDC). Min / Max Ultimate Trip: Must Hold 100% of rated current at 25°C/77°F. Must Trip at 135% of rated current within I hour. Unique / specific higher ambient calibrations are also available. Inrush Capacity: The Series 53 will not trip at 35X rated capacity for ½ cycle (0.008 sec.). Note: This product is not rated for an engine starter circuit. \*Tested per methods of standard.

Approvals: UL 1077, SAE [553, ABYC, CE



**Rear Panel Mount** 

### **Series 53 Disconnect Function**

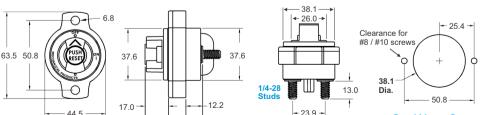
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Dia

Switch ON, Continuity - Breaker is active and circuit is active.

Switch ON, NO Continuity - Breaker is tripped. Push the PUSH TO RESET button to reset the breaker.

Switch OFF, NO Continuity - Breaker is not operable. Circuit is Off.



24.9

**Panel Mount Cutout** Front or Rear



29 7

Dimensions in MM

### **CIRCUIT BREAKERS - SERIES 18**

### Features:

- Designed for the harshest of environments. Weatherproof and ignition proof.
- All materials used are resistive to UV and flammability. Strong thermoplastic case.
- Double break design to achieve increased short-circuit interruption capability.
- The push-to-reset actuator is trip-free, ensuring the breaker cannot be forced to continuously maintain a closed circuit if an overload condition exists.
- Suitable for Marine, Heavy Equipment, Trucks, Buses & Battery Chargers. Made in USA.







Manual (TIII) # 8-32 Screw	Manual (TIII) #10-32 Stud		Screw Term (1800E112E s		ud Terminals 0E113T series)
Terminal	Terminal	Ampere			
Part Number	Part Number	Rating			
1800E112E0050	_	5A			
1800E112E0100	1810E113T0100	IOA NEW			
1800E112E0125	1810E113T0125	12.5A			w→m
1800E112E0150	1810E113T0150	I5A	1800E11		5205 1810E1 310250
1800E112E0200	1810E113T0200	20A	2E0100 4417		817
1800E112E0250	1810E113T0250	25A			
1800E112E0300	1810E113T0300	30A	(8)	Locking Nuts	
1800E112E0350	1810E113T0350	35A		Fitted	
1800E112E0400	1810E113T0400	40A			Ī
_	1810E113T0500	50A	Ţ		
_	1810E113T0600	60A	#8-32 Screw	#8-32 Mounting	#10-32 Stud
-	1810E113T0700	70A NEW	Terminals	Locking Nuts Include	d Terminals

Voltage: 125VAC / 32VDC.

I.R. (1800 series): 3kA at 120VAC / 32VDC (Standard Calibration) I.R. (1810 series): 3kA at 120VAC, 5kA at 32VDC (High Ambient\*)

Reset Mechanism: Type III, Manual Reset. 1800 & 1810 Series. Reset Button: Red with 45° white ampere stamp.

Reset Option: Type I, Automatic reset available. 1801 & 1811 series, no button. Contact sales for information.

Mounting Standard: #10 eyelet hole with attached self-locking nut (includes 2 x #8-32 screws). Mounting Option: 1800T0 & 1810T0 series: #10 eyelet hole only, no fitted locking nut. Indent only.

Terminals (1800 series): Screw terminals includes #8-32 screws and lock washer.

Terminals (1810 series): Threaded stud includes #10-32 nuts and lock washer. Stud is 11.4mm long.

Vibration Rating: 10g per MIL-STD-202, Method 204, Test Condition A.

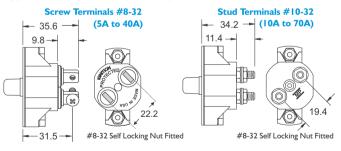
Features: Ignition Protected UL 1500. Housing: UL 94 V-0 Black Thermoplastic.

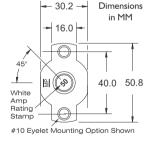
Pack Size: 1, 20, 40, 160, 320, 640

Note: \*High Ambient style increases trip rating from 100% to 110% (min.) & 135% to 143% (max.) at 25 deg C.

Ampere ratings 2A (CDM-2) and 3A (CDM-3) contact sales.

Approvals: ABYC E-II, SAE J553, SAE J1428, UL 1500, UL 1077, MIL-STD-202.





### Right Angle -45° Fix **Mounting Bracket SS** NFW



Part Number: PROBRK018A

### Recommended **Mounting**



### **Automatic Reset** No Button



Product Series: 1801 / 1811

Manual Reset - Red Button White Amp Stamp at 45°



Product Series: 1800 / 1801



### **CIRCUIT BREAKERS - SERIES 19 PANEL MT**

### Features:

- Wide range of ratings from 25A to 200A.
- Superior Ingress Protection, rated to IP67 & IP69K.
- Designed for harsh applications to 30VDC.
- Optional LED tripID version for open circuits.
- Front panel or rear panel mounting options.
- Trip free.
- Wide bracket version available in natural or black.
- Made in USA. Some subassembly made in Australia.



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19M-P10 Series, Manual Reset TIII Thru Hole No Nuts

MIL-STD IP69K



19M-P11 Series, Manual Reset TIII #10-32 Mounting Nut



19A-P10 Series, Automatic Reset TI Non Indicating

Auto Reset	Manual Reset	Manual Reset	
(Thru Hole)	(Thru Hole)	(Mounting Nut)	Ampere
Part Number	Part Number	Part Number	Rating
19A-P10-N-025	19M-P10-B-025	19M-P11-B-025	25A
19A-P10-N-030	19M-P10-B-030	19M-P11-B-030	30A
19A-P10-N-035	19M-P10-B-035	19M-P11-B-035	35A
19A-P10-N-040	19M-P10-B-040	19M-P11-B-040	40A
19A-P10-N-045	19M-P10-B-045	19M-P11-B-045	45A
19A-P10-N-050	19M-P10-B-050	19M-P11-B-050	50A
19A-P10-N-060	19M-P10-B-060	19M-P11-B-060	60A
19A-P10-N-070	19M-P10-B-070	19M-P11-B-070	70A
19A-P10-N-080	19M-P10-B-080	19M-P11-B-080	80A
19A-P10-N-090	19M-P10-B-090	19M-P11-B-090	90A
19A-P10-N-100	19M-P10-B-100	19M-P11-B-100	100A
19A-P10-N-105	19M-P10-B-105	19M-P11-B-105	105A
19A-P10-N-120	19M-P10-B-120	19M-P11-B-120	120A
19A-P10-N-135	19M-P10-B-135	19M-P11-B-135	135A
19A-P10-N-150	19M-P10-B-150	19M-P11-B-150	150A
19A-P10-N-175	19M-P10-B-175	19M-P11-B-175	175A
19A-P10-N-200	19M-P10-B-200	19M-P11-B-200	200A

Voltage: 30VDC

I.R. (25A - 150A): 2.5kA at 14VDC, 1.5kA at 28VDC

I.R. (175A - 200A): 2.5kA at 30VDC

Auto Reset Stocked Version: No indicator.

Auto Reset Indent Options: Red LED or Clear LED Indicator.

Manual Reset Stocked Version: Red Button.

Manual Reset Indent Options: Red LED or Clear LED Button. Panel Mount Hardware: (19x-P10) Thru-hole, no hex nuts Panel Mount Hardware: (19x-P11) 2 x # 10-32 fitted hex nuts

Threaded Studs: 1/4"-28 (12.5mm long), includes 1/4"

stainless steel sems nuts.

Housing: UL 94-V0 rated black thermoplastic. Operating Temp: -40 deg. C to 85 deg. C Pack Size: I pc stock lines (9pcs non stock lines).

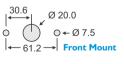
Approvals: SAE [1625, SAE] 1171, ABYC E-11, ÚL1077,

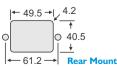
Mil-STD-202 (101, 106, 213), Mil-STD-204.

### 73.9 61.2 48.1 - 19.1 -200 39.1 Ø6.7

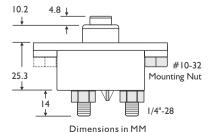
(With #10-32 fitted hex nut) (Without hex nut)

### PANEL CUT-OUT(S)











### **CIRCUIT BREAKERS - SERIES 19 WIDE MOUNT BRACKET**



MIL-STD

### Features:

- Wide range of ratings from 25A to 200A.
- Superior Ingress Protection, rated to IP67 & IP69K.
- Designed for harsh applications to 30VDC.
- Optional LED tripID version for open circuits.
- Wide bracket version available in natural or black.
- Circuit breaker made in USA. Subassembly made in Australia.

Manual Reset TIII Auto Reset TI Natural Bracket Natural Bracket

Part Number Part Number Ampere Rating 19M-P21-B-175 19A-P21-N-175 175A 19M-P21-B-200 19A-P21-N-200 200A

Voltage: 30VDC

I.R. (25A - 150A): 2.5kA at 14VDC, 1.5kA at 28VDC. Made to order.

I.R. (175A - 200A): 2.5kA at 30VDC, Standard product.

Auto Reset Standard Model: No indicator.

Auto Reset Optional Model: Red or Clear LED indicator.

Manual Reset Standard Model: Red Button.

Manual Reset Optional Model: Red or Clear LED indicating button.

All manual reset buttons feature a white ampere marking.

Mounting Plate: Natural finish standard. Black powder coat optional. Includes 4 x # 10-32 x 1/2" stainless steel philips head screws.

Termination: 1/4"-28 (12.5mm long) stainless steel studs.

Includes stainless steel sems nuts.

Housing: UL 94-V0 rated black thermoplastic. Operating Temp: -40 degrees C. to 85 degrees C. Pack Size: I pc stock lines (36pcs non stock lines). Approvals: SAE J1625, SAEJ1171, ABYC E-11, UL1077,

Mil-STD-202 (101, 106, 213), Mil-STD-204.

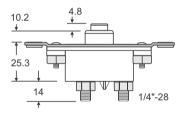
Notes: Contact sales for details on all custom made product options.

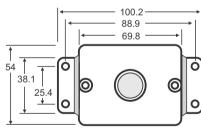


19M-P21-B-xxx Manual Reset TIII



19A-P21-N-xxx Automatic Reset TI





### Rear View



Battery I/4"-28 Input Stud Barrier

Stud

Output Stud

Auxiliary 1/4"-28

### **CUSTOM MADE OPTIONS**



19M-P21-B-xxxB Manual Reset TIII With Black Bracket



4 Mounting Screws

#10-32 x 1/2"

SS Phillips Head included

19A-P21-R-xxx Automatic Reset TI With LED TripID™ Feature



Dimensions in MM

19M-P21-R-xxx **Manual Reset TIII** With LED TripID™ Feature



### **CIRCUIT BREAKERS - SERIES 17 SURFACE MOUNT DIAG**

- Ignition protected and weatherproof.
- Superior moisture seal.
- Robust thermoplastic case.
- Corrosion resistant studs & hardware.
- 1/4" or 3/8" stainless steel stud options.
- Stronger rubber stud cap lead.
- Accommodates new tripID™
- Made in USA.





Automatic (TI)	Manual (TIII)	Manual (TIII)	A
1/4" & 3/8" Stud	I/4" Stud	3/8" Stud	A
Diagonal	Diagonal	Diagonal	Ampere
Part Number	Part Number	Part Number	Rating
171-S0-025	175-S0-025	175-S2-025	25A
171-S0-030	175-S0-030	175-S2-030	30A
171-S0-035	175-S0-035	175-S2-035	35A
171-S0-040	175-S0-040	175-S2-040	40A
171-S0-050	175-S0-050	175-S2-050	50A
171-S0-060	175-S0-060	175-S2-060	60A
171-S0-070	175-S0-070	175-S2-070	70A
171-S0-080	175-S0-080	175-S2-080	80A
171 \$0.090	175 \$0 090	175 \$2 090	904

171-S0-090 1/5-80-090 1/5-52-090 90A 171-S0-100 175-S0-100 175-S2-100 100A 171-S0-110 175-50-110 175-S2-110 LIOA 171-S0-120 175-S0-120 175-S2-120 120A 171-S0-135 175-S0-135 175-S2-135 135A 171-S0-150 175-S0-150 175-S2-150 150A

171-S0-175 175-S0-175 175-S2-175 175A 171-S0-200 175-S0-200 175-S2-200 200A 171-S2-225 <sup>2</sup> 174-S2-225\* 225A **NEW** 171-S2-250 ^ 174-S2-250\* 250A NEW 171-S2-275 ^ 275A **NEW** 300A NEW

( ^ 3/8" Stud only) \* Not PTT - (Push To Trip) Manual reset only.

Voltage Ratings:

171-S2-300 ^

Type TI: (25A-200A): 30VDC, (225A-300A): 14VDC. Type TIII: (25A-150A): 48VDC, (175A-200A): 30VDC. Type TIII: (225A-250A): 14VDC.

### I.R.Ratings:

Type TI (25A-150A): 3kA at 30VDC, (175A-200A): 1.5kA at 30VDC.

Type TI (225A-300A): 2.5kA at 14VDC.

Type TIII (25A-150A): 2.5kA at 14VDC, 1.5kA at 48VDC Type TIII (175A-200A): 2.5kA at 14VDC, 1.5kA at 30VDC.

Type TIII (225A-250A): 1.5kA at 14VDC

Pack Size: Stock lines I pc. Indent items 36pcs. Housing: UL94 V-0 rated black thermoplastic. Termination: Diagonal 1/4" or 3/8" stud options.

Terminal Hardware: Stainless steel sems nuts included.

Stud Insulator Caps: Included.

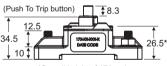
Operating Temp: -40°C to 85°C. Ingress Protection Rating: IP67 Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers (Type TIII) Approvals: SAE | 1625, | 1171, ABYC E-11, MIL-STD-202, UL1077 (4)

### Automatic Reset I/4: Studs



30 Manual Reset 3/8" Studs

THE



\*Overall height of 171 series.

### RELATED PRODUCTS TripID™

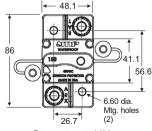
TripID Surface mount accessory. Provides a red lit visual indication of an open circuit. Can be reused. Simply snap on and off as required.



Part Number: 17LED-R Voltage: 10-30VDC

### Breaker with TripID





Dimensions in MM



### **CIRCUIT BREAKERS - SERIES 17 SURFACE MOUNT SBS**



Manual (TIII)

Side by Side

Part Number

175-S1-025

175-S1-030

175-51-035

175-S1-040

175-S1-050

175-S1-060

175-S1-070

175-S1-080

175-S1-090

I/4" Stud

- Ignition protected and weatherproof.
- Superior moisture seal.
- Robust thermoplastic case.
- Corrosion resistant studs & hardware.

Manual (TIII)

Side by Side

Part Number

175-S3-025

175-S3-030

175-S3-035

175-S3-040

175-S3-050

175-S3-060

175-S3-070

175-S3-080

175-S3-090

3/8" Stud

- 1/4" or 3/8" stainless steel stud options.
- Stronger rubber stud cap lead.
- Accommodates new tripID™
- Made in USA.

NEW

NFW

Ampere

Rating

25A

30A

35A

40A

50A

60A

70A

80A

90A





**Manual Reset** Type TIII PTT 3/8" Studs Side by Side



**Manual Reset** Type TIII PTT I/4" Studs Side by Side



175-S3-100 175-SI-100 100A 175-SI-110 175-S3-110 II0A 175-SI-120 175-S3-120 120A 175-SI-135 175-S3-135 135A 175-SI-150 175-S3-150 150A 175-S1-175 175-53-175 175A 175-S1-200 175-S3-200 200A 175-S3-225 225A 175-S3-250 250A

Voltage Ratings:

Type TI: (25A-200A): 30VDC, (225A-300A): I4VDC. Type TIII PTT: (25A-150A): 48VDC, (175A-200A): 30VDC.

Type TIII PTT: (225A-250A): 14VDC.

I.R.Ratings:

Type TI (25A-150A): 3kA at 30VDC, (175A-200A): 1.5kA at 30VDC. Type TI (225A-300A): 2.5kA at 14VDC

Type TIII PTT (25A-150A): 2.5kA at 14VDC, 1.5kA at 48VDC. Type TIII PTT (175A-200A): 2.5kA at 14VDC, 1.5kA at 30VDC.

Type TIII PTT (225A-250A): 1.5kA at 14VDC.

Reset Function: Manual Reset. Automatic Reset Optional.

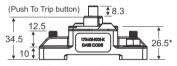
Housing: UL94 V-0 rated black thermoplastic.

**Termination:** Side by Side 1/4" or 3/8" stud options. Terminal Hardware: Stainless steel sems nuts included.

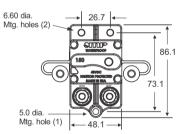
Stud Insulator Caps: Included.

Operating Temp: -40°C to 85°C. Ingress Protection Rating: IP67 Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers (Type TIII). Pack Size: Stock lines Ipc, indent items 9, 36, 72, 144pcs.

Approvals: SAE | 1625, | 1171, ABYC E-11, MIL-STD-202, UL1077 (1)



\*Overall height of 174 series.



Dimensions in MM

### RELATED PRODUCTS - TripID™

Surface mount accessory. Provides a red lit visual indication of an open circuit.



Part Number: I7LED-R Voltage: 10-30VDC Mounting: Snap on.





Side by Side Studs **Manual Reset** Type TIII with TripID™ 3/8" Studs Side by Side Closed Circuit



### **CIRCUIT BREAKERS - SERIES 17 PANEL MT**



### Features:

- Ignition protected and weatherproof.
- Standard or 90 degree stud orientation.
- Robust thermoplastic case.
- Corrosion resistant studs & hardware.
- · Largest amperage range available.
- 1/4" or 3/8" stainless steel stud options. • Superior moisture seal.
- Breaker made in USA. Bracket made in AU.







Auto Reset Type TI I/4" Studs	Manual Reset Type TIII PTT I/4" Studs	Manual Reset Type TIII PTT Type TIII *		
3/8" Studs ^		3/8" Studs	Ampe	re
Part Number	Part Number	Part Number	Rating	
171-P0-025	175-P0-025	175-P2-025	25A	
171-P0-030	175-P0-030	175-P2-030	30A	
171-P0-035	175-P0-035	175-P2-035	35A	
171-P0-040	175-P0-040	175-P2-040	40A	
171-P0-050	175-P0-050	175-P2-050	50A	
171-P0-060	175-P0-060	175-P2-060	60A	
171-P0-070	175-P0-070	175-P2-070	70A	
171-P0-080	175-P0-080	175-P2-080	80A	
171-P0-090	175-P0-090	175-P2-090	90A	
171-P0-100	175-P0-100	175-P2-100	100A	
171-P0-110	175-P0-110	175-P2-110	II0A	
171-P0-120	175-P0-120	175-P2-120	120A	
171-P0-135	175-P0-135	175-P2-135	135A	
171-P0-150	175-P0-150	175-P2-150	150A	
171-P0-175	175-P0-175	175-P2-175	175A	NEV
171-P0-200	175-P0-200	175-P2-200	200A	NEV
171-P2-225 ^	-	175-P2-225	225A	NEV
171-P2-250 ^	-	174-P2-250*	250A	NEV
171-P2-275 ^	-	-	275A	NEV
171-P2-300 ^	-	-	300A	NEV
( ^ 3/8" Stud only	y)	* Not PTT - (Pus		))

Manual reset only.

### **Auto Reset** Type I Std. Orientation







**Rear View** I/4" Studs Std. Orientation



**Gasket Accessory** 

Part Number: B156-7003-1 Material: Black Santoprene.

Rear View 3/8" Studs Std. Orientation



### I.R.Ratings:

Type TI (25A-150A): 3kA at 30VDC, Type TI (175A-200A): 1.5kA at 30VDC. Type TI (225A-300A): 2.5kA at 14VDC.

Type TIII (25A-150A): 2.5kA at 14VDC, 1.5kA at 48VDC. Type TIII (175A-200A): 2.5kA at 14VDC, 1.5kA at 30VDC.

Type TIII (225A-250A): 1.5kA at 14VDC.

Voltage Ratings:

Type TI: (25A-200A): 30VDC, (225A-300A): 14VDC. Type TIII: (25A-150A): 48VDC, (175A-200A): 30VDC.

Type TIII: (225A-250A): 14VDC.

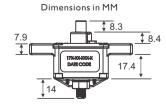
Pack Size: Stock lines I pc, indent items 9pcs. Housing: UL 94-V0 rated black thermoplastic. Termination: 1/4" or 3/8" Stainless steel studs.

Terminal Hardware: Stainless steel Sems nuts included.

Operating Temp: -40°C to 85°C. Ingress Protection Rating: IP67 Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers (TIII).

Options: 90 Degree position studs suit horizontal busbar.





80



EAT•N Bussmann

This single pole thermal circuit breaker is typically used in DC power systems in marine applications (as a main or branch circuit breaker), truck, bus & RV systems, add-on protection for accessories, etc. Some models are sealed for engine compartment and bilge applications.





### Features:

- Ignition protected and weatherproof.
- Elastomer over mold front.

Auto Reset Type TI	Manual Reset Type TIII - PTT	Manual Reset Type TIII - PTT	
Threaded Mt	Threaded Mt	Non-Threaded Mt	Ampere
Part Number	Part Number	Part Number	Rating
25110-B-I	25510-B-I	25510-A-1	I0A
25115-B-I	25515-B-I	25515-A-1	I5A
25 I 20-B-I	25520-B-I	25520-A-I	20A
25 I 25-B-I	25525-B-I	25525-A-I	25A
25 I 30-B-I	25530-B-I	25530-A-I	30A
25135-B-I	25535-B-I	25535-A-I	35A
25 I 40-B-I	25540-B-I	25540-A-I	40A
25150-B-I	25550-B-I	25550-A-I	50A

**Auto Reset** No Button (251 series)

Manual Reset **Push To Trip - Button** (255 series)





Voltage: 32VDC

I.R.: 2.5kA as per ABYC E-II.

**Reset Mechanism:** Type I = Automatic Reset,

Type III PTT = Manual Reset with Push To Trip feature.

Indicator: The 255 series has a unique highly visible yellow colour reset mechanism which provides a visual indication of tripped condition & features a push-to-trip (PTT) option.

Mounting Torque Rating: 2.0Nm max.

**Mounting Hole Types:** -A-I (suffix) = #10 Thru-hole insert (not threaded).

-B-I (suffix) = #8-32 (threaded inserts).

Terminal Hardware: Nylock nuts installed. Termination: #10-32 Threaded studs.

Operating Temp: -40°C to 85°C Storage Temp: -40°C to 125°C

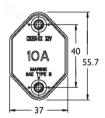
Body: UL 94 V-0 thermoset plastic Ingress Protection Rating: IP66

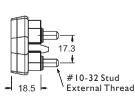
Pack Size: Stock lines Ipc, indent items 60pcs. Approvalsea | 1553, | 1171 & ABYC E-11.

**Rear View** #10-32 Studs

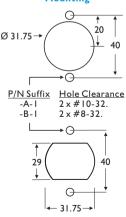


### Automatic Type 25 I series





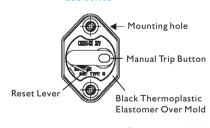
Front Panel Mounting



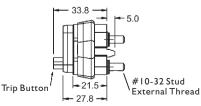
**Rear Panel** 

Mounting

**Manual Type** 255 series



Dimensions in MM





CIRCUIT BREAKERS

IGNITION PROTECTED

Typically used in auxiliary and accessory circuits for automotive & marine applications. Some models are sealed for engine compartment and bilge area applications.

30VDC	48VDC	
Auto Reset	Manual Reset	
Type T I	Type TIII PTT	Ampere
Part Number	Part Number	Rating
181025F-12-1	285025F	25A
181030F-12-1	285030F	30A
181035F-12-1	285035F	35A
181040F-12-1	285040F	40A
181050F-12-1	285050F	50A
181060F-12-1	285060F	60A
181070F-12-1	285070F	70A
181080F-12-1	285080F	80A
181090F-12-1	285090F	90A
181100F-12-1	285100F	100A
181110F-12-1	285110F	II0A
181120F-12-1	285120F	120A
181135F-12-1	285135F	135A
181150F-12-1	285150F	150A





**Manual Reset PTT** 

I.R.: 3kA at 30VDC (Series 181) 3kA at 48VDC (Series 285) Voltage: 30VDC (Series 181),

48VDC (Series 285)

Pack Size: Stock lines Ipc, indent items 60pcs **Termination:** 1/4"-28 threaded studs (Series 181) M6 threaded studs (Series 285)

Operating Temp: -40°C to 85°C (All Series) Storage Temp: -34°C to 149°C (Series 181), -40°C to 125°C (Series 285).

Ingress Protection Rating: IP67 Housing: UL 94 V-0 thermoset plastic.

Indicator: Reset mechanism provides visual indication of tripped

condition on manual reset breakers.

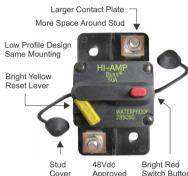
Black colour (184 & 185 Series), Yellow colour (285 Series). Features: Ignition Protected and weatherproof.

Stud Insulator Caps: Included

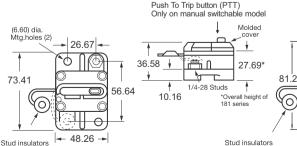
Terminal Hardware: Stainless steel nuts and lock washers installed. Notes: The 285 series is a drop in replacement for the 185 series. 184 series also available which is manual reset only, no PTT bright red switch button feature.

Approvals: SAE 11625, SAE 11171, ABYC E-11

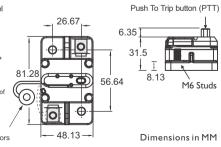
### 285 Series Feature Upgrades



### 181 Series (Standard Profile, Compact Body)



### 285 Series (Low Profile, Extended Body)





Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

Switch Button



Typically used in auxiliary and accessory circuits for automotive & marine applications. Some models are sealed for engine compartment and bilge area applications.





Manual Reset	
Type TIII PTT	Ampere
Part Number	Rating
285025P	25A
285030P	30A
285035P	35A
285040P	40A
285050P	50A
285060P	60A
285070P	70A
285080P	80A
285090P	90A
285 I 00P	100A
285110P	II0A
285120P	120A
285135P	135A
285150P	150A

**Rear View** M6 Studs







I.R.: 3kA at 48VDC Voltage: 48VDC

Termination: M6 threaded studs. Operating Temp: -40°C to 85°C. Storage Temp: -40°C to 125°C. Ingress Protection Rating: IP67 Housing: UL 94 V-0 thermoset plastic.

Indicator: Bright yellow colour reset mechanism provides visual indication of tripped condition on manual reset breakers.

Features: Ignition Protected and weatherproof.

Terminal Hardware: Stainless steel nuts and lock washers installed. Pack Size: Stock lines I pc, indent items 60 pcs

Notes: The 285 series is a drop in replacement for the 185 series. 184 series also available which is manual reset only, no PTT feature.

**Approvals:** SAE | 1625, SAE | 1171, ABYC E-11 €

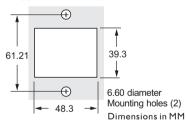
### **Gasket Accessory** B156-7003-I

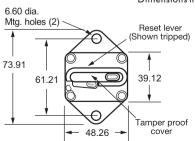


### Gasket Fitted To Breaker



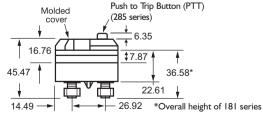
### **Suggested Mounting Cutout**





Gasket Part Number: B156-7003-1 Material: Black Santoprene.

Notes: Optional flange mount gasket for through wall applications. Gasket wraps around breaker to provide a seal between the circuit breaker housing and the panel.



1/4-28 Studs (181 Series - Automatic Reset) M6 Studs (285 Series - Manual Reset PTT)



### **CIRCUIT BREAKERS - MARINE RATED**

Surface Mount	Panel Mount	Ampere
Part Number	Part Number	Rating
187025F-03-1	187025P-03-I	25A
187030F-03-1	187030P-03-1	30A
187035F-03-1	187035P-03-1	35A
187040F-03-1	187040P-03-1	40A
187050F-03-1	187050P-03-1	50A
187060F-03-1	187060P-03-1	60A
187070F-03-1	187070P-03-1	70A
187080F-03-1	187080P-03-1	80A
187100F-03-1	187100P-03-1	100A
187110F-03-1	187110P-03-1	IIOA
187120F-03-1	187120P-03-1	120A
187135F-03-1	187135P-03-1	135A
187150F-03-1	187150P-03-1	150A
187200F-03-1	187200P-03-1	200A





**Surface Mount Rounded Rectangular** 



**Panel Mount Rounded Rectangular** 

Voltage: 48VDC I.R.: 5kA at I4VDC, 3kA at 28VDC, I.5kA at 48VDC Reset Mechanism: Type TIII, Manual reset & switchable. Temperature Operating: -40°C to 85°C. Storage: -40°C to 125°C Termination: 5/16"-18 threaded studs. SS nuts & lock washers installed. Ingress Protection Rating: IP66 Approvals: SAE | | 171, ABYC E-11 (6





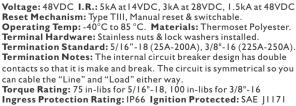


### **CIRCUIT BREAKERS - MARINE RATED**

### **Features:**

- Capable of withstanding 2000 on/off cycles at 48VDC.
- Ignition protected and weatherproof IP66 rated.
- Marine grade corrosion resistive materials.
- Choice of 5/16-18 or 3/8-16 stainless steel threaded studs.
- Extensive ampere rating choice 25A through to 250A.
- Round panel mount face standard. Rounded rectangular option.

Surface Mount	Panel Mount	Ampere	Stud
Part Number	Part Number	Rating	Size
875-SI-025	875-PI-025	25A	5/16"-18
875-SI-030	875-PI-030	30A	5/16"-18
875-SI-035	875-PI-035	35A	5/16"-18
875-SI-040	875-PI-040	40A	5/16"-18
875-51-050	875-PI-050	50A	5/16"-18
875-51-060	875-PI-060	60A	5/16"-18
875-SI-070	875-PI-070	70A	5/16"-18
875-SI-080	875-PI-080	80A	5/16"-18
875-SI-100	875-PI-100	100A	5/16"-18
875-SI-II0	875-PI-II0	II0A	5/16"-18
875-51-120	875-PI-120	120A	5/16"-18
875-SI-I35	875-PI-135	135A	5/16"-18
875-51-150	875-PI-150	150A	5/16"-18
875-SI-175	875-PI-175	175A	5/16"-18
875-SI-200	875-P1-200	200A	5/16"-18
875-S2-225	875-P2-225	225A	3/8"-16
875-S2-250	875-P2-250	250A	3/8"-16



Ingress Protection Rating: IP66 Ignition Protected: SAE J1171 Approvals Pending: SAE | 1171, |553, ABYC E-11, UL 1077









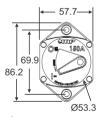




**Surface Mount** 

-57.7 -413→ 65.1 89









Dimensions in MM

Scan this **OR Code** for more information QR Code: 10004





## Fuse Holders, Fuse Blocks & Panels

### Quality built products.



Fuse Clips & PCB Mount Holders Mini Fuse, Auto Fuse & Maxi Fuse EV Cartridge Midget Fuse (5AB)

Panel Mount Holders 3AG Fuses

In-line Holders

3AG / AGC Fuses
Low Profile Mini Fuse
Micro2 Fuse
Mini Fuse / LED Mini Fuse
Auto Fuse / LED Auto Fuse
Maxi Fuse / LED Maxi Fuse
Mini & Auto Bladed Breakers
Jcase Fusible Link
Midi Fuse
Mega Fuse

Add-A-Circuit Holders
Micro2 & Micro3 Fuse

Low Profile Mini Fuse
Mini Fuse
Auto Fuse
Mini & Auto Taps
Ground Taps 3 Way
Mini & Auto Blade Socket Connectors
Mini & Auto Blade Socket Current Loops
Fuse Diagnostic Kit For Mini & Auto Blade

Fuse Blocks

Micro2 Fuse Block
Mini Fuse Block
Auto Fuse Block
Auto Fuse Block Sealed
Midi Fuse Block
Mega Fuse Block
Lift Truck Fuse Block
EV Midget Cartridge Fuses (5AB)
EV Midget Bolted Tag Fuses
EV / EVSE Bolted Tag Fuses
EV / EVSE Bolted Tag Fuses

**Fuse Panels** 

Auto Fuse Auto Bladed Breaker **Page** 68 68

Page

69

> Page 83

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85

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86 88 - 89 93 94 - 96, 98 96 - 97, 99 - 101

102 102 103 - 104 103 - 104

Page

87, 90 - 92 87, 91 - 92



### 

Part Number	<u>Holder</u>	Fuse Type	Blade Width	Rating	Orientation	Mounting Method
FC-MINV	Clip	Mini Blade	2.8mm	I5A	Vertical	Thru Hole
FC-MINH	Clip	Mini Blade	2.8mm	I5A	Horizontal	Thru Hole
FC-ATOV	Clip	Auto Blade	5.2mm	I5A	Vertical	Thru Hole
FC-ATOH	Clip	Auto Blade	5.2mm	I5A	Horizontal	Thru Hole
FC-MAXV	Clip	Maxi Blade	8.3mm	50A	Vertical	Thru Hole
FCB-26	Board	Mini Blade	2.8mm	I5A	Vertical	Thru Hole
FCB-25	Board	Auto Blade	5.2mm	20A	Vertical	Thru Hole



Material: Tin plated spring brass. Pack Size: Varies, please contact sales. Note Clips: 2pcs required per fuse.

Data Sheet: Contact sales

Approvals: RoHS





Mini Fuse Board THM

**Auto Fuse Board THM** 











Mini Clips Vertical

Mini Clips Horizontal

**Vertical** 

**Auto Clips** Horizontal

**AUTO FUSE HOLDER BOARD MOUNT** 

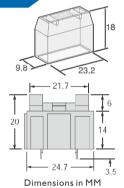
Part Number	Mounting Type	Description
00420	Thru Hole	Fuse holder
00359	Clip On	Clear cover

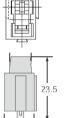
Rating: I5A Voltage: 32V Body: Black PA66, UL94 V2. Mounting: Thru Hole Mount. Cover: Transparent PC

Terminals: Tin plated phosphor bronze. Inox-steel clip included. Feature: Stackable end or side. Pack Size: 5, 10, 100, 500, 1000 Notes: Auto fuse is not included.

**RELATED Auto Fuse** PRODUCTS: (see p. 17)









\land adler

**EV CARTRIDGE FUSE CLIPS 10.3MM DIAMETER** 

Part Number Mounting Type BC800 Thru Hole

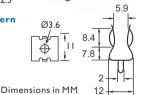
Rating: 32A Voltage: 250V-1500V Clip Material: Brass, Tin plated. Pack Size (bag): 2, 10, 100, 1000 Feature: Fuse end stop

Suits EV Cartridge Fuse: 10.3 x 38.1mm.

Approvals: RoHS



**Mounting Pattern** 







**EV Cartridge Fuses** (see p.32 - 34)



Terminal Type / Angle Part Number Knob Type HTB-26I-R Fingergrip 1/4" Q/C (6.35mm) Straight Fingergrip 3/16" Q/C (4.8mm) or Solder, Straight HTB-22I-R Screwdriver HTB-34I-R 3/16" Q/C (4.8mm) or Solder, Right

Voltage: 250V Rating: 20A Terminals: Tin plated brass.

Mounting Standard: Low profile, rear hex nut. Mounting Option: High profile, or snap mount low profile. Please contact sales for further information. Ambient Temperature:  $-55^{\circ}$ C to  $+85^{\circ}$ C.

Body: Flame retardant thermoplastic UL 94VO. Accessories: Includes plastic nut and spacer.

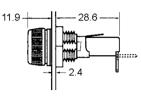
Options: Finger-grip type holders may be ordered with 'splash proof' knob, please contact sales.

Pack Size: 1, 10, 100

Note: Maximum panel Thickness: 7.62mm

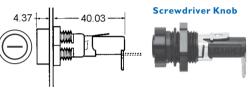
Notes: Fuse is not included.

Approvals: 🕦 🏿 🖒 🏡 🤆 🔞









### Mounting Hole Double D Type



Dimensions in MM

### 1/4" Terminal Types

Straight 6.35mm (1/4") Quick Connect (Q/C)



Right 6.35mm (1/4") Quick Connect (Q/C)

### 3/16" Terminal Types



Straight 4.8mm (3/16") Quick Connect (Q/C) or Solder



Right 4.8mm (3/16") Quick Connect (Q/C) or Solder

### 3AG 250V / 500V IN-LINE FUSE HOLDERS

### **¼** Littelfuse

### Features:

- High voltage rating accommodates many power applications.
- Single piece molded body minimizes component count.
- Wire leads are pre-attached to fuse clips for quick assembly.
- UL Recognized.

Part Number Description 150322 15A 500VAC / 500VDC

150332 15A 250VAC / 250VDC

Terminals: Tin plated brass.

Wire Gauge: 0.8mm<sup>2</sup> (#18 AWG) Black, 150°C stranded. Wire Length: 200mm each side of the body included.

Pack Size: 1, 10, 100, 1000 Note: 3AG fuse not included.

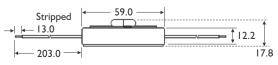
Approvals: SU UL/CSA 4248.1, E14721 RoHS

### **NEW** Clamshell Open / Close

### RELATED PRODUCTS:







Dimensions in MM



### **3AG 250V IN-LINE HOLDER SPLASH PROOF**

Rating: 20A Voltage: 250V

Flammability: UL 94 HB (phenolic body) Temperature Rating (RTI): 150°C

Holder Type: Bayonet Type

Ingress Protection: IP64 Rating for exposed locations.

Contacts: Copper crimp

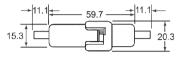
Crimp Terminal: I - 3mm<sup>2</sup> (#16-12AWG) copper wire.

Crimp Tool: Thomas & Betts WT-112M

Pack Size: 1, 10, 20, 100, 500

Approvals: RoHS

Crimp Terminal



Dimensions in MM

### **RELATED PRODUCTS:**





AGC / 3AG Fuses (see p. 10 & 11)

3AB Fuses (see p. II)

### **3AG 32V IN-LINE HOLDER & 20A FUSE**

Part Number Description 20A Bayonet holder HRI

Voltage: 32V

**FUSE HOLDERS** 

Temperature Rating (RTI): 140°C. Wire Thickness: 2mm<sup>2</sup> (#14 AWG). Wire Length: 480mm loop. Pack Size: 1, 10, 100, 500, 1000

### **Bonus Feature:**

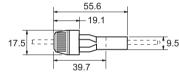
Fuse holder includes 3AG 20A fuse. # AGC020 Fuse specifications: Glass case 6.35 x 31.8mm 20A 32VAC/DC





### ET•N Bussmann NEW





Dimensions in MM

### **3AG 32V IN-LINE HOLDER**

Part Number Description HHN 30A Twist lock holder

Voltage: 32V

Body: Nylon Heavy Duty White Body. Wire Thickness: 3mm² (#12 AWG) yellow. Wire Length: 2 x 100mm lengths of wire.

Pack Size: 1, 10, 100, 500, 1000 Notes: Fuse is not included

### FAT-N Bussmann **NEW**



Dimensions in MM



### **RELATED PRODUCTS:**





**AGC** Fuse Kit (see p.38)



Body: Nylon (high visibility yellow colour).

Flammability: UL 94 V2

Wire Thickness: 1 - 3mm<sup>2</sup> (#16-12 AWG). Wire not included.

Crimp: Simple crimp assembly, copper tin plated.

Crimp Tools: Thomas & Betts ERG4001, Channelock No.909,

General Electric - U.S. & Metric Electrical Terminal Tool.

Assembled Holder Option: Can be ordered assembled with

#14 AWG insulated leads in lengths of either 204mm or 483mm.

Lead colour options; red, black, yellow). Contact sales for further information.

Suits Fuses: Cartridge fuse types 7AG, 8AG and 3AG.

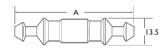
Pack Size: 1, 10, 100, 500, 1000

Approvals: RoHS



**Crimp Terminal** 





With Fuse Installed 7AG (AGW)

8AG (AGX) 3AG (AGC) "A" Dimension 53.34mm 57.19mm 61.5mm

RELATED PRODUCTS:







**AGC Fuse Kit** (see p.38)

### **3AG 32V IN-LINE HOLDER SPLASH PROOF**

EAT•N Bussmann

**IP67** 

### Features:

- Ideal for harsh environments. Water, salt spray, ultraviolet light, Ozone.
- Withstands many organic solvents, rigorous shock and vibration.

Part Number HFB-R

Rating: 30A Voltage: 32V

Body: Thermoplastic rubber, high visibility yellow colour.

Contacts: Tin plated copper

Temperature Range: -40°C to + 150°C

Flammability: UL 94 HB

Wire Thickness: 0.8 - 3mm<sup>2</sup> (#18-12 AWG) wire not included. Ingress Protection: IP67 Rating for exposed locations.

Crimp Tools: Thomas & Betts WT-112M, Channelock No.909.,

California Terminal Products No. I 250

Pack Size: 1. 10. 100 Approvals: RoHS

**Crimp Terminal** 

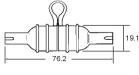


### RELATED PRODUCTS:



**Possible Mounting Arrangement** 





Dimensions in MM



### **LOW PROFILE MINI FUSE IN-LINE HOLDER**

PROLEG

Part Number Description

FHL002 30A Holder with cover

Voltage: 58VDC Body: Black Nylon PA66.

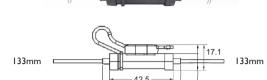
Terminals: Tin / Nickel plated Bronze. Wire Gauge: 3mm² (# I 2AWG) red. Wire Length: 2 x I 33mm lengths of wire.

Pack Size: 1, 10, 100, 1000 Notes: Fuse is not included.

RELATED PRODUCTS:

Low Profile Minifuse

(see p. I 4)



Dimensions in MM

### MICRO2 IN-LINE HOLDER SPLASH PROOF

Part Number Description

FHC002 30A Holder with cover

Voltage: 32V

Wire: 3mm<sup>2</sup> (#12AWG) stranded.

Wire Length: 305mm red wire loop.

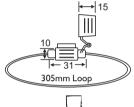
**Body:** Black PVC. **Terminals:** Tin plated brass.

Pack Size: 1, 10, 100, 1000.

RELATED PRODUCTS:

Micro2 Fuse (see p. l 3)









10 a

PROVER

Dimensions in MM

### **MINI FUSE IN-LINE HOLDERS**

Part Number Fuse Holder Kits Include;
01400K1 Fuse holder body and 2 x 10A terminals

01400, 2 x 07209BK (0.5 - 1mm²) 01400K2 Fuse holder body and 2 x 14A terminals

01400, 2 x 07212BK (1.5 - 2.5mm<sup>2</sup>)

Voltage: 32V

Body: Polyamide 6.6 (PA66)

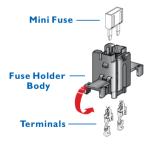
Features: Gangable. Lateral or snap mount fixing.

Fuse Holder Kit Pack Size: 1, 10, 100 Mounting Plate Pack Size: 1000

Notes: Fuse and fixing plate are not included.

Approvals: RoHS

# Gangable Feature



### **Mounting Option**

### RELATED PRODUCTS:

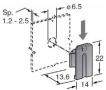




Mini Fuse LED Mini Fuse (see p.15) (see p.15)



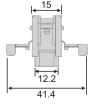
Fixing Plate Snap Mount # 00395



**Fixing Plate** 



Dimensions in MM





# MINI FUSE IN-LINE HOLDERS



Part Number Description

FHM001 20A with cover, 2.1mm<sup>2</sup> #14AWG Black FHM002 30A with cover, 3.3mm<sup>2</sup> #12AWG Orange

Voltage: 32V-58V

Wire: 125°C rated, GXL wires, tinned stranded copper.

Body: Black thermoplastic Ignition Proof: UL94 Ignition Protection: V-2 / V-0

Ingress Rating: IP67 Cover dustproof & waterproof.

Pack Size: 1, 10, 100, 1000 Note: Fuses are not included.

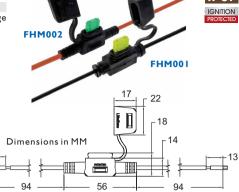
Approvals: RoHS





13

Mini Fuse 58V **RFI ATFD** Mini Fuse PRODUCTS: (see p.15) (see p. 16)



# MINI FUSE IN-LINE HOLDER

Part Number Description

HHL 20A with cover. I.0mm<sup>2</sup> # I6AWG

Voltage: 32V

Wire: Black, 26 strand copper, no plating. Contact Material: Brass, tin-plated. Insulation Body: Santoprene TPV. Feature: Cover is splash proof Pack Size: 1, 10, 100, 1000

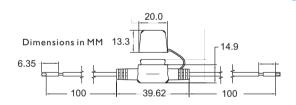
Approvals: (1) 3266, SAE | 2030 RoHS

RELATED PRODUCT: Mini Fuse (see p.15)



# **Bussmann IP66**

FATON



# MINI FUSE IN-LINE HOLDERS CLEAR



FHM00XCLR is a transparent inline fuse holder with protective cap that when used with a LED indicating mini blade fuse it lights up when a fuse is blown.

Part Number Description

FHM002CLR 30A with clear cover, 3.3mm<sup>2</sup> # I2AWG

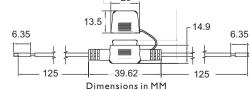
FHM001CLR 20A with clear cover, I.0mm<sup>2</sup> # I6AWG

Voltage: 32V Wire Length: 2 x 125mm lengths of wire **Body:** Transparent thermoplastic Feature: Cover is splash proof Pack Size: 1, 10, 100, 1000

Approvals: RoHS

**LED Mini Fuse** RELATED PRODUCT: (see p.15)





Blown LED Mini Fuse Lights Up Clear Cover



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **AUTO FUSE IN-LINE HOLDERS**

# **Littelfuse**

#### Features

- Capable of snap-mounting to panel from rear.
- Fuse holders gang together (stackable).

Part Number Fuse Holder Kits Include;

I 55320U Fuse holder kit includes holder & terminals 20A

868-062-000 & 2 x 913-008-001

I 55430U Fuse holder kit includes holder & terminals 30A

868-062-000 & 2 x 9 I 3-007-00 I

Part Number Individual Component Ordering

913-008-001 Terminal 2. Imm² (#14 AWG stranded wire) 913-007-001 Terminal 5.3mm² (#10 AWG stranded wire)

Voltage: 32V

Body: Black thermoplastic (UL 94V2)

Terminals: Tin plated brass (snap-lock into body)

Ambient Temp: -40°C to +85°C Panel Thickness: 1.02mm / 1.98 mm

**Notes:** Fuse is not included.

Approvals: RoHS Pb









**Terminals** 



Dimensions in MM

#### **RELATED PRODUCTS:**





Auto Fuse LED Auto Fuse (see p.17) (see p.17)

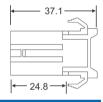
## Mounting Hole



# Gang Mount Option



#### **Fuse Holder Body**



# **AUTO FUSE IN-LINE HOLDER**

Easy to install. Simply locate fuse holder at a convenient spot along the wire between power source and the appliance. Use pliers to crimp fuse holder closed around wire to pierce insulation automatically.

Part Number Description
FH-302 Description
20A Fuse holder.

Voltage: 32V

Body: Royal blue polypropylene Terminals: Self stripping

Wire: 0.8-2.0mm² (#18-14AWG). Maximum Cable Outer Dia: 3.7mm

Contacts: Nickel plated brass Pack Size: 10, 100, 1000 Notes: Fuse is not included.

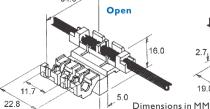


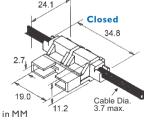
#### **RELATED PRODUCTS:**



(see p.17)









# **AUTO FUSE IN-LINE HOLDER**

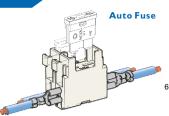
Part Number Description

00341 Fuse holder with I/4" OC 20A 00352 Fixing plate includes screw.

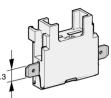
Voltage: 32V Body: White PA 66

Feature: Gangable. Fuse holders interlock.

Pack Size: 1, 10, 100 Notes: Fuse is not included.



Gangable Feature



Fuse Holder with 6.3mm QC Terminals

#### **RELATED PRODUCTS:**





Screw 26.8  $(2.9 \times 9.5)$ 

11.8

**Auto Fuse** (see p.17)

**LED Auto Fuse** (see p. 17)

**Fuse Holder with Fuse and Fixing Plate** 

**Fixing Plate** 

Dimensions in MM

# **AUTO FUSE IN-LINE HOLDER (PANEL MT)**

Part Number Description

00330 Fuse holder with 1/4" Q.C 20A 00357 Secondary terminal lock (optional)

Voltage: 32V Body: Black PA 66.

**Body Options:** Also available without terminals (#00331). Terminals I/4" Q.C (Standard): I/4" 20A #0750 IBK

Terminals Crimp Type (Optional): See page 78. 0.5 to 1.5mm<sup>2</sup> 14A, 2 to 3mm<sup>2</sup> 20A, 4 to 6mm<sup>2</sup> 37A.

Fuse Holder Pack Size: 1, 10, 100 Secondary Lock Pack Size: 250

Notes: Fuses & circuit breakers are not included.



**Fuse Holder** 

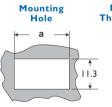
with Auto Blade Fuse



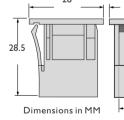
I/4" Q.C Terminals

#### **Panel Mounting** Dimensions (mm)

	,
<u>a</u>	b
21.9	0.8
22.0	1.0
22.1	1.5
22.2	2.0







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#### **RELATED PRODUCTS:**



(see p.17)



(see p.17)



**Auto Breaker** (see p.49)



Secondary **Terminal Lock** (Optional)



1/4" QC **Terminal** (Standard)



Crimp Terminals (Optional)



**Fuse Holder** with Bladed **Breaker** 



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **AUTO FUSE IN-LINE HOLDERS WITH COVER**



PROLEG

**NEW** 

**IP66** 

Part Number Description

FHAC001 20A with cover, 1.3mm<sup>2</sup> (#16AWG) Black

FHAC002 30A with cover, 3.3mm<sup>2</sup> (#12AWG) Orange



Voltage: 32V-58V

Wire: 125°C rated, GXL wires, Tinned

stranded copper

Body: Black thermoplastic Ignition Proof: UL94

Ignition Protection: V-2 / V-0

Ingress Rating: IP67

Feature: Cover dustproof & waterproof.

Pack Size: 1, 10, 100, 1000

Approvals: RoHS





#### **RELATED PRODUCTS:**



**Auto Fuse** (see p. 17)



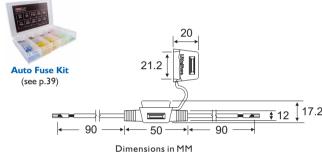
Connectors (see p.188)

**Auto Fuse 58V** (see p. 16)



Female Insulated **Disconnects** (see p.188)

FHAC002



# **AUTO FUSE IN-LINE HOLDERS CLEAR**

FHAC00xCLR is a transparent inline fuse holder with protective cap that when used with a LED indicating auto blade fuse lights up when a fuse is blown.

Part Number Description

FHAC001CLR 20A with clear cover, I.3mm<sup>2</sup> (#I6AWG) FHAC002CLR 30A with clear cover, 3.3mm<sup>2</sup> (#12AWG)

Voltage: 32V

Body: Transparent thermoplastic Wire Length: 2 x 130mm lengths of wire

Feature: Cover is splash proof Pack Size: 1, 10, 100, 1000

Approvals: RoHS



**LED Auto Fuse Pack** (see p.36)



**LED Auto Fuse Kit** (see p.39)



**Normal State Fuse** 

**Blown Fuse Lights Up** 

#### **RELATED PRODUCTS:**



**LED Auto Fuse** (see p. 17)





# **AUTO FUSE IN-LINE HOLDERS WATERPROOF**

# PROLEG

#### Features:

- The lid features a tight snap lock feature and a mounting hole.
- The base features weatherproof seals for both the top and bottom.
- Ingress Protection rating of IP67.
- 2 x Pre-terminated and sealed lengths of wire included.

Part Number Description

HHR 30A with 130mm (5") long wire
HHRL 30A with 305mm (12") long wire
NEW

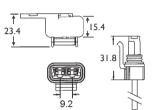
Voltage: 32V

Cover: Snap locking cover includes mounting hole.

Body Seals: Silicone gasket and cable seal.

Pack Size: 1, 10, 100 Wire: 3.0mm<sup>2</sup> (#12AWG). Notes: Fuse is not included.

Approvals: RoHS







46.3

17.0

5.8 dia

**←** 28

# RELATED PRODUCTS:





Auto Fuse (see p. 17)

(see p.17)

# **FUSE / BREAKER IN-LINE HOLDER WATERPROOF**

# PROLEG

**IP67** 

#### Features:

- Clear cover is allows visual identification of circuit protection device.
- Clear cover alerts a problem to the user when an LED indicating fuses is blown.
- The fuse holder suits multiple blade fuse types.
- The fuse holder extended cap also suits various bladed circuit breaker types.
- The lid features a tight snap lock feature and a mounting hole.
- The base features weatherproof seals for both the top and bottom IP67.
- Extra long 2 x 305mm / 12" lengths of wire included.

Part Number FHU002L

Description
30A with Extended Cover

Voltage: 32V

Body: Black waterproof inline fuse holder.
Body Seal: Silicone gasket.
Cover: Clear cover with lock and mounting hole.
Suits: Mini, LED Mini, Auto and LED Auto Blade Fuses,

Mini and Auto Bladed Circuit Breakers. **Wire:** 3.0mm<sup>2</sup> (#12AWG).

Wire Length: 2 x 305mm / 12" lengths of wire.

Pack Size: 1, 10, 100, 500

Notes: Fuse & breakers are not included.

Approvals: RoHS

#### **RELATED PRODUCTS:**







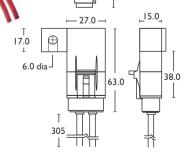
Mini Breaker (see p.48)



Auto Fuse & LED Auto Fuse (see p.17)



Auto Breaker (see p.49)



305mm

(12") Cables

44.2

Dimensions in MM



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# **AUTO FUSE IN-LINE HOLDERS**

Part Number	Fuse Holder Kits Include;	Pack Size
00400K1	00400, 00415, 00430 & 2 x 07920BK	1, 10, 100 <b>NEW</b>
00400K2	00400, 00415, 00430 & 2 x 07930BK	1, 10, 100 NEW
00400K3	00400, 00415, 00430 & 2 x 07940BK	1, 10, 100 <b>NEW</b>

Part Number	Individual Component Ordering	Pack Size
00400	Fuse holder body black PA 66	1, 10, 100
00415	Fuse holder cover black PA 66	1, 25, 100
07900BK	Terminal 0.5 to 1.5mm <sup>2</sup> 14A (RL*)	10, 20, 100
07912RL	Terminal 2 to 3mm <sup>2</sup> 20A (RL)	10, 20, 100
07901BK	Terminal 4 to 6mm <sup>2</sup> 37A (RL*)	10, 20, 100
07920BK	Terminal 0.5 to 1.5mm <sup>2</sup> + Clip 14A (RL*)	10, 20, 100
07930BK	Terminal 2 to 3mm <sup>2</sup> + Clip 20A (RL*)	10, 20, 100
07940BK	Terminal 4 to 6mm <sup>2</sup> + Clip 37A (RL*)	10, 20, 100
00392	Fixing plate snap mount	1, 10, 100
00430	Fixing plate single screw, M5	1, 10, 100
00440	Fixing plate dual screw, M5	1, 10, 100

Terminal Options: BK = Bulk pack, RL = \*Reel Pack MOQ applies. Accessories: Snap lock fixing plate and bracket accessories. Features: Gangable. Lateral fixing. Approvals: RoHS

# Fuse Holder Cover Fuse Holder Body Closing Tabs **Terminal Types**

Scan this **OR Code** for more information

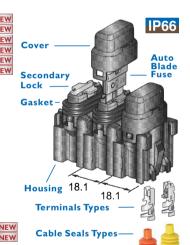


QR Code: 7001

# **AUTO FUSE IN-LINE HOLDERS SPLASH PROOF**

Part Number 50153K 50153K1 50153K2	Fuse Holder Kits Include; 02330, 00392 & 2 × 07920BK. 02330, 00392, 2 × 07920BK & 2 × 4507770. 02330, 00392, 2 × 07930BK & 2 × 4507771.		NE
02330K1 02330K2	02330, 00430, 2 x 07920BK & 2 x 4507770. 02330, 00430, 2 x 07930BK & 2 x 4507771.	1, 10, 100	NE NE
02330K3	02330, 00430, 2 x 07940BK & 2 x 4507771.	1, 10, 100	NE

Part Number	Individual Component Ordering	Pack Size
02330	Housing w/secondary lock, gasket & cover	1, 10, 100
07900BK	Terminal 0.5 to 1.5 mm <sup>2</sup> 14A (RL*)	10, 20, 100
07912RL	Terminal 2 to 3 mm <sup>2</sup> 20A (RL)	10, 20, 100
07901BK	Terminal 4 to 6mm <sup>2</sup> 37A (RL*)	10, 20, 100
07920BK	Terminal 0.5 to 1.5mm <sup>2</sup> + Clip 14A (RL*)	10, 20, 100
07930BK	Terminal 2 to 3mm <sup>2</sup> + Clip 20A (RL*)	10, 20, 100
07940BK	Terminal 4 to 6mm <sup>2</sup> + Clip 37A (RL*)	10, 20, 100
4507770	Cable seal for 0.5 - 1.5 mm <sup>2</sup> wire, orange	10, 20, 100
4507771	Cable seal for 2.0 - 3.0 mm <sup>2</sup> wire, yellow	10, 20, 100
00392	Fixing plate snap mount	1, 10, 100
00430	Fixing plate single screw, M5	1, 10, 100
00440	Fixing plate dual screw, M5	1, 10, 100
00697	Mounting bracket slide lock male	1, 10, 100
00698	Mounting bracket slide lock female	1, 10, 100



Body: Black PA 66 Terminal Options: BK = Bulk pack, RL = \*Reel Pack MOQ applies. Cable Seal: Self lubricating silicone rubber.

Ingress Protection Rating: IP66 (Valid when properly installed with components). Features: Gangable. Lateral fixing. Accessories: Snap lock fixing plate & bracket accessories.

Notes: Secondary lock available in various colours to match fuse colour identification.

Approvals: RoHS

#### **RELATED PRODUCTS:**







**Fixing Plate Fixing Plate** (Single) (Dual)



**Fixing Plate** (Snap Mount)



Mounting Brackets (M/F)

Scan this **QR** Code for more information



QR Code: 7004



# **MAXI FUSE IN-LINE HOLDERS**

Part Number	Fuse Holder Kits Include;	Pack Size	
01001K	00390, 00391, 00430 & 2 x 07650BK	I	NEW
01001K2	00390, 00391, 00430 & 2 x 07660BK	1	NEW
01001K3	00390, 00391, 00430 & 2 x 07670BK	1	NEW

Part Number	Individual Component Ordering	Pack Size
00390	Fuse holder body black PA66 w/lock	1, 10, 100
00391	Clear fuse cover	1, 10, 100
07650BK	Terminal 1.5 to 2.5 mm <sup>2</sup> 20A (RL*)	10, 20, 100
07660BK	Terminal 4 to 6mm <sup>2</sup> 36A (RL*)	10, 20, 100
07670BK	Terminal 8 to 10mm <sup>2</sup> 50Å (RL*)	10, 20, 100
07671BK	Terminal I 6mm <sup>2</sup> 75A (RL)	10, 20, 100
00392	Fixing plate snap mount	1, 10, 100
00430	Fixing plate single screw, M5	1, 10, 100
00440	Fixing plate dual screw, M5	1, 10, 100

Terminals Options: BK = Bulk Pack, RL = Reel Pack
Accessories: Optional I.D inserts - colour coded with rating embossed.
Features: Gangable, lateral fixing & snap lock fixing plate accessories.

**Note:** Fuse is not included with this holder.

Approvals: RoHS

# Amperage I.D Insert (Optional) Fuse Holder Body Secondary Terminal Lock Terminals

Scan this QR Code for more information



QR Code: 7005

# **MAXI FUSE IN-LINE HOLDERS SPLASH PROOF**

Part Number	Fuse Holder Kits Include;	Pack Size
01005K	21210, 21000, 21200 & 2 x 07660BK	1
01005K2	21210, 21000, 21200, 00430 & 2 x 07660BK	1
01005K3	21210, 21000, 21200, 00430 & 2 x 07670BK	1

Part Number Individual Component Ordering Pack Size 21210 Cover with gasket inserted 1, 10, 100 21000 1, 10, 100 Fuse holder body black PA66 w/lock 21200 Bottom cover black PA 66 1, 10, 100 07650BK Terminal 1.5 to 2.5mm<sup>2</sup> 20A (RL\*) 10.20.100 07660BK Terminal 4 to 6mm<sup>2</sup> 36A (RL\*) 10, 20, 100 07670BK Terminal 8 to 10mm<sup>2</sup> 50Å (RL\*) 10, 20, 100 07671BK Terminal I6mm<sup>2</sup> 75A (RL\*) 10, 20, 100 00392 Pressure fixing dual pin 1, 10, 100 00430 Fixing plate single screw, M5 1, 10, 100 00440 Fixing plate dual screw, M5 1, 10, 100 00697 Mounting bracket slide lock male 1, 10, 100 00698 Mounting bracket slide lock female 1, 10, 100

Terminal Options: BK = Bulk Pack, RL = \*Reel Pack MOQ applies.

Accessories: Optional I.D inserts - colour coded with rating embossed.

Features: Gangable, lateral fixing & snap lock fixing plate accessories.

Cable Note: Max. cable size is 6mm² when using bottom cover.

Max. cable size is 16mm² when not using bottom cover.

Note: Fuse is not included with this holder.

Approvals: RoHS

# Cover & Gasket Amperage I.D Insert (Optional) Fuse Holder Body Secondary Terminal Lock Bottom Cover





Maxi Fuses (see p. 18)



Fixing Plate (Single)



Fixing Plate (Dual)



Fixing Plate
(Snap Mount)



NEW

Mounting Brackets (M/F)



QR Code for more information



**Terminals** 

QR Code: 7000



# **MAXI FUSE IN-LINE HOLDERS - GANGABLE**



Fuse Holder Kits Include; Part Number

152001KIT1 Fuse holder kit, includes fuse holder body, cover.

2 x screws, 4 x washers & 2 x terminals (2.5 - 6mm<sup>2</sup>) 152001KIT2 Fuse holder kit, includes fuse holder body, cover, 2 x screws, 4 x washers & 2 x terminals (5 - 10mm<sup>2</sup>)

Part Number	Individual Component Ordering
152001	Maxi fuse holder black body 01520001
152900	Protective clear fuse holder cover 01520900
913-550	M5 x 8 Screw, split washer and flat washer
913-653	Ring tongue terminal, 2.5 - 6mm <sup>2</sup> (#12-10AWG)*
913-654	Ring tongue terminal, 5.0 - 10mm <sup>2</sup> (#10 - 8AWG)*







**Fuse Holder Body** 

Littelfuse

PROLE

67.3

#### Rating: 60A Voltage: 32VDC

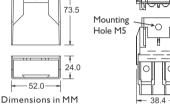
Terminals: Copper alloy Cover: Translucent thermoplastic Body: Thermoplastic (UL 94HB), Ignition Protection: V-2 Feature: Only 2 fuse blocks may be ganged together with a maximum fuse rating of 50A per block.

Notes: This product will only accept original Littelfuse Maxi blade fuses (299 / 999 series). Fuse is not included. \*It is recommended that cross linked polyethelene (GLX) insulated wire be used. Contact sales for more information.

# 73.5 24 0

52.0

**Fuse Holder Cover** 



# **RELATED PRODUCTS:**

Maxi fuse see page 18 LED Maxi fuse see page 18





# MAXI FUSE IN-LINE HOLDER SPLASH PROOF

Part Number Description Fuse holder with black cover

Rating: 60A Voltage: 32VDC

Wire: 2 x 127mm leads of 13mm<sup>2</sup> #6AWG black.

Ignition Protection: V-2 Ignition Proof: UL-94 Pack Size: 1. 10. 100

Feature: Protective cover permits use in harsh under hood environments. Mounting hole also permits easy bulkhead installation. Permits 2 or more holders to be mounted together.

Approvals: RoHS

MAHC0001

# IGNITION IP67 85.1 34.8 60.2 127mm Dimensions in MM 6.7 Dia. Mounting Hole

# **MAXI FUSE IN-LINE HOLDERS SPLASH PROOF**

Part Number Description MFHC Fuse holder with black cover MFHCLR6 Fuse holder with clear cover NEW

Rating: 60A Voltage: 32VDC

Wire: 2 x 150mm leads of 13mm<sup>2</sup> #6AWG red.

**Body Material: PVC** Pack Size: 1, 10, 100

Notes: Protective cover permits use in harsh under hood environments. The clear cover allows LED Maxi fuses to be clearly seen.

# **RELATED PRODUCTS:**

Maxi fuse see page 18 LED Maxi fuse see page 18











MFHCLR6



# **JCASE FUSE IN-LINE HOLDER SPLASHPROOF**

# **¼** Littelfuse

#### Features

• Suit either Low Profile JCASE™ fuses (LJC) or standard JCASE fuses (JTF).

They offer size and weight savings compared to MAXI<sup>™</sup> fuse holders.

• Include a protective cover for splash resistance.

• Fuse links are compact and incorporate a design advantage over blade fuses. Over time the spring clips that hold blade fuses will weaken. In cartridge fuses, the weaker female part is designed into the disposable fuse so that the grip and

electrical connection will never weaken.

Part Number Description

FHIC1002 Fuse holder with black cover

Rating: 60A Voltage: 58VDC

Wire Thickness: #8AWG Cable Insulation: GXL, 125°C

Operating Temperature Range: -40°C to + I25°C

Max Fuse Insertion Force: 49 Nm Pack Size: 1, 10, 50, 100, 250 Approvals: RoHS

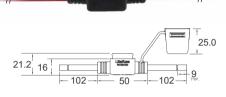
#### RELATED PRODUCTS:

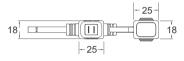


Low Profile Jcase (see page 20)



(see page 21)





Dimensions in MM

# MIDI FUSE IN-LINE HOLDER WITH COVER



58V

#### Features:

• Designed for use with bolt-down Midi fuses.

• May be installed directly inline with the cables with no mounting required.

• Can be used with heat shrink tubing for applications requiring more splash resistance. The curved design of the cover aids in prevention of tubesplitting during application.

Part Number Description

04980921GXM5 Fuse holder with black cover

Rating Continuous: 150A, Rating Max: 200A

Voltage: 58VDC

Operating Temperature Range: -40°C to +125°C

Max. Wire Size: 20mm

Base/Cover Material: UL 94V-0 glass-filled nylon

Studs: Zinc plated steel M5 x 0.8

Stud Torque Rating: 5Nm

Hardware: Nylock Zinc-plated steel nuts (included).

Pack Size: 1, 10, 100

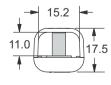
Notes: Midi fuse is not included.

Approvals: RoHS

# RELATED PRODUCT:



Midi Fuse (See page 24)



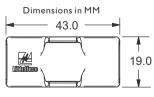
Side View







Assembled Holder



**Top View** 



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

Part Number Description

MIDERR Midi Fuse Block with Hinged Cover

Rating: 125A Voltage: 32VDC

Body & Cover: Black PA66.

Accessories: Includes cover & flanged nuts. Studs: M5 threaded studs. Steel / Zinc plated.

Torque Rating: 4.5 Nm

Features: Inline or surface mounting options.

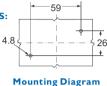
Pack Size: 1, 10, 100, 500 Notes: Midi fuse is not included.

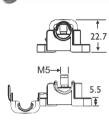
Approvals: RoHS

# RELATED PRODUCTS:

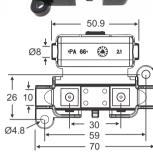
Midi Fuse (See page 24)

**FUSE HOLDERS** 





Dimensions in MM



# **MEGA FUSE IN-LINE HOLDERS**

#### Part Number Kit Description 00380 Fuse holder, M8 bolts and nyloc nuts. 00380K Fuse holder, M8 bolts, nyloc nuts and 2 x 10-20mm<sup>2</sup> & 2 x 25-35mm<sup>2</sup> terminals. 00380KI Fuse holder, M8 bolts, nyloc nuts and 2 x 10-20mm2 terminals only. 90A 00380K2 Fuse holder, M8 bolts, nyloc nuts and 2 x 25-35mm2 terminals only. 100A 00395 Snap mount fixing plate 6.5mm hole.

Voltage: 32V

Body: PA66-GF30 HB

Studs: Steel M8 x 14. Torque Rating: | | Nm

Pack Size: 1, 10, 50, 100, 500

Note: Mega fuse & fixing plates not included.

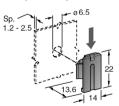
# **Fuse Inspection** Window **Body Top** Flanged Nuts **Terminal** Cable -Mega Fuse M8 Studs **Body Bottom**

11.8 11.8 ø 3.6 ø 3.6 0.8 0.8 6.8 6.8 21.5 21.5

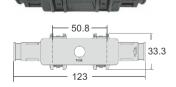
**Lateral Fixing Plate** 

# **Snap Mount Fixing Plate**

Slide locks to holder. Snaps into to panel hole.







#### RELATED PRODUCTS:



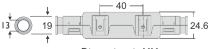
(See p.25)



16mm<sup>2</sup>, 25mm<sup>2</sup> (see p.188)



2pcs reg'd per holder



Dimensions in MM



NEW IP20

# **BLADE FUSE ADD-A-CIRCUIT HOLDERS & KITS**



Create a new fuse protected circuit by tapping into an existing fuse circuit. Perfect for adding accessories. Simply plug the add a circuit holder into an existing energized fuse-block slot and insert the original fuse into slot (A) to continue protecting the original circuit. Finally insert a new fuse into slot (B) to protect the new accessory circuit powered by the included lead.

**NEW** 

Tap Only	Tap & Fuse Kit	
Bulk Pack	Retail Clam Shell	
Part Number	Part Number	Suits Blade Fuse Types
FHC200	FHC200K	Micro2 / ATR 32V
FHL200	FHL200K	Low Pro Mini / LP ATM 58V
FHM200	FHM200K	Mini / ATM 32V
FHA200	FHA200K	Auto / ATC 32V
FHD200	FHD200K	Micro3 / ATL 32V





(Micro2 Fuse) FHC200

**Rating:** 10A max installation rating. **Wire:** Imm<sup>2</sup> #16AWG red wire.

Terminal: Hardened brass crimp-type coupler.

Tap Only Bulk Pack: Includes Fuse Tap Only. No Fuses.

Tap & Fuse Kit Packaging: Includes Add-a-circuit & 3 spare fuses.

Ratings included are 5A, 7.5A & 10A.

**Important Note:** Please ensure the gauge of the cable powering the

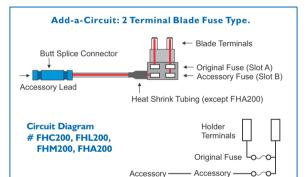
original fuse is suitable for the additional current draw of the new circuit. **Pack Size:** 1, 10, 100, 500, 1000

Approvals: RoHS





(Low Pro Mini) FHL200



I ead

Fuse





(Mini Fuse) FHM200





(Auto Fuse) FHA200





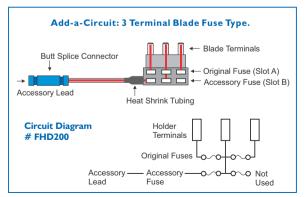
Tap & Fuse Kits

(Micro3 Fuse) FHD200





QR Code: 7014







Taps into existing blade fuse by fitting over the leg for additional non-fused circuit.

Part Number Kit Includes Instruction Sheet Plus;

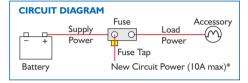
MIN-TAPSP 5x Mini blade fuse taps, 5x insulated female terminals. 5x Auto blade fuse taps, 5x insulated female terminals. ATOF-TAPSP

Rating: 10A Max.

Notes: Always install an inline fuse holder to protect

the accessory. Fuses not included.

Pack Size: 1, 10, 100





**PACKAGING** 'SP' Spare Pack Retail Clamshell





Mini Tap Terminals: 2.8mm (1.87")



Auto Tap Terminals: 5.8mm (1/4")

# **3 CIRCUIT BATTERY POWER FEED / GROUND TAPS**



**Bussmann** 

A quick, easy and reliable method of attaching additional electrical cables to a battery terminal or to ground. They can be stacked to provide multiple taps at one location. Battery Application: Once mounted on the battery terminal, the tap provides three 6.35 mm (1/4") quick connect terminals that can be used to power accessory products. Grounding Application: Once mounted onto the frame, the tap provides three 6.35mm (I/4") quick connect terminals that can be used to ground accessory products. Terminals: 3 x 6.35mm (1/4" QC)

Note: Always install an inline fuse holder to protect the accessory.

Suits Battery Terminals

Screw Type

Post Clamp

Pack Size: 1, 10, 100

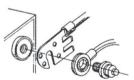
Part Number

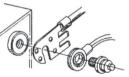
**BAT-TAP-POST** 

**BAT-TAP** 

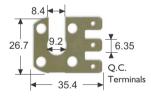


Stacked **Battery Taps** 









**Battery Screw Mounting** Frame Ground Mounting



1 x #8 Mounting Hole



**BAT-TAP** 

Frame Grounding Mounting

**BAT-TAP-POST** 

#### **RELATED PRODUCTS:**

**Battery Post Mounting** 



**Blade Fuses** (see p13 - 17)



(see p.72 - 77)



**Disconnect Terminals** (see p.188)



(see p.188)



# **FUSE SOCKET CONNECTORS**

# PROVE

#### **Fuse Socket Uses:**

- Check current draws.
- Check short / open circuits.
- Check voltage.
- Tap power to energize.

Part Number Socket Terminal Type

FSC-MINI Mini Blade Terminals 2.8mm **FSC-AUTO** Auto Blade Terminals 6.35mm

Pack Size: 1.10.100 Notes: 30A Max.





**FSC-MINI** 



# **FUSED SOCKET CURRENT LOOP KIT - 2mcs**



The Fuse Socket Current Loop provides end user easy testing access when using a current probe to determine the amperage draw through a fused circuit. Maximum testing range is up to 30 Amp. The Perfect tool for installer who needs to monitor circuit amperage limits.



Part Number Kit Contains Both Units

Ipc Mini Blade Socket 2.8mm + Mini Inline Fuse Holder FSCL-KIT

I pc Auto Blade Socket 6.35mm + Auto Inline Fuse Holder

Pack Size: 1, 10, 100 Notes: Fuse not included.





# **FUSE SOCKET SHORT CIRCUIT DIAGNOSTIC KIT - 17pcs**



This circuit diagnostic kit enables professional mechanics to troubleshoot short circuits in a vehicle without the need to constantly replace fuses. Simply plug the correct socket connector into the fuse slot and fit the appropriate circuit breaker, then start troubleshooting. Mechanics will be able to use the manual reset button on the circuit breaker during the troubleshooting process to reset the breaker instead of replacing a new fuse. Each socket connector has an extension cable to save the user having to reach down into difficult locations where the fuse box is located every time a reset is required. Once the short circuit has been fixed, simply remove the connector and reinstall the correct fuse.



#### Part Number Kit Contains FSCLA-KIT

I x Mini blade socket connector and mini blade breaker housing.

- I x Auto blade socket connector and auto blade breaker housing. (Each unit is 280mm long with I 2AWG red cable).
- 7 x Mini blade type III manual reset circuit breakers. Ratings include: 5A, 7.5A, 10A, 15A, 20A, 25A, 30A
- 7 x Auto blade type III manual reset circuit breakers. Ratings include: 5A, 7.5A, IOA, I5A, 20A, 25A, 30A
- I x Fuse puller. Extracts mini and auto blade fuses.





Mini Blade







Puller Circuit Breakers

Circuit Breakers



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

# MICRO2 FUSE BLOCKS LATERAL CONNECTION

ETON Bussmann





Voltage: 32V

Circuit Rating: 15A max per circuit Cover: Clear with o-ring seal **Block:** Moisture resistant back plate IP Rating: IPx4 (Splash proof) Terminals: Lateral I/4" QC (6.25mm).

Mounting: Surface mount, M5 screw.

Pack Size: |

Options: Also available in 8 & 10 way.

Notes: Fuses not included.

#### RELATED PRODUCTS:

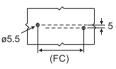


Micro2 Fuses (see p. 13)

#### FB4-ATR

83 (L) x 45 (W) x 39 (H) Fixing Centre (FC): 65mm

#### **Mounting Diagram**



FB6-ATR

103 (L) x 45 (W) x 39 (H) Fixing Centre (FC): 85mm

Use cable ties through side slots

to secure fuse holder to vehicle.



I/4" Quick Connects



# MINI FUSE BLOCK AXIAL CONNECTION

#### Features:

• Up to 7 x Mini fuse protected circuits & space to store 3 x spare fuses.

• Compact design for mounting in tight spaces using cable ties.

• Kit includes plenty of terminals in 3 different sizes to suit a wide range of cable sizes.

• Hinged cover protects fuses from the elements. Inside legend identifies the circuits.

Part Number Kit Description

01435K Mini Fuse Block Kit Includes:

I x 01430 (7 way frame) 7 x 01420 (Mini fuse modules)

16 x 08330BK (Bulk terminals 0.35 - 0.75mm<sup>2</sup> 9A)

16 x 0833 IBK (Bulk terminals I - 2 mm<sup>2</sup> 16A) 16 x 08332BK (Bulk terminals 2.5 to 4mm<sup>2</sup> 28A)

Voltage: 32V

Body: Black rubber (PA 66 GF30) Terminals: Tin plated copper

Terminal Options: BK = Bulk Pack.

Pack Size: 1, 400

Notes: Cable ties not supplied. Fuses not included.

Approvals: RoHS

#### **Fuse Housing**

**RELATED** 



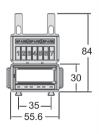


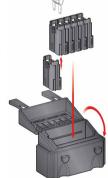
#### **Fuse Frame**











Storage for 3 spare fuses.





This panel is designed for use with Auto fuses &/or Auto Bladed Circuit Breakers. It can be ordered with a minimum of 4 positions up to a maximum of 20 positions (in multiples of 2). You can also order the panel with a Ground Terminal Pad (GTP) fitted. The GTP features I 2 x I/4" (6.35mm) Q.C. terminals with a common wiring stud.

Short Base GTP not Fitted Part Number 15600-04-20 15600-08-20 15600-08-20 15600-10-20	Long Base GTP is Fitted Part Number 15600-04-21 15600-06-21 15600-08-21 15600-10-21	Number of Positions 4 6 8
15600-12-20	15600-12-21	12
15600-14-20	15600-14-21	14
15600-16-20	15600-16-21	16
15600-18-20	15600-18-21	18
15600-20-20	15600-20-21	20



Long Base With GTP

Input Stud #10-32

5.6 DIA.

Common Feed

Voltage: 32V

Input Stud Terminal Rating: 100A max total. Output Terminal Rating: 30A max per circuit.

Positions: 4 to 20 circuits available Materials: Black thermoplastic Input Stud: #10-32 threaded stud.

Hardware: Nut and lockwasher supplied on input terminal. Output Terminals: 6.35mm x 0.8mm Q.C. terminals.

Wire Size: #4-6 AWG (Input). #12-16 AWG (Output).

Feature: Recessed area in centre of block for identification label. Pack Size: Stock lines Ipc. Indentitems 35pcs.

Notes: \*When ordering with a GTP fitted, please add 33mm to dimension 'L' for actual overall length.) Plug-in components such as fuses and breakers not included.

Dual Supply Option: RTA fuse panels can also be ordered with 2 power input studs (dual power feed). Choose from 4-16 fuse/breaker positions for each input stud (20 positions total per panel). Please contact sales for further information.



Recessed

Label Area



Retail Pack Option # 15600-06-20SP

#### Positions 15.8 62.8 6 8 31.8 78.5 10 47.5 95.3 63.6 110.3 12 79.3 126.3 14 16 95 6 142 1 18 HI.I 158.1 20 127.1 173.9

#### **RELATED PRODUCTS:**



**Auto Fuses** (see p.17)



**LED Auto Fuses** (see p.17)



**Auto Bladed Breakers** (see p.49 - 51)

# 85.6 0 26.9 63.5 15.8 6.35 Q.C. GTP fitted\* -15.8



# **AUTO FUSE BLOCKS LATERAL CONNECTION**

- Clear plastic cover for fast visual confirmation of fuse amp rating.
- Easy identification of blown fuses when LED indicating Auto fuses are installed.
- Gasket included with cover.

Part Number	No. Poles	Max Amps Per Block
00610K	4 Pole	80A
00600K	6 Pole	100A
00590K	8 Pole	135A



Voltage: 32V

Input Terminal Rating: 20A max. per circuit.

Body: Black PA66 GF30

Cover: Transparent cover with gasket. Material PA12.

Terminals: Lateral connections, 6.35mm (1/4") QC terminals. Kit Contents: Fuse cover, base & QC terminals.

Mounting: M5 screw

Pack Size: 1, 10, 100, 500

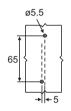
Notes: Each fuse branch is independently powered.

Fuses are not included. Approvals: RoHS

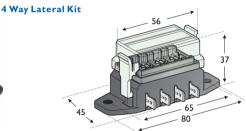


**Lateral Connection** I/4" Quick Connects

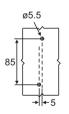
#### Mounting Diagram - 00610K



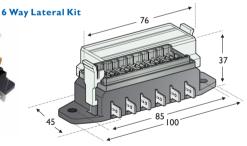




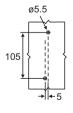
#### Mounting Diagram - 00600K





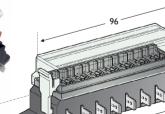


#### Mounting Diagram - 00590K









120

Dimensions in MM

**RELATED** 

PRODUCTS: Auto & LED Auto Fuses (see p. 17)



8 Way Lateral Kit

# **AUTO FUSE BLOCKS AXIAL CONNECTION**

# MTA

#### Features

- Clear plastic cover for fast visual confirmation of fuse amp rating.
- Easy identification which amperage Auto fuses are installed.
- Easy identification of blown fuses when LED indicating Auto fuses are installed.

Part Number	No. Poles	Max Amps Per Block	Included Terminals
00540K	4 Pole	80A	8 x 07501
00560K	6 Pole	100A	12 x 07501
00580K*	8 Pole	135A	16 x 07501
00580K*	8 Pole	135A	16 x 0/501

Voltage: 32V

Input Terminal Rating: 20A max. per circuit.

Body: Black PA66 GF30

Cover: Transparent cover. \*00580K cover features a gasket.

Terminals: 6.35mm (1/4") Quick Connect terminals. # 07501BK.

Kit Contents: Fuse cover, base & QC terminals.

Mounting: M5 screw (00540K & 00560K), M5 threaded insert (00580K).

Pack Size: 1, 10, 100, 500

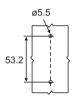
**Options:** Blocks and terminals can be ordered separately, minimums apply. **Notes:** Each fuse branch is independently powered. Fuses are not included.

Approvals: RoHS



Axial Connection 1/4"Quick Connects Included & Installed.

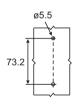
#### Mounting Diagram - 00540K



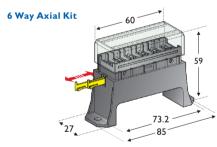




#### Mounting Diagram - 00560K







#### Mounting Diagram - 00580K With Panel Cut Out

103

Gasket →
Threaded

Insert (M5)

33

80

88

RELATED PRODUCTS:

Auto & LED Auto Fuses (see p.17)

Email: info@prolecproducts.com.au

Web: www.prolecproducts.com.au

8 Way Axial Kit

PROLEG

Dimensions in MM

# **AUTO FUSE 6 & 12 WAY PANELS LED INDICATING**

# PROLEG

#### Features:

- 2 combined preassembled models available.
- Features blown fuse LED indication.
- 2 slots to store spare auto fuses.
- Includes a 65 piece sticker set to identify each circuit.
- All fuse and ground terminal panels include a clear cover.

Part Number Description

MFP6SCGTP

MFP12SCGTP

12 Way auto fuse panel with cover & GTP.

12 Way auto fuse panel with cover & GTP.

Voltage: 32V

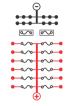
Maximum Total Block Rating: 100A
Maximum Terminal Rating: 30A
Input Stud & Ground Stud: M5 (3/16")
Output Screw Terminals: M4 (5/32")
Ground Screw Terminals: M4 (5/32")
Base Colour: Black Cover: Clear
Operating Temperature: -20°C to +60°C

Screws & Lock Washers: Included.



**65pc Sticker Assortment Set** 







Height with cover 42mm



85mm -

Height with cover 42mm



6 Way Fuse Panel With GTP

**Auto Fuses** 

(see p.17)



12 Way Fuse Panel with GTP



M5 Stud negative distribution

M4 Screw terminals

 $2 \times Spare$  fuse positions

6 x Fuse positions

Screw connect terminals



Protective clear cover included.

M5 input stud positive feed.

Blown fuse LED indicator.



# **AUTO FUSE 6 & 12 WAY PANELS**

# **¼** Littelfuse

#### Features:

- Suits auto fuse or auto bladed circuit breakers.
- Dual power studded inputs.
- Single ground stud & multiple earth returns.
- Lockable transparent cover with label recesses.
- 84pc sticker label set included.
- Storage for two spare fuses.

Part Number Description

880027 6 Way Fuse / Breaker Block 12 Way Fuse / Breaker Block 880028



Continuous Rating: 100A Total Max.

Rating Per Circuit: 30A Max.

Power Input Studs: Dual Input Studs. Negative Input Stud: Single #10-32. Ground Terminals: #10-32 Screws. Output Terminals: #10-32 Screws.

Mounting: 4 x M5 holes. Base: Black Polycarbonate. Cover: Clear PBT

Notes: Fuses are not included



Height 58mm



12 Way Circuit Diagram



**Dual Power Input** 





**Dual Power Input** 

**¼** Littelfuse°

# **RELATED PRODUCTS:**





**LED Auto Fuse** 

(see p.17)





**Automatic & Manual Bladed Circuit Breakers** (see p.49 - 50)



► Height 58mm



Dimensions in MM

# **AUTO FUSE 12 WAY PANEL**

#### Features:

- Suits auto fuses. Transparent cover stores two spare fuses.
- Single power studded input & single ground stud.
- 84pc sticker label set included.

Part Number Description

880066 12 Way Auto Fuse Block

Voltage: 32VDC Rating per Circuit: 30A. Cumulative Rating: 100A.

Single Input & Ground Studs: #10-32. 12 x Output Terminals: #8-32 screws. 12 x Ground Terminals: #8-32 screws.

Internal Buss & Fuse Clips: Tin plated copper. Base: Black reinforced polycarbonate.

Cover: Clear polycarbonate. Hardware: Stainless steel.

Notes: Fuses are not included. Approvals: Cover satisfies ABYC / USCG insulation

requirements.



L: 165mm, W: 85mm, H: 39mm



## **AUTO FUSE / BREAKER REAR TERMINAL BLOCKS**



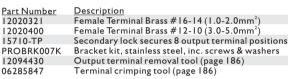
Capacity of 8 to 32 output circuits (for auto fuses or auto bladed circuit breakers).

• 1, 2, 3 or 4 bussed power input studs. Each powering 4 or more fuse circuits.

• Splash resistant cover included. Shallow for fuses. Tall auto bladed circuit breakers.

• Fuse / Circuit breaker block is also available in custom configurations.

Inc Fuse Cover Part Number	Inc Breaker Cover Part Number	Number of Poles	Buss Type	Set Up
15711-12-21A	15711-12-22A	I 2 Pole	Single Bus	12
15712-08-04-21A	15712-08-04-22A	I 2 Pole	Dual Bus	8 + 4
15712-10-06-21A	15712-10-06-22A	I 6 Pole	Dual Bus	10 + 6
15712-14-06-21A	15712-14-06-22A	20 Pole	<b>Dual Bus</b>	14 + 6
15712-12-08-21A	15712-12-08-22A	20 Pole	Dual Bus	12 + 8
15712-12-12-21A	15712-12-12-22A	24 Pole	<b>Dual Bus</b>	12 + 12
15713-16-08-11A	15713-16-08-22A	I 6 Pole	Triple Bus	8 + 4 + 4
15713-20-12-21A	15713-20-12-22A	20 Pole	Triple Bus	12 + 4 + 4
15714-20-06-21A	15714-20-06-22A	20 Pole	Quad Bus	6+4+4+6







Terminals

Secondary Lock TPA

NEW

**Bracket Kit** 

Voltage: 32V Input Rating: 200A max total input for unit.

Fuse / Circuit Breaker Capacity: 8, 12, 16, 20, 24, 28 & 32 positions.

Panel Mounting: Threaded inserts #10-32 (4 places).

Panel Mounting SS Hardware: Screw #MT103212PPHS. Washer # SW316S. Surface Mounting: Bracket kit required. Base Materials: Black thermoplastic.

Input Supply Options: Single, dual and triple bus options.

Input Wire Sizes: #6 - 4 AWG / 13 - 19mm<sup>2</sup>

Input Terminals: 1/4"-20 stud for top & bottom bus. 4x 1/4" Q/C terminals supply power to middle bus (which always powers only 4 positions). 30A max for each Q/C terminal.

Output Terminals: Delphi Pack-Con Series 3 female unsealed tang terminals.

30A max load per circuit. Output terminals not included.

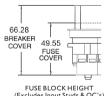
Output Wire Sizes: #16 - 10 AWG / 1.0 - 5.0 mm<sup>2</sup>

Secondary locks: Secure output terminals. Each lock secures 8 positions.

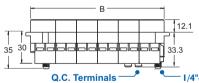
(Please order multiple locks to cover length of selected terminal block).

Pack Size: Stock lines Ipc. Customised indent items 24pcs.

Notes: Fuses & breakers not included. Terminals must be ordered separately as above.

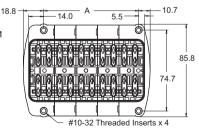


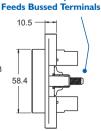
(Excludes Input Studs & OC's)



**Rear Panel Mounted** 20 Way Auto Fuse Block Without Lid I/4"-20 Stud Input

Number Dimensions in MM Poles 28.0 47.5 8 12 48.0 67.0 16 67.8 87.0 20 87.5 107.0 24 107.0 126.5 28 127.0 146.5 32 147.0 166.5





Scan the OR Code for more information



QR Code: 7015



# **AUTO FUSE BLOCK SEALED REAR TERMINAL - 10 WAY**



The Littelfuse HWA20 is a non-bussed, sealed IP67, fuse block constructed from durable polyamide. All input and output connections are electrically isolated, enabling the user to customize the circuitry. Capable of installing 10 x Auto fuses with a maximum combined amperage of up to 210A. Dovetail slots on the sides of the block enable multiple units to be connected side by side to each other or with other Littelfuse fuse blocks and power distribution units.



**IP67** 

**80V** 

Part Number	Kit Contents;
PDMKIT611	Base, Cover, Seal, Terminal Secondary Lock (TPA)
	20 x Terminals (927835-1), 20 x Seals (963245-1)
	4 x Cavity Plugs (100132-1)

Part Number	Individual Component Ordering
PDM61001ZXM	Module with Cover & Terminal Secondary Locks
927836-I	Terminal Female (#20 - #16 AWG), 0.5 - 1.0mm <sup>2</sup>
927835-I	Terminal Female (#15 - #13 AWG), 1.5 - 2.5mm <sup>2</sup>
928966-I	Terminal Female (#12 - #11 AWG), 3.0 - 4.0mm <sup>2</sup>
1241962-1	Terminal Female (#12 - #10 AWG), 3.0 - 5.0mm <sup>2</sup>
963243-I	Cable Seal Silicone Blue, 1.4 - 2.1 mm Cable Dia.
963244-I	Cable Seal Silicone White, 2.2 - 3.0mm Cable Dia.
963245-I	Cable Seal Silicone Yellow, 3.4 - 3.7mm Cable Dia.
967011-1	Cable Seal Silicone Green, 3.6 - 4.3mm Cable Dia.
100132-1	Cavity Plug Silicone Black, 8.1 mm Cavity inside Dia.



Voltage: 80VDC

Maximum Total Current: 210A Max Single Fuse Rating: 40A

Temperature Rating: -40°C to +85°C.

Body & Cover: Black Thermoplastic 94V-0.

Cover Gasket: Green silicone.

Wire Size:  $0.5 \text{ to } 5 \text{mm}^2 (#20 \text{ to } #10 \text{ AWG}).$ 

Terminals: TE AMP Standard Power Timer, Tin Plated.

Terminal Secondary Locks (TPA's): Included with module.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals. Silicone material.

Ingress Protection Rating: IP67 when cover, cable seals & cavity plugs are installed.

Cavity plugs must be fitted to any of the unused 20 terminal holes.

Mounting: Surface mount using 4 fixing holes (M6). Mounting Torque: 4 to 6 Nm.

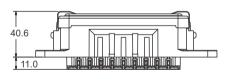
Suit Fuse: Auto fuses (1A-40A). Not suitable for circuit breakers.

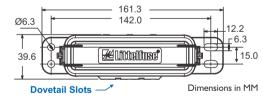
Notes: Fuses, terminals, cable seals or cavity plugs are not included.

Pack Size: |



PDMKIT611





#### **RELATED PRODUCTS:**



32V Auto Fuse 32V LED Auto Fuse 58V Auto Fuse 80V Auto Fuse (see p16-17)



FLEX-MIDI (see p.98)



MEGA-FLEX (see p.99)



HWB60-AL (see p. 123)



FLEC (see p.145)



**EPC** (see p.146)



Did you know? The dovetail features allow you to interlock other multiple Littelfuse Low and High Power products together.
These include; FLEX-MIDI, MEGA-FLEX, HWB60-AL, FLEC & EPC.



# MIDI FUSE BLOCKS GANGABLE 58V

Part Number Description

04980900 Midi Fuse Block with M3 In-Board Mounting 04980903 Midi Fuse Block with M6 Mounting Tabs NEW

Voltage: 58VDC

Rating Continuous: 150A Rating Max: 200A

Body: Black glass filled thermoplastic.

Cover: Included. Black glass filled thermoplastic. Hardware: Includes hex nuts & lock washers.

Studs: M5 threaded studs. Features: Gangable Pack Size: 1.10.100

Notes: The holders feature a stackable side design to allow multiple holders to be joined together. Fuse is not included.

Approvals: RoHS

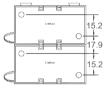
# 9.5 11.5 10.5→ | ← 27.4 → | ← 2.0



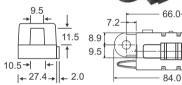
Littelfuse Littelfuse

58V

### **Gang Mount Setup**













# **MIDI FUSE BLOCK GANGABLE 65V**

The BHR series fuse holder is specially designed for use with DC fuse in automotive equipment and road vehicles. It works with both 32V and 58V Midi fuses. The holder is built with special automotive grade materials to withstand high fault currents and temperatures.





04980903

6.35

Part Number BHR030-15-M5

Voltage: 65VDC Rating: 200A Body: Black PA+GF VO Cover: Black PA+GF VO

Operating Temperature: -40 to + 125°C Hardware: Includes hex nuts & lock washers.

Studs: M5 threaded stainless steel.

Features: Gangable. Cover with window feature.

Pack Size: 1. 10. 100

Notes: The holders feature a stackable side design to allow multiple holders to be joined together.

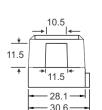
Fuse is not included. Approvals: RoHS

#### **RELATED PRODUCTS:**

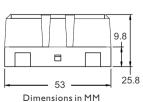




**Fuse window** 



Side locks



# MIDI FUSE MULTI-POLE FUSE BLOCKS

Russmann

Bussmann now offers a heavy duty fuse panel called the LMI "Little Block". The LMI is used for main branch primary fusing and can be configured to fit up to 6 industry standard Midi fuses all bussed to a single input stud. The LMI provides efficient power distribution suitable for many "under the hood" applications such as: Marine. Construction, Agriculture, Heavy Trucking, Bus and Specialty Vehicles.

Part Number	Description
LMII-E-I-0	Midi Fuse Block (2 x 10-32 studs)
LMII-E-I-I	Input Module (1 x 5/16"-18 stud)
LMII-M-I-0	Midi Fuse Block (2 x M5 studs)
LMII-M-I-I	Input Module (1 x M8 stud)
B109-7091-2	Busbar 2 holes - (spans 2 modules)
B109-7091-3	Busbar 3 holes - (spans 3 modules)
B109-7091-4	Busbar 4 holes - (spans 4 modules)
B109-7091-5	Busbar 5 holes - (spans 5 modules)
B109-7091-6	Busbar 6 holes - (spans 6 modules)
B109-7091-7	Busbar 7 holes - (spans 7 modules)





Input Module

Midi Fuse Block

Ordering: Maximum of 7 blocks / modules per assembly (6 fuse blocks & I input module). One Midi fuse block is required for each Midi fuse. Input modules and busbars can be ordered as required. The input module should be located in the center of the assembly for bus bar efficiencies.

Ratings: Midi Fuse Block 200A. Max total combined rating is 400A continuous. Based on numerous variations possible between numbers of poles used, fuses selected, input wiring, and output wiring, all applications should be tested by installer to verify the product meets their requirements.

Temperature: -40°C to 85°C.

Housing: HTN black UL-rated 94V0 thermoplastic material.

Cover: Red Santoprene cover for protection from accidental shorts.

Studs (Midi Fuse Block): Imperial or Metric Stainless Steel & Keps Nuts. Stud (Input Module): Imperial or Metric Stainless Steel & Keps Nut.

Accessories: Busbars - see details below.

Pack Size: 1.10.100

Options: Pre-assembled with specified Midi fuses for OE requirements. Notes: The modules feature a stackable side design to allow multiple modules to be joined together. Fuses & busbars are not included with blocks. Approvals: RoHS



Single Stud Input Module

**Dual Studs** Fuse Block

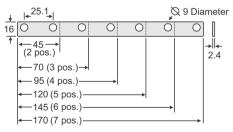
#### Sample Configuration:

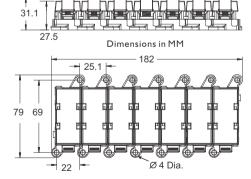
2 x Midi Fuse Blocks

I x Input Module

I x Busbar (3 holes)







#### **RELATED PRODUCTS:**





**M6 Stud Terminal** 

**M8 Input Terminal** 16mm<sup>2</sup> - 35mm<sup>2</sup>(see p.188) 16mm<sup>2</sup> (see p.188)



# MIDI & MEGA MULTI-POLE COMBINATION FUSE BLOCKS

- 2 x Fuse block models (Midi & Mega Fuse).
- 2 x Single stud input block models (M5 or M8).
- Gangable Multiple blocks or a combination of blocks
- Hinged cover included Tool less finger lift.
- Extensive busbar options One power feed.

Part Number	Description
0101499	Midi Fuse Block M5 Studs with Hinged Cover
0101224	Midi Input Stud I x M5 with Hinged Cover
0101498	Mega Fuse Block M8 Studs with Hinged Cover
0101223	Mega Input Stud 1 x M8 with Hinged Cover
0301509	Busbar 2 x Midi Fuse Positions
0301508	Busbar 3 x Midi Fuse Positions
1600060	Busbar 4 x Midi Fuse Positions
0301227	Busbar 5 x Midi Fuse Positions
0301511	Busbar I x Midi Fuse & 2 x Mega Fuse Positions
0301251	Busbar 2 x Midi Fuse & 1 x Mega Fuse Position
0301512	Busbar 2 x Midi Fuse & 2 x Mega Fuse Positions
0301250	Busbar 3 x Midi Fuse & 1 x Mega Fuse Position
0301249	Busbar 4 x Midi Fuse & 1 x Mega Fuse Position
0301225	Busbar 4 x Midi Fuse & 2 x Mega Fuse Positions
0301226	Busbar 4 x Midi Fuse & 3 x Mega Fuse Positions
MGBB02	Busbar 2 x Mega Fuse Positions
MGBB03	Busbar 3 x Mega Fuse Positions





Ganged Midi Block + Mega Block

Base: Black PBT-GF20 Cover: Black PP-TD20 HEAT-ST Cu-ST Hardware M5 and M6: Steel - Zn Ni.

Fuse Blocks & Input Block: Include cover & hex nut(s).

Ampere Rating: All blocks and busbars please contact sales. Notes: Rear plastic panel must be cut out if not fitting a busbar Single stud power input blocks are also gangable to fuse blocks.



Top Entry





MTA

**Independent Power** 

**Ganged Fuse Blocks** Common Busbar Power



Top Wall

Input Cable

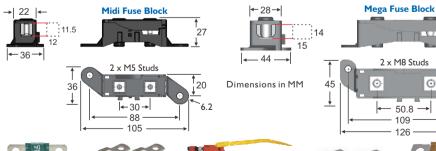


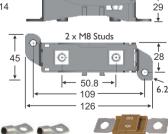
**Busbar Accessory** No Cut-out Required

Scan this OR Code for more information



QR Code: 7022













Mega Fuses (see p.25-26)



# **MEGA FUSE BLOCK SEALED & IGNITION PROOF**



#### **Features**

- High amperage circuit protection in harsh / hazardous environments.
- Waterproof sealed fuse compartment protects fuse from corrosion.
- •Ignition protected to SAE [1171 and ISO 8846 for installation in a battery box or on vehicles carrying hazardous loads.
- Stainless steel hardware and tin-plated 100% pure copper optimize long-term corrosion protection.
- Allows dielectric spray on cable terminals without compromising fuse connections.
- Cover retention ensured through integrated tether. AssureLatch™ technology for worry-free positive latching.

Part Number Description

880014 Mega Fuse Block & Cover Sealed

Voltage: 70VDC

Rating Max: 500A, 375A continuous. Input Studs: M8 stainless steel.

Ignition Protected: SAE | | | 7 | and | SO 8846

Ingress Protection: IP66 / IP69K

Operating Temperature: -50°C to + 125°C

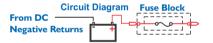
Shock: 50 G's Vibration: 8 G's

Input Terminal Stud Torque: 20Nm, Max 30Nm.

Mounting Fuse Stud Torque: 12-18Nm. Mounting Block Torque M6 Holes: 5-8Nm. Fuse Block: Inc. cover, SS screws & hex nuts.

Pack Size: 1.10

Notes: Fuses not included



# IP69K IP66 IGNITION 70V

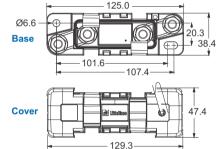












# **MEGA BATTERY DISTRIBUTION UNIT POST MOUNT**

#### Features:

• Durable clip-on cover. Cable feeds through slots in the housing.

• Double ring (19mm) connects to positive top post battery terminal.

Part Number Description

I Way Mega Fuse BDU With Cover 0101703

Voltage: 32VDC Rating Max: 250A.

Operating Temperature: -40°C to +120°C

M6 Post Torque: 4.5Nm. M8 Terminal Torque: 11Nm. BDU: Includes housing, cover, busbar, self locking nuts.

Notes: Fuses not included.

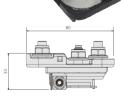
#### Circuit Diagram

1 Fused Output

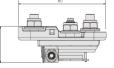
#### RELATED PRODUCTS:

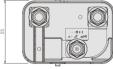














Internal Busbar

1 Non Fused Output

Power Input

# MIDI MULTI-POLE POLE COMBINATION FUSE BLOCK 58V



The MIDI-Flex fuse holder is used with the MIDI style bolt-down fuse, which is available up to 200 A. This holder offers a flexible cover, which allows cable entry from virtually any direction, large wire size, and ring terminal stack up. Slots on the base allow holder to be mounted with tie wraps. Dovetail features allow you to interlock multiple MIDI-Flex fuse holders together for a high power distribution block. Bus bars are available for multiple holder applications.

#### Foatures

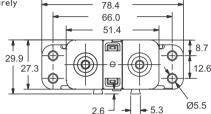
- Flexible cover allows for cable entry from virtually any direction allowing for easier installation.
- Dovetail features allow you to interlock multiple Flex holders together to create a high power distribution block. Combine with the MEGA-Flex fuse holder for a high and low amperage solution.
- Slots are moulded into the base that allow the holder to be securely mounted with tie-wraps.

Fuse Block with M5 Studs & Cover

 Zinc plated steel hardware and tin-plated 100% pure copper optimize long-term corrosion protection.

NEW
07-1-1
<u>.</u>

Midi-Flex Fuse Block



882-267-002 Bus Bar (2 holes - spans 2 blocks) 882-267-003 Bus Bar (3 holes - spans 3 blocks) 882-267-004 Bus Bar (4 holes - spans 4 blocks) 882-267-005 Bus Bar (5 holes - spans 5 blocks)

Description

Voltage: 58VDC Rating: 200A

Part Number

04981038

Accessories: Includes cover, hex nuts & split washers.

**Studs:** M5 threaded zinc plated steel studs.

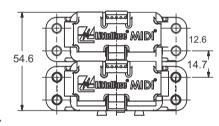
Flammability: UL94 V-0 Wire Size: 8mm² to 35mm²

Operating Temperature: -40°C to + 125°C

Pack Size (bag): 1, 10, 100, 500

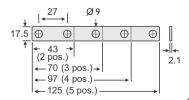
Notes: The holders feature a stackable side design to allow multiple holders to be joined together. Fuses are not included. The busbar needs to be installed first, followed by the Midi fuse,

the split washer and finally the hex nut.





**Bus Bars Accessories** 



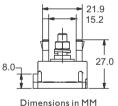
#### RELATED PRODUCTS:



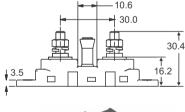


32V Midi Fuse (see p.24)

**58V Midi Fuse** (see p.24)



Midi-Flex & Mega-Flex fuse blocks combined.





**Gang Mount Setup** 



# **MEGA MULTI-POLE POLE COMBINATION FUSE BLOCK 70V**



The MEGA-Flex fuse holder is used with the MEGA bolt-in fuse, available in ratings 40A to 500A. This block features a flexible cover which allows cable entry from virtually any direction, large wire size, and ring terminal stack up. Slots on the base allow holder to be mounted with cable ties or surface mount using standard screw holes. Bus bars are also available for common power feed across multiple holders. Dovetail features allow you to interlock multiple MEGA-Flex holders together for a high power distribution block or it can interlock with other Littelfuse products including FLEC, EPC, HWA20, HWB60 & Midi-Flex.

Part Number	Description
02981028	Fuse block with M8 Studs & Cover
882-839-2	Busbar 2 holes - (spans 2 modules)
882-839-3	Busbar 3 holes - (spans 3 modules)
882-839-4	Busbar 4 holes - (spans 4 modules)
882-839-5	Busbar 5 holes - (spans 5 modules)

Voltage: 70VDC Rating: 500A

Base: Black UL 94V-0 Glass-filled PPA.

**Cover:** Black flexible UL94V-0 Elastomer. Red colour optional. **Studs:** M8 x I.25 Zinc plated steel. Stainless steel optional.

Nuts & Washers: Same material as studs. Bus Bar Material: Tin plated copper. Temperature Rating: -40°C to 125°C

Wire Size: 8mm<sup>2</sup> to 35mm<sup>2</sup>

Accessories: Includes cover, hex nuts & split washers.

Pack Size: 1, 10, 100

Notes: Fuse & busbar are not included.

Approvals: RoHS





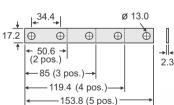
Mega-Flex Fuse Block



**Bus Bar Accessories** 

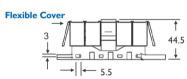


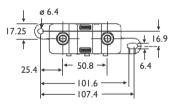
Multipole with Bus Bars

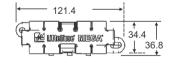




Midi-Flex & Mega-Flex fuse blocks combined.









Dimensions in MM

#### **RELATED PRODUCTS:**







# **Littelfuse**

The Littelfuse MEGA® Bolt-Down Series High Current Fuse Holder is ideal for battery and alternator connections as well as providing ultra-high current protection for other types of heavy gauge cables. Interlocking pins on the sides let you connect additional fuse holders for multi-fuse applications.

70V

Part Number Description

02981001 Fuse Block with Hard Cover

Voltage: 70VDC Rating: 500A

Body & Cover: Black glass filled thermoplastic.

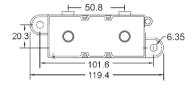
Fuse Block: Includes cover, hex nuts & lock washers.

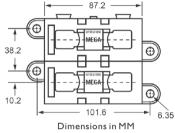
Studs: M8 threaded. Torque Rating: 5 Nm. Features: Gang mount, stackable side design.

Pack Size: 1, 10, 100

Notes: Fuse is not included. Approvals: RoHS







**Gang Mount Setup** 

Bussmann

62.5

#### **RELATED PRODUCTS:**







# **MEGA FUSE BLOCKS FLEXIBLE COVER**

#### Part Number Description FMG-III Fuse Block With Standard Cover M8 Studs (a) FMG-116 Fuse Block With Extended Cover M8 Studs (b) FMG-211 Fuse Block With Standard Cover 5/16"-18 Studs (a) FMG-216 Fuse Block With Extended Cover 5/16"-18 Studs (b) NEW

Voltage: 32VDC Rating: 500A

Body: Black UL rated 94V-0 thermoplastic.

Cover: Black flexible thermoplastic elastomer. Red cover optionable. Fuse Block: Includes cover & sems nuts. Wire Size: #8 AWG / 8mm<sup>2</sup>

Studs: Zinc plated steel studs. Torque Rating: 13.5 Nm.

Features: Cables can be routed to studs from nearly any direction.

Pack Size: 1, 10, 100 Notes: Both covers features end cut-outs for wiring.

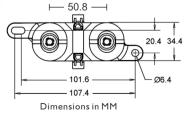






(a) 19.5 (b) 24. 45.5 121.4

**Extended Cover** 



**RELATED PRODUCTS:** 





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# **MEGA FUSE BLOCK WITH CLEAR COVER 100V**



NEW

100V

Part Number Description

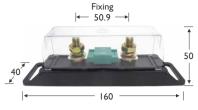
BHR059-25-M8 Fuse Block with Clear Cover

Voltage: 100VDC Rating: 500A

Studs: M8 Studs Max Torque: | 2Nm Operating Temperature: -40 to + | 25°C Hardware: Nuts and washers included.

Pack Size: |

Notes: Fuse not included.



Dimensions in MM

RELATED PRODUCTS:



Mega Fuse 70V (see p.25)

# LIFT TRUCK FUSE BLOCK WITH CLEAR COVER 120V



NEW

120V

Bussmann 80V

Part Number Description

BHR061-25-M10 Fuse Block with Clear Cover

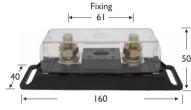
Voltage: 120VDC

Rating: 800A

Studs: MI0 Studs Max Torque: 14.3Nm Operating Temperature: -40 to +125°C Hardware: Nuts and washers included.

Pack Size: |

Notes: Fuse not included.



Dimensions in MM

RELATED PRODUCTS:

FBT Fuses 48V-80V (see p.26)

# **LIFT TRUCK FUSE BLOCKS 80V**

Part Number Description
FBTB-LN Fuse Block with Nylon Insert Locknuts
4164-FR Fuse Block with Free Running Nuts

Rating: 800A

Voltage: 125VAC / 80VDC Base: Thermoplastic Studs: 5/16" - 24 (M8) Torque: 120 In-Lbs. Pack Size: 1, 10, 50, 100

Notes: Countersunk mounting holes to suit No. 10 flat head screws. Fuses not included.

# INEW INEW



EAT•N

# RELATED PRODUCTS:



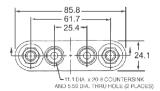
FBT Fuses (see p.26)



ANL Fuses (see p.27)



ANN Fuses (see p.27)





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# EV FERRULE & BOLTED TAG FUSE BLOCKS 10.3MM DIA.



Part Number	Decsription
BHII4-IC	Cartridge Fuse Block with 1/4" QC & Screw Terminals
BHII4-IM	Flush Tag Fuse Block with Screw Terminals
BHII4-CN	Cartridge / Tag Fuse Clear Cover - Non Indicating
BHII4-CC	Cartridge Fuse Clear Cover - LED Indicating
BHII4-CL	Flush Tag Fuse Clear Cover - LED Indicating





Cartridge Fuse Block Rating: 30A | 100VDC Flush Tag Fuse Block Rating: 50A | 100VDC Wire Size: 14-10 AWG (1.6 - 8.4mm2)

Material: Thermoplastic (Base & Cover). Flammability: UL94VO (Base)

Operating Temperature: -40°C to + 125°C

Terminals: Tin plated, copper alloy.

Mounting: Screw, bolt or 35mm DIN Rail. Feature: Slide lock design.

Pack Size (box): 1. 10. 100 Notes: Fuse not included. Approvals: TUV A ROHS

**RELATED PRODUCTS:** 

**EVCartridge Fuse** 

(see p.32-34)



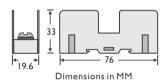
Flush Tag Fuse Block **Screw Terminals** 



Cartridge Fuse Block Screw & I/4" QC Terminals



**Gangable Slide Lock** 



# **EV / EVSE BOLTED FUSE BLOCKS MODULAR**

EV Flush Tag Fuse

(see p.32-34)



Bussmann

The C5268 series is a simple design modular fuse block. With this design, the fuse terminal and cable (with termination) are mounted on the same stud, minimizing labor needed for installation.

Part	Ampere	Stud Diameter	
Number	Rating	and Thread Type	"A" Stud Height
C5268-5	100A	1/4"-20 UNC (6.35mm)	1.75" (44.45mm)
C5268-3	200A	5/16"-18 UNC (7.93mm)	0.75" (19.05mm)
C5268-2	200A	5/16"-18 UNC (7.93mm)	1.75" (44.45mm)



Pack Size (box): I block (order 2 blocks per fuse).

Ambient Temp: 150 °C

Base: Plaslok \$5440 phenolic, UL 94V-0 or 94V-1.

Studs: Steel, Zinc Plated

Hardware: Includes nut & spring washer.

Pack Size (box): I (stock lines), 50 (indent items).

Notes: Fuse not included.

#### **RELATED PRODUCTS:**



Class T Fuse 160V (see p.31)

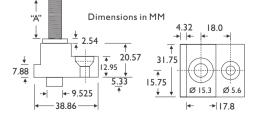


**EV Fuse** 500V - 800V (see p.32-33)



**EV** Fuse 1000V (see p.34) Fuse blocks with fuse installed.







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# **EV / EVSE BOLTED FUSE BLOCKS FIXED**



The BFR series fuse bases are suitable for use in automotive vehicles and automotive supply equipment. The bolt mount assembly system uses a wedge lock system to withstand extreme vibration or dynamic loads. The Adler BFR series EV fuse block uses special materials for use with high fault currents and temperatures specifically for automotive fuses applications.



Rated Voltage: | 1000VAC / | 1000VDC

Rated Current: Adler EV fuses (all current ratings) can be

used with their suitable fuse blocks.

Operating Temperature: -50°C to +180°C

Max Voltage: 13-18 kV

Insulation Board Material: FR4 UL94 Flame Retardant Grade: 94HB Insulation Resistance: 50,000 M ohm

Studs: Stainless steel.

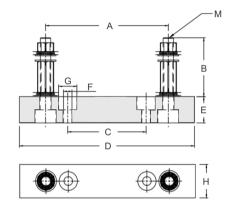
**Hardware:** Two-piece interlocking wedge lock washers. **Hardware Option:** Detend edged washers add suffix -S.

Pack Size: 1, 20, 100 Notes: Fuse not included.









Fuse Block	EV Fuse Range	Suggested				Dime	ensions	in MM			
Part Number	Adler Series	Stud Torque	Α	В	C	D	E	F	G	Н	M
BFR063-38-M6	AE5620	9 ± 1 Nm	63	38	3	84	15	5.5	9	25	M6
BFR071-46-M8	AE5625, AE5631	12 ± 1 Nm	7 I	46	25	96	15	8.5	14	30	M8
BFR094-45-M8	AE7i25	12 ± 1 Nm	94	45	60	134	20	6.5	14	25	M8
BFR099-70-MI0	AE7i38, AE7i51	16 ± 1 Nm	99	70	60	146	20	6.5	14	42	MI0
BFR106-46-M8	AEX731	12 ± 1 Nm	106	46	60	146	20	6.5	14	35	M8
BFR116-72-M10	AEX738, AEX751	16 ± 1 Nm	116	72	60	146	20	6.5	14	42	MI0
BFR091-35-M8	AT8302	12 ± 1 Nm	91.5	35	25	130	15	8.5	17	30	M8
BFR101-45-M10	AT7C03, ATXC01	16 ± 1 Nm	101.5	45	40	150	25	8.5	17	48	MI0
BFR086-45-M8	AT8702	12 ± 1 Nm	86.8	45	35	130	20	8.5	17	42	M8
BFR082-45-M10	AT5B04	16 ± 1 Nm	82.5	45	40	130	25	8.5	17	48	MIO
BFR065-45-M10	AT2E00	16 ± 1 Nm	65	45	30	115	25	8.5	17	48	MIO
BFR043-28-M6	AT1105	9 ± 1 Nm	43	28	15	70	15	5.5	9	25	M6
BFR050-28-M8	AEY900, AEY901	12 ± 1 Nm	50.9	28	15	80	15	5.5	9	30	M8

#### **RELATED PRODUCTS:**







**AE5 500V Fuses** (see p.32)

AE7 800V Fus (see p.33)

AEX 1000V Fuses (see p.34)



# **CLASS T, EV & EVSE BOLTED FUSE BLOCKS MODULAR**

# **¼** Littelfuse®

#### **Features**

- Modular design reduces inventory requirements.
- Supplied with nut and belleville washer.
- 200kA (VAC), 250kA (VDC) short-circuit withstand rating.

Part	Ampere	Terminal	Suggested
Number	Rating	Stud Size (Metric)	Stud Torque
LSCR001	400A	1/4"-20 (6.35mm)	6.8 Nm
LSCR002	800A	3/8"-16 (9.52mm)	21.6 Nm

Insulator Material: Molded Phenolic (150°C Max) Terminal Material: Steel, Zinc Plated. Flammability Rating: UL 94-V0

Ordering Information: Sold as a pair of blocks. (ordering I pair of blocks suits one fuse).

Notes: Fuse not included.

Voltage: 700VAC / 1500VDC

Approvals: St calus ( C RoHS









# **RELATED**



225A - 800A











QR Code: 7017

Littelfuse NEW

1500V

# PRODUCTS:



**AE5 500V** 50A - 400A

**AE7 800V** 60A - 150A 175A - 600A

175A - 600A

# CLASS T. EV & EVSE BOLTED FUSE BLOCKS MODULAR

#### Features

LSCR002

- Modular design reduces inventory requirements.
- Supplied with nut and belleville washer.
- 200kA short-circuit withstand rating.

Part	Ampere	Terminal		Suggested
Number	Rating	Stud Size (Me	etric)	Stud Torque
LSCR101	400A	1/4"-20 (6.3	5mm)	7.6-9.3 Nm
LSCR102	800A	3/8"-16 (9.5	2mm)	23.4-28.6 Nm
LSCR103	1200A	1/2"-13 (12.	7mm)	30.5-37.3 Nm

Voltage: 700VAC / I500VDC

Insulator Material: Thermoplastic (125°C Max) Terminal Material: Steel, Zinc Plated. Ordering Information: Sold as single blocks. (order 2 blocks per fuse).

Notes: Fuse not included. Approvals: c us RoHS







LSCR103

# **RELATED**











175A - 600A





QR Code: 7018



**Fuse Block** 

LSCRIOI

LSCR102

LSCR103



225A - 800A

1000A - 1200A





175A - 600A

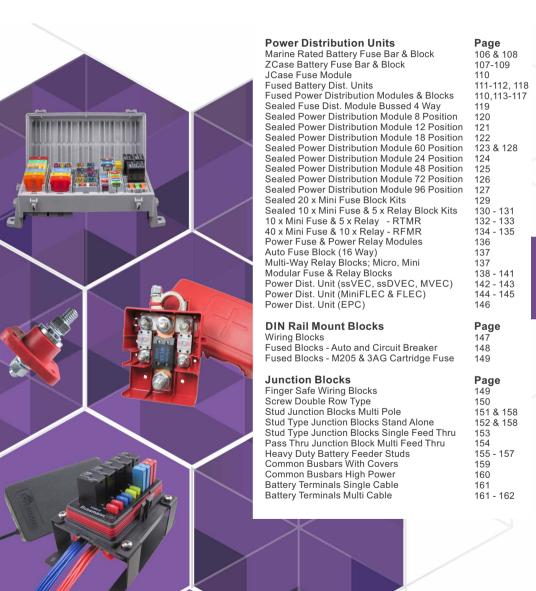






# Power Distribution Units, Blocks & Studs

# **Engineered solutions.**



# FATON

# Bussmann

NEW

#### Features:

- Suitable for DC Main, inverter, windlass and bow thruster circuit protection.
- Weatherproof, suitable for small locations & other harsh environments.
- Simple, economical and compact circuit protection system. Satisfies ABYC 7.
- Santoprene red or black insulating cap prevents accidental shorts.
- Provides high current protection in tight space constraints.
- Mounts on a battery post, battery switch or busbar.

Part Number	Pole Kit	Mount Hole	Stud	Cover
CFBARISP-KIT	Single	3/8" (MI0)	1/4"-20	Red
CFBARISP-KITB	Single	3/8" (MI0)	1/4"-20	Black
CFBARIBP-KIT	Single	1/2" (M12)	1/4"-20	Red
CFBARIBP-KITB	Single	1/2" (M12)	1/4"-20	Black
CFBARIM8SPRK	Single	3/8" (MI0)	M8	Red
CFBARIM8SPBK	Single	3/8" (MI0)	M8	Black
CFBAR2M8SPRK	Double	3/8" (MI0)	M8	Red
CFBAR2M8SPBK	Double	3/8" (MI0)	M8	Black

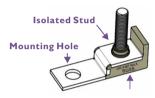




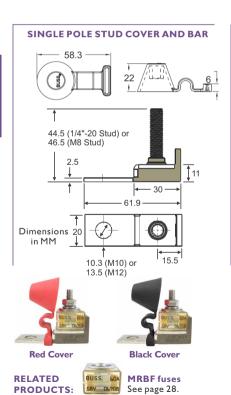


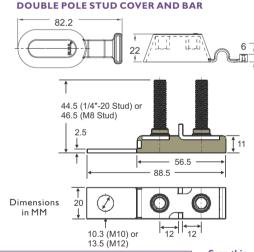
CFBAR2 Double Pole
With Red Cover Kit

Rating: 300A max per CFBAR Voltage: 58VDC
Body: Thermoplastic PPS UL94-V0 Busbar: Nickel plated copper
Fuse Bar Stud: Stainless steel. Two options 1/4"-20 or M8.
Kit Contents: Includes 5/S nuts, washers and insulating cover.
Battery Post Mounting Hole: Two options: 3/8" (M10) or 1/2" (M12).
Notes: The updated 'SP' version of the battery fuse bar does not require a special isolating nut so regular nuts and washers can be fitted to the stud(s).
Fuses not included.



Single Isolated Base with Laser Marking







Scan this QR Code for more information



QR Code: 3000



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# **ZCASE M8 FUSE BATTERY STUD MOUNT BARS 1 POLE**



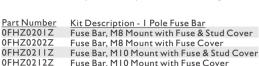
NEW

80V

The Littelfuse ZCASE® SMZ Series Stud Mount Fuse Holder reduces the need for wiring and parts by allowing ZCASE® single high-current fuses to be directly installed on an alternator, battery switch, or electrical relay.

#### Features:

- Up to 3 fuse holders can be stacked to protect multiple circuits.
- Space-saving design eliminates the need to wire in a separate fuse holder or power distribution module (PDM).
- Cover offered in 2 styles. Fuse only or fuse and mounting stud.







Fuse Bar with **Fuse-Stud Cover** 

& Fuse Cover

Voltage: 80VDC

Rating: 400A. Continuous, Max & Stud. Operating Temp.: -40°C to 105°C. Fuse Terminal: M8 Isolated Stud. Cover: Red III 94 V-0 rated

Fuse Busbar: Tin-plated Copper Busbar.

Torque M8 Nut: 14 Nm

Kit Contents: Includes Fuse Bar. Cover & Nut.

Notes: Zcase fuse not included.



Multiple Mounting **Arrangement** 



Single Pole M8 Isolated Fuse Stud Pictured Without Fuse

M8 x 1.25 Serrated Flange Nut

#### RELATED PRODUCTS:

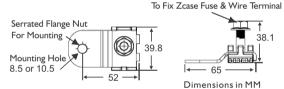


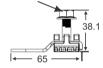


Zcase M8 fuse & Shunt (see page 29)



MRBF M8 fuse (see page 28)





Dimensions in MM

# **ZCASE M8 FUSE BATTERY POST MOUNT BARS 2 & 3 POLES**

Littelfuse

Part Number Description 0FHZ00854-BX 2 Pole fuse bar kit & cover 0FHZ00853-BX 3 Pole fuse bar kit & cover

Voltage: 32VDC

Rating: 275A max continuous. Fuse Terminal: Isolated studs M8.

Torque: 12 to 16 Nm

Mounting: Top Post Positive 19mm.

Kit Contents: Includes Battery Bar, Fuse Bar,

Cover, S/S Nuts & Washers.

Operating Temp.: -40°C to 125°C. Notes: Zcase fuse not included.



3 Pole M8 Isolated **Fuse Terminals** 



2 Pole M8 Isolated **Fuse Terminals** 

#### **RELATED PRODUCTS:**



Zcase M8 fuse & Shunt (see page 29)



MRBF M8 fuse (see page 28)



Red cover fitted. (Included in kits)





QR Code: 9030



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### **5 & 7 POSITION ZCASE FUSE BLOCK**



The 5 or 7 position ZCase fuse blocks are designed for primary high current power distribution. One position is used as a power input terminal and usually fitted with a Zcase shunt to provide common power, via the bus bar (included), to the remaining positions fitted with ZCase fuses for protected power outputs. A variety of bus bar configurations are possible. The green dust covers keep dust out of the backside of the fuse box and the cover protects the fuses from debris. Applications include construction equipment, body builders, agricultural equipment and HD/MD Trucks.





#### Features:

- High current distribution with flexible bussing.
- Busbars can also be cut to create split circuits.
- Corrosion resistant coatings and stainless steel nuts.
- ZCase 3298 series fuses (40A to 600A) or Zcase shunts can be used in any location.



Secure Latch —

Finger Release



5 Way: 217mm x 86mm x 59mm

Sectional Copper Busbar Cut to create multiple circuits

Part Number Description 0FHZ0005Z 5 x M8 Stud a

0FHZ0005Z 5 x M8 Stud assembly, busbar, cover & tether. 0FHZ0007Z 7 x M8 Stud assembly, busbar, cover & tether.

Voltage: 80VDC

Maximum Continuous Current: 400A. Fuse Block Contents: Studs, Busbar, Black Silicon Rubber Tether & Green Silicon Rubber Dust Covers.

Busbar: Solid Copper with Tin Plating.
Max wire size: AWG 4/0 (105mm²)
Contact Temperature: -40°C to 105°C.
Notes: Zcase fuses / shunts are not included.

#### **RELATED PRODUCTS:**

Zcase Fuse (See page 29)



Zcase Shunt (See page 29)



#### 0FHZ0007Z

Green dust covers not shown but are included with this block.



Fuse Block Dimensions
7 Way: 28 I mm x 86mm x 59mm

Scan this QR Code for more







#### BATTERY MOUNT FUSE HOLDER WITH BUSBAR 2-4 POLE



The Battery Mount ZCASE® Fuse Holder with Busbar (BMZB) series allows you to mount fusing directly to a post-style battery terminal. This series offers a compact solution with an integrated busbar, which consolidates complex wiring around a battery system, eliminating or reducing the need for additional wiring. By creating additional fusing locations outside of the main fuse box, these products help reduce cabling and assembly time and provide localized circuit protection without modifying the existing battery harness. This product is designed to mate with M6 ZCASE® fuses, and is rated to operate with fuse ratings up to 400A. This series mounts directly to the battery post with all necessary hardware coming pre-assembled. Available in 2-, 3-, and 4-position configurations, this series serves as a scalable circuit protection solution.

#### NFW

#### **Applications**

- · Battery-mounted circuit protection.
- Secondary circuit protection for applications and motors such as trucks.
- · Best used for hydraulics, electric pumps, or other secondary motors.

#### Features:

- Specifically designed to relocate circuit protection closer to a vehicle battery.

· Integrated busbar. • Plastic cover (3 & 4 pole only) & overmolded housing. Battery clamp oriented to provide clearance for wire routing.



FHZ210 Negative Post Mount Fuse Holder 2 Position No Cover (-) FHZ310 Positive Post Mount Fuse Holder 3 Position with Cover (+)

FHZ410 Strap Mount Fuse Holder 4 Position with Cover

Voltage: 32VDC Rating: 400A Max continuous. Operating Temp.: -40°C to 85°C.

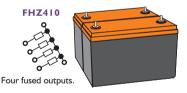
Base Material: Black PPA-GF30 UL94 V-0 Cover Material: Black PBT UL94 V-0

Fuse Busbar:

Torque Battery Post: Tighten the M6 nut to 5.4 Nm to secure the base to the battery post.

Torque Zcase Fuse: Assemble nut and washer and tighten the nut to 14 Nm to secure the ring terminal to the ZCASE fuse.

Notes: Zcase fuses are not included.



FHZ410 is designed to be used as a battery strap to connect the positive posts of 2 Group 3 I batteries, the 4-position holder also provides 4 individual fused outputs in a convenient linear setup.



Zcase fuse See page 29.



**Zcase shunt** See page 29.



**MRBF** fuses See page 28.















#### **JCASE FUSE MODULE SEALED - 3 POLE**



This 3 Pole | case fuse module with common M6 stud feed suits high amperage circuit protection applications in harsh environments with limited space. This sealed, compact and connectorized fuse module is a cost effective and installation friendly circuit protection solution. Surface mount or panel mount. Speed nuts included.



3 v Fuso Positions

Part Number	Description
JCU-3P-000-P	3 Pole Jcase Fuse Module, Cover + M6 Input Stud
JCUCK	3 Way Female Connector Kit (Terminal 3 - 5 mm <sup>2</sup> )
12124685	3 Way Female Connector with Red Seal
12045699	Connector TPA, Terminal Position Assurance
12052457	Female Terminal 20-18AWG, 0.5 - 0.8 mm <sup>2</sup> Wire
12052455	Female Terminal 16-14AWG, 1 - 2 mm <sup>2</sup> Wire
12052456	Female Terminal 12-10AWG, 3 - 5 mm <sup>2</sup> Wire
15324997	Cable Seal, 1.60 - 2.40mm Diameter Wire, Tan
15324995	Cable Seal, 2.00 - 2.90mm Diameter Wire, Red
15324994	Cable Seal, 2.80 - 3.80mm Diameter Wire, Grey
15324996	Cable Seal, 3.60 - 4.50mm Diameter Wire, Blue
12059255	Cavity Plug 9.8mm diameter Light Green

Cover 3 fused outputs via connector.

Input Stud 3 Way Female Output **Connector Kit** 

Output Connection Speed Nut

**M6** 

Scan this OR Code for more information

QR Code: 9043

Voltage: 32VDC. Rating: For use with 3 x Jcase fuses (20A - 60A) Temperature rating: 120°C (250°F).

Materials: Cover and housing - Nylon 66 Housing Seal: Silicon. Terminals: Tin Brass / Tin plated. Input Stud: M6 Zinc plated steel. Ingress Protection Rating: IP66. Mounting: Surface or Panel. Output Connector: Delphi MP 630 series female connector. RoHS Notes: Fuses, connector, TPA, terminals, seals and plug not included.

**RELATED** PRODUCTS: Icase fuses 32V (See page 21).



**Female Terminals** Seals and Plug:



#### MIDI FUSE DISTRIBUTION BLOCK 3 POLE



**NEW** 

IP69K

Eliminates splices & multiple fuse holders. 2 spare Midi fuses can be fitted to the inside of the cover. Single input power cable connects to a 3 pole internal busbar to feed 2 or 3 fused output cables. Suited for near the battery applications and can be mounted in exposed locations.

Water-proof and dust-proof fuse holder with a very high IP rating (IP69K).

Developed for high current loads, and harsh conditions.

Part Number Fuse Block Description 04980933 3 Pole Midi Fuse Module Kit

Module Kit 04980933

Circuit Diagram



I x Base with tethered cover & seal.

- I x Busbar powers up to 3 fuses from a single input cable.
- 6 x Nuts to secure up to 3 Midi fuses.
- 6 x Cable seals of assorted sizes.
- I x Cavity plug, required if you only install 2 x Midi fuses.
- 2 x Cable seal caps to secure cable seals into unit.
- 4 x Screws to secure 2 spare fuses to inside cover.
- I x Instruction sheet.

Module kit does not include ring terminals or fuses.

3 Fused Outputs Voltage: 58VDC max. Rating: Maximum total current 200A. Wire Size: 16 or 25mm<sup>2</sup> (input cable), 6 to 16mm<sup>2</sup> (output cables). Temperature Rating: -40°C to +85°C. Body & Cover: UL 94-V0. Ingress Protection Rating: IP67, IP69K when cover, cable seals & caps are installed. Cavity Plug: Included cavity plug must be fitted if using only 2 x Midi fuses.

**RELATED** PRODUCTS: Midi fuses 32V (See page 24).

**Mounting:** Surface mount using 3 fixing holes (M6 or 1/4").



Midi fuses 58V (See page 24).









#### **FUSED BATTERY DISTRIBUTION UNIT 3 WAY STUD SIDE MOUNT**

#### Features:

- Suits up to 3 x Midi fuses 32Vdc.
- Includes cover and internal adhesive label.
- Include 90 degree copper tin plated busbar.
- Angled busbar saves valuable bonnet space.
- Cable feeds through slots in the housing.
- Small size with easy access durable clip on lid.
- Includes 6 x M5 self locking nylon flanged nuts.

Part Number Description

3 Way Midi Fuse Housing & 90° Busbar 0300468

Voltage: 32VDC

Rating: 90A Max at 85°C.

Hardware: Includes M5 flanged nuts.

Studs: M5 threaded zinc plated steel studs.

Flammability: UL94

Wire Size: 8mm<sup>2</sup> to 35mm<sup>2</sup>

Operating Temperature: -30°C to + 120°C

Pack Size: 1. 10. 100

Notes: Fuses are not included.

# **RELATED PRODUCTS:**



3 Way Post Terminal See page 24 See page 162

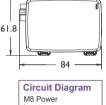
#### 90 Degree Busbar M8



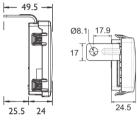
Side Mount



Clip On Cover







Dimensions in MM

## FUSED BATTERY DISTRIBUTION UNIT 3 WAY POST MOUNT

#### Features:

- Suits 2 x Midi fuses and 1 x Mega fuse or Powerval fuse.
- Includes durable clip-on cover with distinct red housing.
- Cable feeds through slots in the housing.
- Double ring (19mm) connection to positive top post battery terminal.
- Fully insulated cap prevents accidental short circuits.
- Saves money by using one product that does the same as a battery terminal, terminated cable and a fuse box.

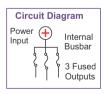
Note: Fused BDU includes 4 x M5 nuts with nylon insert, 2 x M8 nuts, I x M8 washer, busbar & housing. Fuses are not included.

Part Number Description

3 Way Battery Dist. Unit & (+) Red Cover Only. No fuses. 11000 00011FDUK Kit Inc. - BDÚ + Cover, I x PÓWCAL2, 2 x MID030 Fuses.



Base shown with fuses fitted







#### **RELATED PRODUCTS:**

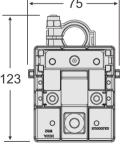




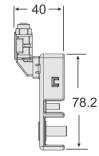




See page 26



Dimensions in MM





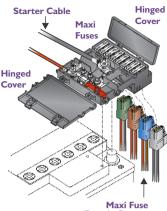
Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

#### **FUSED BATTERY DISTRIBUTION UNIT 10 WAY**

#### Features

- Suits 8 x Maxi fuses & 2 x Midi fuses (not included).
- 2 Hinged covers for easy access to either Maxi fuses or Midi fuses.
- Simple double ring (19mm) connection to positive battery terminal.
- Includes battery charging terminal & one fuse puller.
- Opening for the starter cable to pass into unit.
- A large assortment of terminals & power connectors (not included).
- 4 colour-coded sockets for polarized power connectors to Maxi fuses.
- Common feed powers all fuse positions.

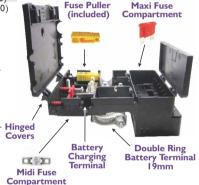
Part	
Number	Description
00710	10 Way Fused Battery Power Distribution Unit
40300	Maxi Fuse Connector Female Black - Non polarized
40310	Maxi Fuse Connector Female Blue - Polarized
40340	Maxi Fuse Connector Female Grey - Polarized
40325	Maxi Fuse Connector Female Green - Polarized
40330	Maxi Fuse Connector Female Brown - Polarized
07650	Maxi Fuse Connector F Terminal 1.5 to 2.5 mm <sup>2</sup> 20A (BK/RL)
07660	Maxi Fuse Connector F Terminal 4 to 6mm <sup>2</sup> 36A (BK/RL)
07670	Maxi Fuse Connector F Terminal 8 to 10mm <sup>2</sup> 50A (BK/RL)
07671	Maxi Fuse Connector F Terminal 16mm <sup>2</sup> 75A (BK/RL)
08240RL	Midi Fuse Terminal 2.5 to 4mm <sup>2</sup> 28A, M5 (RL) (Pack 3000)
08245RL	Midi Fuse Terminal 6.0 to 8mm <sup>2</sup> 48A, M5 (RL) (Pack 2400)
08250RL	Midi Fuse Terminal 10 to 16mm <sup>2</sup> 75A, M5 (RL) (Pack 2400)
05925RL	Midi Fuse Terminal 25 to 35mm <sup>2</sup> 125A, M5 (RL) (Pack 800)

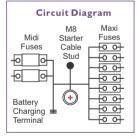


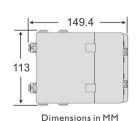
Female Connectors\*

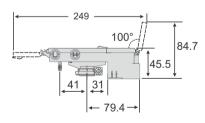
#### **Ordering Notes:**

- 1. Distribution unit does not include fuses, terminals or connectors.
- 2. Only I x Midi terminal is required for each Midi fuse.
- 3.\*Each connector plugs into 2 x Maxi fuses and requires 2 terminals. Non-polarized (black) connector plugs into any of the 4 sockets. Polarized connectors only plug into their colour-coded socket eg. blue connector into blue socket. Each connector plugs into 2 x Maxi fuses.









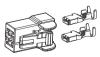
**RELATED PRODUCTS:** 



(see p. 18)



Midi Fuse (see p.24)



Maxi Fuse Connector & Female Terminals







(2.5 - 4mm<sup>2</sup>) (6.0 - 8mm²)

(10 - 16mm<sup>2</sup>)

(25-35mm<sup>2</sup>) Polarity B

Midi fuse M5 Terminals (Indent Items)



#### **MEGA FUSE HIGH POWER DISTRIBUTION MODULE 2 POLE**

MTAIL



The 2 Pole High Power Distribution Module (HPDM) provides two high current Mega fuse protected circuit outputs as well as an un-fused output that can optionally be used to parallel multiple modules or deliver power to circuits which do not require circuit protection or to daisy chain multiple devices.

IP67 IP69K 48V



\*M10

Stud

Part Number Description

0301887 2 Pole with cover 32V NEW 880195400

2 Pole with cover 48V

Voltage: Varies see above. Max Input Current: 600A Max Fuse Rating Per Circuit: 300A Ingress Protection Rating: IP67, IP69K **Dimensions:** 129 x 125 x 45mm

Notes: Mega fuses not included. Either side can be input or un-fused outputs.

Un-fused output. (eg. starter).

Two fused outputs.



Output B M8 Stud

#### **RELATED PRODUCTS:**





Mega Fuse 32V &70V (See p.25)



M8 & M10 (See p. 188)



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QR Code: 9022

#### **MEGA FUSE DISTRIBUTION BLOCKS 5 POLE**

FATON Bussmann

Heavy duty power distribution module for main branch primary fusing. Common busbar requires just one input connection to power all the fuses.

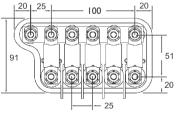
Part Number Description

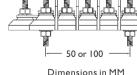
LMG5-I-001 5 Pole with stud input and cover

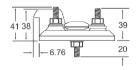
Rating: Maximum total combined rating is 300A continuous. Maximum ampere rating based on fuses, input & output wiring. Body: Black UL-Rated 94 V0 thermoplastic.

Studs: 5/16"-18 plated steel (E), optional M8 metric studs(M). Hardware: Includes busbar, nuts & lock washers.

Cover: Red EPDM (provides protection from accidental shorts). Temperature: -40°C to 85°C. Notes: Fuses are not included.







5 pole block has 3 input stud holes to provide 50 or 100mm spacing between the 2 studs.

**RELATED PRODUCTS:** Mega Fuses (see p.25)







Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

#### 4 X MEGA & 2 X MIDI DISTRIBUTION BLOCK



IP66 NEW

The Littelfuse LTX Power Distribution Module is a high current sealed primary fuse box that can be placed in or near the battery box to fuse major feeder cables. The unit features a single bussed power input to all 4 MEGA® and 2 MIDI® fuses.

#### ne unit leatures a single busse

- Common power input reduces the number of large gage cables that need to attach to battery .
- Put all the high current fusing in one sealed location (IP 66)\*.
- Gore-Tex breather prevents temperature changes from pulling in moisture.
- Broad range of values for MEGA® and MIDI® fuses allow for use in a variety of applications.

Voltage: 32VDC.

**Features** 

Max Total Current: 240A.

Terminal Stud Size: M5 (Midi fuse) / M8 (Mega fuse).

Flammability Rating: UL94-V0 Input Wire Size: 50mm<sup>2</sup>.

Output Wire Sizes: 16-35mm<sup>2</sup> (Mega), 10-16mm<sup>2</sup> (Midi)

**Hardware:** S/S nuts & spring washers included.

Seals & Plugs: Not included, please order separately.

Ingress Protection Rating: 1P66.

Seals / plugs must be installed to achieve IP66 rating. Please ensure seal flange is completely pressed through the hole to ensure a good seal on the inside of the block as shown in the image.

Temperature Rating: -40 °C to + 120 °C

Notes: A cavity plug is required for each opening that is not fitted with a cable & cable seal. Fuses are not included.

Part Number Fuse Block Description

07981002ZXS 6 Pole Fuse Block with Cover, Busbar, Nuts & Washers.

Part Number	Seal & Plug Accessories	Colour	Cable Diameter	Position
868-952	Cable Seal suits Midi Fuse	Yellow	10 mm <sup>2</sup>	PI, P7
868-953	Cable Seal suits Midi Fuse	Green	I 6 mm <sup>2</sup>	PI, P7
868-955	Cable Seal suits Mega Fuse	Blue	I 6 mm <sup>2</sup>	P2, P3, P5, P6
868-956	Cable Seal suits Mega Fuse	Yellow	25 mm <sup>2</sup>	P2, P3, P5, P6
868-957	Cable Seal suits Mega Fuse	Yellow	35 mm <sup>2</sup>	P2, P3, P5, P6
868-958	Cable Seal suits Input Cable	Yellow	50 mm <sup>2</sup>	P4
868-951	Cavity Plug suits Midi Fuse	Grey	-	PI, P7
868-954	Cavity Plug suits Mega Fuse	Grey	-	P2, P3, P5, P6



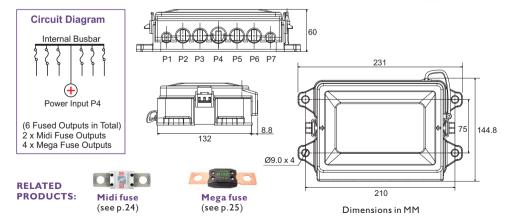




#### Note:

Seals must be fully pressed into block as shown in this image.







#### 2 X MEGA & 3 X MIDI DISTRIBUTION BLOCK 70V



The MDB5 is a sealed high current primary fuse box that can be placed in the battery box or under hood as the first line of circuit protection and power distribution for a vehicle. It can fit 2 x MEGA and 3 x MIDI fuses. Input power can be connected using one or two input cables depending on continuous current requirement. When fitted with included seals it is IP67/69K rated providing high protection in harsh environments. Yellow tool-less latches secure the cover which acts as secondary lock to hold in cable seals even when wires are arranged for routing.



#### Features

• Sealed primary fusing that can be placed close to the battery in a harsh environment.

Capability to handle fuse ratings from 23-500A and voltages up to 70V.

• Full range of fuses for applications from 12V-48V+.

User choice of either unsealed or IP67/69K rating when fitted with included seals.

· Poke-Yoke mounting pattern for easier assembly.

Fuse Block Description Part Number

07985003ZXS 5 Pole Fuse Block with Cover & Seal, Busbar, Nuts.

Washers and Cable Seal Kit (as detailed below).

Voltage: 70VDC.

Continuous Current: 400A with two inputs or 200A with one input.

Terminal Stud Size: 3 x M5 (Midi fuse) / 2 x M8 (Mega fuse).

Input Stud Size: 2 x M8 Input Wire Size: 50mm<sup>2</sup>.

Output Wire Sizes Mega: 2 positions: 16mm<sup>2</sup>, 25mm<sup>2</sup>, 35mm<sup>2</sup>

Output Wire Sizes Midi: 3 positions: 6-10mm<sup>2</sup>, 10-16mm<sup>2</sup>

Hardware: S/S nuts & spring washers included.

Fuse Terminal Torque Mega: 32V 15 ± 3Nm, 70V 20 ± 1Nm Fuse Terminal Torque Midi: 32V 6±1 Nm, 70V 9±1 Nm

Flammability Rating: UL94-V0

Cable Seals & Cavity Plugs Assortment: Included. Ingress Protection Rating: IP69K with seals installed.

Seals / plugs must be installed to achieve IP66 rating. Please ensure seal flange is completely pressed through the hole to ensure a good

seal on the inside of the block as shown in the image. Temperature Rating: -40 °C to +105 °C

Notes: A cavity plug is required for each opening that is not fitted with a cable & cable seal. Cable seals and cavity plugs must be fully pressed into block. Fuses are not included.









- 2 x Input Cable Seal 50mm<sup>2</sup> I x Input Cavity Plug
- 2 x Output Seal Mega 35mm<sup>2</sup>
- I x Cavity Plug Mega
- 3 x Output Seal Midi 10-16mm<sup>2</sup>
- I x Cavity Plug Midi









58V Midi Fuse (see p.24)

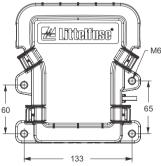


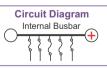
153

32V Mega Fuse (see p.25)



70V Mega Fuse (see p.25)









#### 4 X AUTO FUSE & 3 X MIDI FUSE PDM

TERRA



Protect high and low-amp circuits with this PDM. Holds  $3 \times MIDI$  fuses and  $4 \times A$  Auto fuses. The Auto fuse output circuits are wired to an integrated sealed 4-way connector (P/N: XTCK4). A common power input stud provides power for the 7 fuses via a tin-plated copper busbar. Stainless steel studs & hardware provide superior corrosion resistance.

Part Number Description

880073 Power Dist Module 350A XTCK4 4 Way Connector Plug Kit

Voltage: 32VDC (limited by fuses).
Maximum Continuous Current: 350A.
Max Fuse Rating Per Circuit (Midi): 170A.
Max Fuse Rating Per Circuit (Auto): 30A.
Module Contents: Includes cover with gasket.
IP Rating: IP59K Dimensions: 152 x 102 x 45mm

Notes: Auto fuses & Midi fuses not included.

4 Way Connector

(P/N: XTCK4)



Scan this QR Code for more information



QR Code: 9017

# RELATED PRODUCTS:

Auto fuse 32V & 58V (see page 16-17)

Midi fuse 32V & 58V (See page 24)

#### 4 X AUTO FUSE & 3 X MIDI FUSE PDM

The 880076 SL series integrated fuse block is designed to power to 3 x switched high-amp circuits using either a remote switch or the manual switch on the block. This block also includes 4 x low-amp always- on circuits to power loads like clock, alarms etc. All 7 x output circuits are fuse protected. Power is output via 3 study.

output circuits are fuse protected. Power is output via 3 studs (high-amp circuits) or a single 4 wire connector (low-amp circuits).

Part

Number Description
880076 Power Dist Module with Remote & Manual On/Off Switch
880092 Illuminated Remote Control Switch SPDT (On)Off(On)
MX I 50FK6 6 Way Remote Switch Connector Kit. Terminals included.
XTCK4 4 Way Plug Connector Kit. Terminals included.

Voltage: 32VDC (limited by fuses).

Switch Continuous Ampere Rating: 300A at 85°C, 240A at 105°C

Switch Cranking Rating: 10 sec. 1000A

Max Operating Ampere Per Block: 240A (Midi fuse), 50A (Auto fuse)
Max Operating Ampere Per Circuit: 170A (Midi fuse), 20A (Auto fuse)
Fuse Ampere Ratings: 30A-200A (Midi fuse), 1A-20A (Auto fuse)

Studs: Tin-plated copper, M8 x 1.25
Midi Fuse Screws: M5 x .8 x 10
Hardware: Stainless steel

Operating Temperature: -50°C to 105°C Module Contents: Includes cover with gasket.

Mounting: Mount as close as possible to the battery, but not above vented lead acid batteries. Mount in a dry protected location. Where possible mount in a vertical orientation. Do not mount upside down.

IP Rating: IP59K / IP66

Ignition Protected: SAE JI 171, ISO 8846 Dimensions (LxWxH): 146 x 122 x 73mm

Notes: Auto fuses, Midi fuses and connectors are not included.

RELATED PRODUCTS:



Auto fuse 32V & 58V (see page 16-17)



Midi fuse 32V & 58V (See page 24)





Power Distribution Module (P/N: 880076)

Remote Control Switch (P/N: 880092)



6 Way Remote Switch Connector Kit (P/N: MX150FK6)



4 Way Plug Connector Kit (P/N: XTCK4)



Scan this QR Code for more information



QR Code: 9036



#### **6 X AUTO FUSE & 4 X MIDI FUSE PDM**



Protect high and low-amp circuits via single power input stud with a collection point for ground returns, Ignition protected fuse block with screw termination.

IP59K

#### IGNITION

#### Features:

- 600A Continuous Current Rating. 10 Fuse Output Circuits.
- One common power input stud feeds power to all fuses.
- Protects up to 4 high-amp and 6 low-amp circuits. (30A-200A MIDI® fuses and IA-40A ATO® fuses).
- Negative bus provides common location for ground returns.
- Eliminates battery-box clutter, saves space & reduces cost.

Part Number Description

880089 Power Dist Module 600A

Voltage: 60VDC (limited by fuses). Max Total Continuous Current: 600A.

Max Cont. Current Per Circuit: 170A (Midi) / 30A (Auto). Module Contents: Includes fuse puller, cover & gasket.

IP Rating: IP59K

Dimensions: 165 x 127 x 51mm.

Notes: Auto fuses & Midi fuses not included.

**Power Input Stud** 5/16" (M8)





**Negative Return Busbar** Studs 5/16" (M8)

RELATED PRODUCTS:





(See page 24)

Scan this **OR Code** for more information



QR Code: 9021

**NEW** 

IP59K

IGNITION

#### 6 X AUTO FUSE & 4 X MIDI FUSE PDM

OWER SYSTEMS



Outputs

Protect high and low-amp circuits via a Midi Fuse with a collection point for ground returns. Ignition protected fuse block with screw termination.

#### Features:

- 170A Continuous Current Rating. 9 Fuse Output Circuits.
- Common power input fed via a MIDI Fuse to power to all fuses.
- Protects up to 3 high-amp and 6 low-amp circuits. (30A-200A MIDI® fuses and IA-40A ATO® fuses).
- Negative bus provides common location for ground returns.
- Eliminates battery-box clutter, saves space & reduces cost.

Part Number Description

880094 Power Dist Module 170A

Voltage: 60VDC (limited by fuses). Max Total Continuous Current: 170A (200A MIDI fuse fitted). Max Cont. Current Per Circuit: 170A (Midi) / 30A (Auto). Module Contents: Includes fuse puller, cover & gasket.

Dimensions: 165 x 127 x 51mm.

Notes: Auto fuses & Midi fuses not included.



**Negative Return Busbar** Studs 5/16" (M8)





Scan this **OR Code** for more

information QR Code: 9044



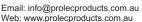
IP Rating: IP59K





Midi fuse 32V & 58V (See page 24)







#### **FUSED BATTERY DISTRIBUTION UNIT 3 WAY**

- Suits 2 x Midi fuses and 1 x Mega fuse or Powerval fuse.
- Includes durable hinged cover with common bus.
- · Cable feeds through slots in the housing.
- Double ring (19mm) connection to positive top post battery terminal.
- Saves money by using one product that does the same as a battery

terminal, terminated cable and a fuse box.

Part Number 0300839

Voltage: 32V

Pack Size: 1, 10, 20

Notes: Fuses are not included.

Description

Ix Mega Fuse + 2x Midi Fuse BDU

Circuit Diagram Internal Busbar

Power Input

Output • 3 Fused Outputs



**FUSED BATTERY DISTRIBUTION UNIT 4 WAY** 

#### Features:

- Suits 4 x Midi fuses with common bus.
- Includes clip on cover.
- Cable feeds through slots in the housing.

Part Number 0300552

Description

4x Midi Fuse BDU

Voltage: 32V Rating: 120A Pack Size: 1, 10, 20

Notes: Fuses are not included.



Power (+ Output Input Midi Fused Outputs



#### FUSED BATTERY DISTRIBUTION UNIT 4/6 WAY PLUS

- Includes durable splash proof clip-on cover.
- · Cable feeds through slots in the housing.
- Includes common bus and M5 / M8 nuts.
- Can house I x MTA modular fuse / relay module.
- Can house 5 x MTA Mini fuse housing accessories.

Part Number

Description

0301865 2x Midi Fuse, 2x Mega Fuse\* BDU 0301873 4x Midi Fuse, 2x Mega Fuse BDU

Voltage: 32V Rating: 150A Pack Size: 1, 10, 20 Note: Includes housing, cover, internal busbar and all nuts for fuses and input stud. Nuts feature a nylon insert.

\* Can accommodate electronic Battery Disconnect Switch. Modules, Mini fuses and Mini fuse housings are not included.



#### RELATED PRODUCTS:



Power Input (Internal Busbar) Qty of fuses depends on product selected.



Mini Fuse (See p. 15)







**ISO** Relays **ISO 280** (See p. 164-168)



Fuse / Relay **Modules** (See p. 138)



0301873 Pictured

Fuse / Relay

Module

Mini Fuse Housing (See p.86)



**OR Code** for more information



QR Code: 9049



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#### **FUSED POWER DIST. MODULE SEALED - 4 WAY**

# Littelfuse 4

**IP67** 

#### Features

- Accommodates low to medium current fuses. Amperage range 2 A to 60A.
- Accommodates 2 x Mini fuses (fast acting) and 2 x Icase fuses (slow acting).
- Internal bussing. One input connection to power four fuse circuits.
- Secondary locks are included to secure each wire terminal in the holder.
- The holder is a sealed module enabling it to be used in heavy duty environments.

Voltage: 32VDC **Temperature Rating:** -40°C to +85°C.

Rating: 100A at 23°C, 70A at 85°C.

Fuses not to exceed 70% of rated current continuously.

Body & Cover: Black thermoplastic UL 94V-0.

Mounting: Screw mount bracket M6 (torque: 6-8Nm).

Cover Gasket: Green silicone. Ingress Protection Rating: IP67

When cover, cable seals & cavity plugs are installed. Input Stud: M6 zinc plated steel (torque: 6-8Nm)

Terminal Ratings: 30A max per terminal (Mini fuse). 60A max per terminal (Jcase fusé).

Secondary Locks: PA66 (TPA's included).

Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Cavity Plugs: Required to fill unused output cavities for ingress protection.

Notes: Terminals, cable seals, cavity seals & fuses are not included. Mini bladed circuit breakers are not suitable for use in this product.

Approvals: RoHS





**PDM Module & Terminal Kit** PDMKITIOI

Part Number Module & Terminal Kit Contents

PDMKIT101 Base with Silicon Seal, Finger Release Cover, Mounting Bracket and 3 x TPA's.

Terminals (2 x 12129493, 2 x 15344631),

Cable Seals (2 x 15324980, 2 x 15324994), Plugs (1 x 12010300, 1 x 12059255).

Part Number Module Contents Only

Base with Silicon Seal, Finger Release Cover, Mounting Bracket and 3 x TPA's. BPDMAI04HXFI



4 Fused Outputs

#### ACCESSORIES TO SUIT MINI FUSES: Delphi Metri-Pack 280

#### TERMINALS: TANGED

Female Sealed - Tin Brass / Tin Plated

Part Number Wire (AWG) Wire (mm<sup>2</sup>) #22 - #20 0.35 - 0.5 12084201 12077411 #18-#16 0.80 - 1.012129493 #14-#12 2.0 - 3.0 12077413 #10 5.0

#### CABLE SEALS: Silicone

Part Number

15324983

15324982

15324980

15324981





Cable Dia.(mm)

1.70 - 1.29

2 85 - 2 03

3.49 - 2.81

4 30 - 3 45



Dark Red

Green

Grey

Blue





Part Number 12010300

#### ACCESSORIES TO SUIT ITF FUSIBLE LINKS: Delphi Ducon 6.3

#### TERMINALS:

Male Sealed - Tin Brass / Tin Plated

Wire (AWG) Part Number 15344632 #16-#14 1.5 - 2.515344631 #12-#10 4.0 - 6.0

#### **CABLE SEALS:**

Silicone











Part Number
12059255

# Wire (mm²)

#### Cable Dia. (mm) Colour Part Number 15324997 2.40 - I.60 Tan 15324995 2.90 - 2.00 Dark Red 3.80 - 2.80 15324994 Grey 15324996 4.50 - 3.60 Blue







Jcase Fuse (see p.21)



**Crimping Tools** (see p. 185)



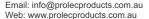
**Terminal Removal Tool** (see p. 186)





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#### **POWER DIST. MODULE SEALED - 8 POSITION**

This module can be fitted with a mixture of 280 style components such as Mini fuses, mini circuit breakers, mini diodes, mini resistors and ISO 280 relays. It's compact size means it can be installed anywhere thereby eliminating excessive wiring in harnesses.

Voltage: 32V Temperature: -40°C to + 125°C

Rating: 120A max\* (100A when following SAE guidelines)

Combined maximum current of positions I & 2 is 60A for fuses / 30A

for circuit breakers. The same applies for positions 3 & 4.

Module is rated 50A max when fitted with an ISO 280 micro relay.

\*Please contact sales for max amperage guidelines

Module Contents: Module includes cover, base with seal & bracket.

**Terminal Capacity:** 8 terminals on a layout matrix of (2 x 4). Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.

Cover: 94V0 Clear Polycarbonate. Short or tall cover options. Base: 94V0 Thermoplastic black. Other colour also available.

Bracket Option: Side B028-7013, End B028-7015, Pin B028-7016. Ingress Protection Rating: IP66 (Valid when properly installed with

cover, cable seals and cavity plugs). Cavity Plugs: Required to fill unused output cavities for ingress

protection. Silicone material UL94-V0. Cable Seals: Please check the overall diameter of your cable before

ordering cable seals. Silicone material UL94-V0. Terminal Tools: Terminal crimping & removal tools page 185-186.

Pack Size: 1, 10, 100

Part Number

Notes: Fuses, circuit breakers and relays are optional extras.

Kit Contents;





PDMKITALS I, Tall Cover PDM Kit





**Mini Fuses** Installed

Ultra Micro Relay, Mini Fuse & Breaker

PDMKITASSI	Short Cover, Base, Side Bracket, 8 x 3.0mm <sup>2</sup> Te	rminals, 8 x Seals, 4 x Plugs & T	PA <b>NEW</b>
Part Number	Description		
CFH-ALS	Tall Clear Cover*, Base and Side Bracket	Short Cover	Tall Cove
CFH-ALE	Tall Clear Cover*, Base and End Bracket NEW	Side Bracket	Side Brac
CELL ACC	Chant Chan Carrey Base and Cida Bussless		

PDMKITALS | Tall Cover\*, Base, Side Bracket, 8 x 3.0mm2 Terminals, 8 x Seals, 4 x Plugs & TPA NEW

I al t I vullibel	Description
CFH-ALS	Tall Clear Cover*, Base and Side Bracket
CFH-ALE	Tall Clear Cover*, Base and End Bracket NEW
CFH-ASS	Short Clear Cover, Base and Side Bracket
CFH-ASE	Short Clear Cover, Base and End Bracket NEW
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dark Red, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green, 2.85 - 2.03mm Cable Dia.
15324980	Cable Seal Grey, 3.49 - 2.81 mm Cable Dia.
15324981	Cable Seal Blue, 4.30 - 3.45mm Cable Dia.
12010300	Cavity Plug Green, 6.7mm Cavity inside Dia.
32006-TP2	Secondary Lock (TPA). Secures Terminals.

#### **Component Loading Options:**

- 4 x Mini fuses or Mini Blade circuit breakers or combination.
- 2 x Ultra Micro 280 Relays (4 pin only).
- I x Micro 280 Relay (4 or 5 pin).
- 2 x Mini fuses or Mini Blade circuit breakers or combination & I x Ultra Micro 280 Relay (4 pin only).

Note: \*Tall cover is required when fitting relays & breakers.

#### Cover racket





Tall Cover



Short Cover End Bracket







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QR Code: 9010



Mini Fuses. Mini Resistors. Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



ISO 280 Relays, Ultra Micro & Micro, 12VDC or 24VDC.



Tanged Cables, Tanged Jumpers, Splice Connectors.



#### **POWER DIST. MODULE SEALED - 12 POSITION**



The HWB I 2 series is a 12 position PDM providing a compact, durable and sealed power distribution solution for the transportation market. It is designed to accept 280 style components. Mini fuses. Mcase Unslotted fuses w/adapter. Mini Circuit Breakers. Mini Diodes / Resistors. Ultra Micro 280 Relays. Micro 280 Relays. Mini 280 Relays and 280 Flashers.

IP69K IP67

Module Contents: Module includes base, clear cover, seal, straight mounting bracket and 3 secondary terminal locks (TPA's).

Accessory Components: Terminals, cable seals & cavity plugs, minifuses, mini blade circuit breakers, ISO 280 ultra micro and ISO 280 micro relays. Terminal Capacity: 12 terminals on a layout matrix of (2 x 6).

Voltage Rating: 58VDC Temperature Rating: -40°C to +105°C.

Maximum Continuous Current: 135A Maximum Fuse Rating: 30A per circuit. Housing: PA66 GF30, Black, UL 94 V-0

Cover: Clear UL94 V-2 Cover Seal: Silicone, green.

Cover must be oriented correctly in order to secure yellow tabs.

Mounting Bracket: Plated steel - straight (standard).

Wire Size: #22 - #13 AWG (0.35 to 2.5mm<sup>2</sup>).

Ingress Protection Rating: IP67 / IP69K

when cover, cable seals & cavity plugs are installed.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals. Silicone material UL94-V0.

Terminals: Tyco AMP MCP 2.8, Barbed Female, Copper Tin Plated. Terminal Tools: Terminal crimping & removal tools refer p. 185-186. Options: 30 deg. angled mounting bracket, black cover, cover tether and foam relay retention inserts.

Note: It is recommended that one foam insert be ordered for each relay & installed onto the inside of the cover as a retention device.





Part Number	Kit Contents;
DDMICITABLE	D CI C

Base, Clear Cover, Seal, Straight Bracket, 3 x TPA's, PDMKIT331

12x 2.5mm<sup>2</sup> Terminals, 12x Cable Seals & 4x Cavity Plugs.



**PDM Module & Terminal Kit** 

PDMKIT331

Part Number

PDM33003ZXM Base, Clear Cover, Seal, Straight Bracket, 3 x TPA's. 1-968896-1 Terminal Female (#22 - 20AWG), 0.35 - 0.50mm<sup>2</sup> 1-968875-1 Terminal Female (#20 - 16AWG), 0.5 - 1.0mm<sup>2</sup> 1-968876-1 Terminal Female (#16 - 14AWG), 1.0 - 2.5mm<sup>2</sup> 828904-1 Cable Seal Blue. 1.2 - 2.1 mm Cable Diameter. 828905-I Cable Seal White, 2.2 - 3.0mm Cable Diameter. 828922-I Cavity Plug Clear, 5.6mm Cavity inside Diameter. 901-327 Foam Relay Retention Insert (optional). 868-068 Angled Bracket 30 Degree (optional).

890009470 Cover Tether (optional).

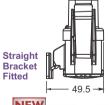
**Female Terminals** With Locking Barbs





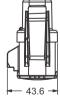
**RELATED PRODUCTS:** 

Mini Blade Fuses, LED Fuses, Resistors, Diodes, Shunts & Mini Blade Circuit Breakers.



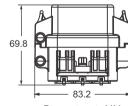


**Mcase Unslotted Fuse** Adaptor to Minifuse (# 875-584)





ISO 280 Relays Ultra Micro & Micro 4 & 5 Pin. I 2V & 24V.



Dimensions in MM

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#### **POWER DIST. MODULE SEALED - 18 POSITION**



58V IP69K IP67

Base, Seal, Cover & Bracket

PDMKIT311 - PDM Terminal Kit

The HWB18 series is an 18 position power distribution module providing a compact, durable and sealed power distribution solution. This unit is designed for 280 style components such as mini blade fuses, circuit breakers, relays, diodes etc. with 2.8mm blades on 8.1mm centerline spacing.

PDM Module Kit Contents: Module kit includes cover, cover seal, base, mounting bracket 30° angled and 3 secondary terminal locks (TPA's).

Accessory Components: Terminals, cable seals & cavity plugs, mini fuses, mini blade circuit breakers, Ultra micro 280 & Micro 280 relays.

Terminal Capacity: 18 terminals on a layout matrix of (3 x 6).
Terminal Rating: 30A max per terminal. Maximum Fuse Rati

Terminal Rating: 30A max per terminal. Maximum Fuse Rating: 30A Maximum Total Continuous Current: 100A @ 23°C, 70A @ 85°C

Voltage Rating: 58VDC Max. Temperature Rating: -40°C to +105°C. Body & Cover: Black UL 94V-0 glass filled thermoplastic. Body Seal: Silicone. Mounting Bracket: Plated steel - 30° angled (standard).

**Ingress Protection Rating:** IP67 / IP69K when cover, cable seals and cavity plugs are installed.

Wire Size: #22 - #10 AWG (0.35 to 5mm<sup>2</sup>).

Cavity Plug: Required to fill unused output cavities for ingress protection. Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.
Terminal Tools: Terminal crimping & removal tools see page 185-186.

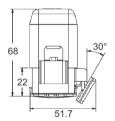
**Notes:** Fuses and relays are not included.

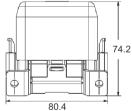


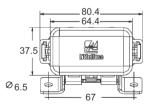
Part Number	Kit Contents
PDMKIT311	Base, Cover, 30° Bracket, 3.0mm <sup>2</sup> Terminals, Cable Seals, Cavity Plugs and TPA's.
PDMKIT312	Base, Cover, 30° Bracket, 2.0mm <sup>2</sup> Pre-terminated Cables, 2.0mm Jumpers & TPA's.

Part Number	Description	
PDM31001ZXM	PDM Module Base, O	Cover, 30° Angled Bracket.
12084201		22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411		18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493		14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#	10AWG), 5.0mm <sup>2</sup>
15324983		, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green,	2.85 - 2.03mm Cable Dia.
15324980	Cable Seal Grey,	3.49 - 2.81mm Cable Dia.
15324981	Cable Seal Blue,	4.30 - 3.45mm Cable Dia.
12010300	Cavity Plug Green,	6.7mm Cavity inside Dia.
868-068	30° Angled Bracket (	(Spare Part).









Dimensions in MM



Mini Blade Fuses, LED Fuses, Resistors, Diodes, Shunts & Mini Blade Circuit Breakers.



Mcase Unslotted Fuse Adaptor to Minifuse (# 875-584)



ISO 280 Relays Ultra Micro & Micro 4 & 5 Pin, 12V & 24V.





QR Code: 9015



#### PDM SEALED MODULE - 60 POSITION

Littelfuse €

IP67 IP69K 58V

The HWB60-AL is a compact, 60 open position PDM, waterproof fuse & relay box. It is designed to accept 280 style components. Mini fuses, Mcase Unslotted fuses w/adapter, Mini Circuit Breakers, Mini Diodes / Resistors, Ultra Micro 280 Relays, Micro 280 Relays, Mini 280 Relays and 280 Flashers.

**Terminal Capacity:** 60 terminals on a layout matrix of (5 x 12). Terminal Rating: 30A max per terminal. Max Fuse Rating: 30A

Maximum Total Continuous Current: 250A

Voltage Rating: 58VDC Max.

Wire Size: #22 - #10 AWG (0.35 to 5mm2).

Temperature Rating:  $-40^{\circ}$ C to  $+125^{\circ}$ C.

Base & Cover: PA66 30% GF. Cover Gasket: Silicone. Mounting: 4 holes for M6 bolts (4 - 6Nm max torque). Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.

Cavity Plugs: Fill unused output cavities for ingress protection.

Cable Seals: Check the overall diameter of your cable before ordering cable seals.

Ingress Protection Rating: IP67 / IP69K when cover, cable seals and cavity plugs are installed.

Options: Cover tether. Accessory to hold a fuse puller & spare fuses. Internal cover grid to aid relay retention.

Feature: Gang mount feature interconnects multiple modules side-by-side.

Interlocks with Littelfuse Auto fuse block, Midi-Flex fuse block, Mega-Flex fuse block and FLEC.

Base Features: Internal storage for 8 spare fuses. Terminal position numbering on underside of base.

Terminal Tools: Terminal crimping & removal tools see page 185-186. Notes: Fuses and relays are not included.

Kit Contents Part Number PDMKIT711 Module, Terminals (60 x 12129493), Cable Seals (60 x 15324980) & Plugs (10 x 12010300). PDMKIT712 Module, Pre-terminated Cables 2.0mm<sup>2</sup> x 300mm (30 x Red & 30 x Blue), Pre-terminated Jumper Cables Red 2.0mm<sup>2</sup> x 90mm (5 x Red), Splice Connectors (60pcs) & Cavity Plugs (10 x 12010300).

Part Number	Description
PDM71003ZXM	Base, AssureLatch Cover with Gasket and 6 x TPA's.
12084201	Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal Dk Red Silicone, 1.70 - 1.29mm Cable Dia.
15324982	Cable Seal Green Silicone, 2.85 - 2.03mm Cable Dia.
15324980	Cable Seal Grey Silicone, 3.49 - 2.81 mm Cable Dia.
15324981	Cable Seal Blue Silicone, 4.30 - 3.45mm Cable Dia.
12010300	Cavity Plug Green Silicone, 6.7mm Cavity inside Dia.

Scan this **OR Code** for more information



QR Code: 9028



PDMKIT711 - PDM Terminal Kit

97.8 157.6

78.6 <sup>65.2</sup>

22.6



PDMKIT7 12 - PDM Cable Kit

Finger Release 138 5.8 Ø6.4 R3.2 65.8 60 36 R10.0 Dimensions in MM



6

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#### **POWER DIST. MODULE SEALED - 24 POSITION**



The FRH-A24 is a 24 position power distribution module providing a compact, durable and sealed power distribution solution for the transportation market. This module can be fitted with a mix of 280 style components such as Mini fuses, Mini Circuit Breakers, Mini Diodes. Diode Keys. Mini Resistors. ISO 280 Ultra Micro and ISO 280 Micro relays.

Voltage Rating: 58VDC Rating: 250A

**Terminal Capacity:** 24 terminals on a layout matrix of (4 x 6).

Terminal Rating: 30A continuous.

Terminals: Delphi Metri-Pack 280 Female Sealed TANGED.

Temperature Rating: -40°C to + 125°C.

Housing: Black thermoplastic. Seal: Silicone, red.

Mounting Bracket: Stainless steel, straight with anti-rotation tab. Cable Seals: Please check the overall diameter of your cable

before ordering cable seals. Silicone material UL94-V0.

Cavity Plugs: Required to fill unused output cavities for ingress

protection. Silicone material.

Ingress Protection Rating: IP67.

Terminal Tools: Terminal crimping & removal tools available.

Module Accessories: Optional 90 degree mounting bracket.

Components: Mini fuses, mini circuit breakers and ISO 280 relays

are not included with the kit.

Approvals: RoHS REACH



Part Number Kit Contents
PDMKIT424 Base, Seal, Cover, S.Steel Bracket, 2 x TPA's, CPA, 26 x Terminals (12129493), 26 x Seals (15324980),

6 x Cavity Plugs (12010300).





TERMINALS: TANGED Female Sealed, Tin Brass / Tin Plated



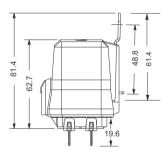








PDMKIT424 - PDM & Terminal Kit



Dimensions are in MM



Mini & LED Fuses, Circuit Breakers, Transorbs, Diodes, Shunts & Diode Key



ISO 280 Relays Ultra Micro, Micro & Mini. 12VDC & 24VDC.

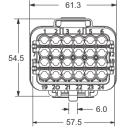


Tanged Cables, Jumpers & Connectors. (see p. 186)





QR Code: 9038





#### **POWER DIST. MODULE SEALED - 48 POSITION**



This 48 position power distribution module provides compact, durable and sealed main power or auxiliary power. This high density module suits a mix of 280 components such as mini fuses, mini circuit breakers, mini diodes, diode keys, mini resistors, ISO 280 Ultra micro and ISO 280 Micro relays.



Voltage Rating: 58VDC Terminal Rating: 30A per terminal. **Terminal Capacity:** 48 terminals on a layout matrix of  $(4 \times 12)$ . Terminals: Delphi Metri-Pack 280 Female Sealed TANGED. Temperature Rating: -40°C to + 125°C.

Housing: Thermoplastic, black PBT Polyester. Cover Seal: Silicone. Mounting: Top or side mount options. 10.5mm moulded holes. 2 x M6 threaded mounting clips included. They are removable. Inserted for top mount arrangement, Spare part # PDM-TMC.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals. Silicone material UL94-V0.

Cavity Plugs: Required to fill unused output cavities for ingress protection. Silicone material.

Terminal Tools: Terminal crimping & removal tools available. Components: Mini fuses, breakers and relays are not included. Features: Terminal numbering on base rear. PDM's are interlockable. Ingress Protection Rating: IP66. Approvals: RoHS REACH

Part Number	Kit Contents
PDMKIT-R3A	Base, Seal, Cover, Tether, 2 x M6 Mtg Clips, 6 x TPA's,
	50 x Terminals (12129493), 50 x Seals (15324980),
	10 x Cavity Plugs (12010300).

Part Number	Description
PDM-R3ACI	PDM Housing 48 Pos, Seal, Cover & 2x Mtg. Clips
PDM-TT1	TPA Terminal Position Assurance, 6pcs Required
PDM-SCT	PDM Tether Black Flexible (110mm - 160mm)
PDM-TK	Diode Key Red Nylon. Drops into PDM Base Slots
12084201	Tanged Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Tanged Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Tanged Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Tanged Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal, I.70 - I.29mm Cable Diameter Dark Red
15324982	Cable Seal, 2.85 - 2.03mm Cable Diameter Green
15324980	Cable Seal, 3.49 - 2.81mm Cable Diameter Grey
15324981	Cable Seal, 4.30 - 3.45mm Cable Diameter Blue
12010300	Cavity Plug, 6.7mm Cavity inside Diameter Green











TETHER: FLEXIBLE

PDM-SCT

TPA: PDM-TTI 8 Positions



**ACCESSORIES: Delphi Metri-Pack 280 TERMINALS: TANGED** 

Female Sealed. Tin Brass / Tin Plated



**CABLE SEALS: CAVITY PLUG:** Silicone



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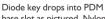
information



QR Code: 9041

# PDM-TK

DIODE KEY:









Mini Fuses, LED Fuses, Circuit Breakers. Transorbs, Diodes & Shunts



ISO 280 Relays Ultra Micro. Micro & Mini. 12VDC & 24VDC.



PDM-TMC

**Tanged Terminal** Seal & Plug Kits. TERMKIT002 (See page 187)

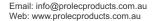


Tanged Cables, Jumpers, Splice Connectors, (See p. 186 & 188)



**Crimping Tools &** Terminal Removal Tool. (See page 185 - 186)







#### **POWER DIST. MODULE SEALED - 72 POSITION**



This sealed, compact and rugged module is an excellent power distribution solution for marine, construction, agriculture, heavy trucking, and specialty vehicle industries. It accommodates 72 terminal positions to provide component flexibility for the increasing demands of modern electrical systems.

IP66

Voltage Rating: 58VDC Terminal Rating: 30A per terminal. Terminal Capacity: 72 terminals on a layout matrix of (6 x 12). Components: Accepts Mini fuses, Mini bladed circuit breakers,

ISO 280 Micro relays and ISO 280 Flashers.

**Mounting:** Top or side mount options. 10.5mm moulded holes. 2 x M6 threaded mounting clips included. They are removable. Inserted for top mount arrangement. Spare part # PDM-TMC.

**Housing:** Thermoplastic, black PBT Polyester. **Cover Seal:** Silicone.

Ingress Protection Rating: IP66

(Valid when properly installed with cover, cable seals and cavity plugs).

Wire Size: #22 - #10 AWG / 0.35mm<sup>2</sup> - 5mm<sup>2</sup>

Cavity Plugs: Required to fill unused output cavities for ingress protection.

Cable Seals: Please check the overall diameter of your cable before

ordering cable seals.

**Terminal Tools:** Terminal crimping & removal tools available.

**Temperature Rating:** -40°C to +125°C (Module only)

**Not Included:** Terminals, cable seals, cavity plugs or mounting screws. Module does not include any plug-in components such as fuses, circuit breakers, relays etc.

**Features:** Gang mount feature. Interconnect multiple modules side-by-side. Terminal numbering on rear of base.

Options: Custom labels and kits. Approvals: RoHS EACH



Part Number	Description
PDM-S3ACI	PDM Housing 72 Pos, Seal, Cover & 2x Mtg. Clips
PDM-SCT	PDM Tether Black Flexible (110mm - 160mm)
PDM-STI	TPA Terminal Position Assurance, 6pcs Required
PDM-TK	Diode Key Red Nylon. Drops into PDM Base Slots
12084201	Tanged Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Tanged Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Tanged Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Tanged Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal, I.70 - I.29mm Cable Diameter Dark Red ■
15324982	Cable Seal, 2.85 - 2.03mm Cable Diameter Green
15324980	Cable Seal, 3.49 - 2.81mm Cable Diameter Grey
15324981	Cable Seal, 4.30 - 3.45mm Cable Diameter Blue
12010300	Cavity Plug, 6.7mm Cavity inside Diameter Green







Rear View



TPA: PDM-STI
Secures 12 Positions



TETHER: PDM-SCT Links Cover with Base

**ACCESSORIES: Delphi Metri-Pack 280** 

TERMINALS: TANGED Female Sealed, Tin Brass / Tin Plated



CABLE SEALS: CAVITY PLUG: Silicone



Scan this QR Code for more information



QR Code: 9034

#### **RELATED PRODUCTS:**







Mini Fuses, LED Fuses, Circuit Breakers, Transorbs, Diodes, Shunts & Diode Key



ISO 280 Relays Ultra Micro, Micro & Mini.



Tanged Terminal Seal & Plug Kits. TERMKIT003 (See page 187)



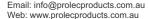
Tanged Cables, Jumpers, Splice Connectors, (See p. 186 & 188)



Crimping Tools & Terminal Removal Tool. (See page 185 - 186)



**12VDC & 24VDC.** 



#### **POWER DIST. SEALED MODULE - 96 POSITION**



Increased power distribution requirements in today's vehicles creates the need for additional component capacity to support electrical system integrity. To meet these increasing power challenges, GEP has released a 96 terminal position module. This new sealed, compact, and rugged module offers more configuration options for transportation and off-road applications.



Voltage Rating: 58VDC Output Rating: 30A max per terminal. **Terminal Capacity:** 96 terminals on a layout matrix of (8 x | 2). Suited to 2.8mm blades on 8.1mm centerline spacing. Components: Accepts Mini fuses, Mini bladed circuit breakers,

ISO 280 Micro relays and ISO 280 Flashers.

Mounting: Top mount only. 10.5mm moulded holes.

4 x M6 threaded mounting clips included. They are removable. Mounting clips are factory pre-inserted. Spare part # PDM-TMC.

Housing: Thermoplastic, black PBT Polyester. Cover Seal: Silicone. Ingress Protection Rating: IP66.

(Valid when properly installed with cover, cable seals and cavity plugs).

Wire Size: #22 - #10 AWG / 0.35mm<sup>2</sup> - 5mm<sup>2</sup>

Cavity Plugs: Required to fill unused output cavities for ingress protection. Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

Terminal Tools: Terminal crimping & removal tools available. Temperature Rating: -40°C to +125°C (Module only)

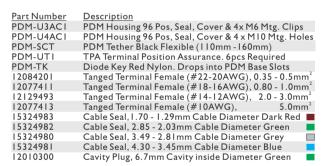
Not Included: Terminals, cable seals, cavity plugs or mounting screws. Module does not include any plug-in components such as fuses, circuit breakers, relays etc.

Features: Terminal numbering on rear of base.

Options: Custom labels and kits. Approvals: RoHS REACH



**PDM With Plain Cover** 





Rear View

TPA:PDM-UTI Secures 16 Positions

**TETHER: PDM-SCT** Links Cover with Base



Scan this **OR Code** for more information



QR Code: 9035

#### **ACCESSORIES: Delphi Metri-Pack 280**

TERMINALS: TANGED

Female Sealed. Tin Brass / Tin Plated



CABLE SEALS: **CAVITY PLUG:** Silicone







Mini Fuses, LED Fuses, Circuit Breakers. Transorbs, Diodes, **Shunts & Diode Key** 



ISO 280 Relays Ultra Micro. Micro & Mini. **12VDC & 24VDC.** 



Terminal, Seal & Plug Kits. TERMKIT003 (See page 187)

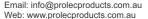


Tanged Cables, Jumpers, Splice Connectors, (See p. 186 & 188)



Crimping Tools & Terminal Removal (See page 185 - 186)





Terminal

**IP66** 

This unit features 60 open positions with no internal bussing. It is designed for use with 280 style components (i.e. Mini fuses, Mini Breakers, ISO280 Relays, diodes, resistors, etc.) and provides efficient power distribution in a rugged compact form. Applications: Marine, construction, agriculture, trucks & specialty vehicle industries.

Output Rating: 30A max per terminal.

Terminal Capacity: 60 terminals on a layout matrix of (6 x 10) suited to 2.8mm blades on 8.1mm centerline spacing.

Mounting: Includes threaded inserts #10-32 as standard (M5 optional). Base: Features letter/number grid front & rear for easy reference of each

terminal position. Black thermoplastic with red rubber gasket. Covers: Black thermoplastic. Improved latch design & tether strap. Replacement Cover Options: Replacement covers also available. Shallow cover includes Gore vent (Mini fuses only) # B151-7168-1-1.

Deep cover (Mini fuses / ISO 280 relays / Mini breakers) # B151-7168-2-1. Temperature Rating: -40°C to + 125°C (PDM only).

Wire Size: #20 - #12 AWG / 0.5mm<sup>2</sup> - 2.5mm<sup>2</sup>

Terminals: Tyco AMP MCP 2.8, Barbed Female, Copper Tin Plated. Ingress Protection Rating: IP66 -IEC 529 (valid only when cover, cable seals and cavity plugs are properly fitted).

Cavity Plugs: Required to fill unused output cavities for ingress protection. Cable Seals: Check the overall diameter of your cable before ordering seals. Terminal Tools: Terminal crimping tools (p. 185).

Not Included: Terminals, cable seals, cavity plugs, mounting brackets or mounting screws. Module does not include any plug-in components.

#### 60 WAY MODULE & COVER (No Bussing):

Part Number	Block Description	Cover Inc.	Nbr Cavities
15310-1-1	30 x Mini Fuses Only	Shallow - Fuse	60
15310-1-2	Mix of 280 Components	Deep - Relay	60

#### ACCESSORIES:

Part Number	Description	
TERMKIT004	170pc Terminal, Cable Seal & Cavity Plug Assortment I	Kit.
I-968875-I	Terminal Female MCP 2.8, #20 - #16AWG 0.5 - 1.0m	ım²
1-968876-1	Terminal Female MCP 2.8, #16 - #14AWG 1.0 - 2.5m	ım²
828904-I	Cable Seal Silicone 1.2 - 2.1 mm Diameter Blue	
828905-I	Cable Seal Silicone 2.2 - 3.0mm Diameter White	
828922-I	Cavity Plug Silicone Clear	
PROBRK008K	Mounting Brackets Stainless Steel Natural (A)	
PROBRK001	Mounting Bracket Powder Coated Black (B)	

#### BRACKET OPTIONS:



(A) PROBRK008K 2pc Bracket Kit Includes Hardware.

#### **RELATED PRODUCTS:**



Mini Fuses, Mini Resistors, Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



(B) PROBRK001 Ì pc Bracket Kit Includes Hardware.



Ultra Micro 280 Relays, Micro 280 Relays, Mini 280 Relays, 280 Flashers







#### **ACCESSORIES: AMP MCP 2.8**

Terminals: Female With Locking Barbs Copper Nickel / Tin plated

Cable Seals: Silicone



Cavity Plug: Silicone





MCP 2.8 Terminal & Seal **Assortment Kit** TERMKIT004 (see p. 187)

Scan this OR Code for more information



QR Code: 9001



#### MINI FUSE SEALED MODULE - DUAL BUS - 20 WAY



NEW IP66

This weatherproof 20 x Mini fuse module designed to provide fuse protected power for up to 20 circuits. The unit is powered by 2 separate power input studs, each stud powers 10 Mini fuse positions. The module can be ordered with a shallow cover to suit Mini Fuses, or with a deep cover if you want to fit Mini Blade Circuit Breakers which are taller.

Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.

20 x Mini Fuses (Shallow Cover Reg'd)



20 x Mini Fuses or Mini Circuit Breakers (Deep Cover Reg'd)

#### **MODULE KITS**

Part Number Kit Description PDMKIT-163T

20 x Mini fuse module kit with shallow cover PDMKIT-164T 20 x Mini fuse / circuit breaker kit & deep cover

Both module kits contain the following components;

- I x Module with either shallow or deep cover black
- 2 x Stud input caps silicone red colour
- I x Medium profile bracket black powder coated
- 4 x Bolts & washers for mounting module to bracket
- 5 x Tangless Terminals 0.8 1.0mm<sup>2</sup> (#18-16 AWG)
- 20 x Tangless Terminals 1.0 2.0mm<sup>2</sup> (#16-14 AWG)
- 5 x Tangless Terminals 2.0 3.0mm<sup>2</sup> (#14-12 AWG)
- 5 x Cable seals 2.03 2.85mm diameter cable
- 20 x Cable seals 2.81 3.49mm diameter cable
- 5 x Cable seals 3.45 4.30mm diameter cable
- 10 x Cavity plugs silicone green colour
- I x Instruction book (download via QR code)
- Lx Fuse circuit identification label

Note: Fuses and circuit breakers are not included. Please refer for page 133 for module dimensions.



Scan this OR Code for more information on module kits.



OR Code: 11005

#### **MODULE & COVER ONLY**

			Included	Nbr of	Max Nor of
Part Number	Block Layout	Bussing	Cover	Cavities	<b>Terminals</b>
15305-1-6-3	20 x Mini Fuse Module	Dual Fuse Buss	Shallow	20	20
15305-1-6-4	20 x Mini Fuse / Circuit Breaker Module	<b>Dual Fuse Buss</b>	Deep	20	20

Notes: Module includes cover and input stud caps only. Fuses, circuit breakers, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.

20 Mini Fuse or **Breaker Positions** 



Front View **Dual Fuse Rows** 

2 Inputs 20 Outputs



**Rear View Dual Busbar Studs** 

Gore Vent Feature on Shallow Cover Only



Assembled with **Shallow Cover** (Suits Fuses Only)



Assembled with Deep Cover (Suits Fuses & Breakers)

Scan this OR Code for more information on modules only.



QR Code: 9040



Email: info@prolecproducts.com.au Web: www.prolecproducts.com.au

#### MINI FUSE, MINI / MICRO RELAY SEALED MODULE





This weatherproof 5 x Micro Relays & 10 x Mini Fuse / Circuit Breaker module is designed to provide fuse protected power and relay switching. Relays and fuses can be wired together or independently of each other. All fuses are powered by a single power input stud. A secondary input stud connects all relay coil pins (86) to either Negative or Positive power via an internal buss.

Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.



5 x Micro 280 Relays 10 x Fuses / Breakers

#### **MODULE KIT**

Part Number Kit Description Internal Bussing PDMKIT-264T 5 x Relays & 10 fuses / breakers Fuse & relay buss\*

Module kit contains the following components: Both kits include the following:

- I x Module with deep cover black
- 2 x Stud input caps silicone red
- I x Medium profile bracket black powder coated
- 4 x Bolts & washers for mounting module to bracket
- 10 x Tangless Terminals 0.8 1.0mm<sup>2</sup> (#18-16 AWG)
- 35 x Tangless Terminals 1.0 2.0mm<sup>2</sup> (#16-14 AWG)
- 10 x Tangless Terminals 2.0 3.0mm<sup>2</sup> (#14-12 AWG)
- 10 x Cable seals 2.03 2.85mm diameter cable 35 x Cable seals 2.81 - 3.49mm diameter cable
- 10 x Cable seals 3.45 4.30mm diameter cable
- 20 x Cavity plugs silicone green colour
- I x Instruction book (download via QR code)
- I x Fuse / relay circuit identification label

Note: Fuses, circuit breakers & relays are not included. Please refer for page 133 for dimensions.



Scan this OR Code for more information on module kit.

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#### **MODULE ONLY**

			included	Nbr of	Max Nor of
Part Number	Block Layout	Bussing	Cover	Cavities	Terminals
15305-2-6-4	5 x Micro 280 Relays and	Fuse & Relay Buss*	Deep	35	30
	10 x Mini Fuses / Circuit Breakers	*Input stud bussed	to pin 86 on	relay.	

Relays: Micro ISO 280 Relays with 4 or 5 terminals (SPST / SPDT)

Notes: Module includes cover and input stud caps only. Fuses, circuit breakers, relays, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



Front View Relay & Fuse Rows



**Rear View Dual Busbar Studs** 



**Assembled with Deep Cover** (Suits Fuses, Breakers & Relays)

Scan this QR Code for more information on module only.



QR Code: 9040



#### MINI FUSE, MINI / MICRO RELAY SEALED MODULE - CONTINUED

#### Bussmann

NEW IP66

This weatherproof 3 Mini Relays or 5 x Micro Relays & 10 x Mini Fuse / Circuit Breaker module is designed to provide fuse protected power and relay switching. Relays and fuses can be wired together or independently of each other. 3 Different internal buss options: 1. All fuses are powered by a single power input stud. 2. All relay coil pins (86) bussed to either Negative or Positive power input stud. 3. No internal bussing.

Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.



5 x Micro 280 Relays 10 x Fuses / Breakers



3 x Mini 280 Relays 10 x Fuses / Breakers

#### **MODULE KITS**

Part Number	Kit Description	Internal Bussing
PDMKIT-404T	3-5 x Relays & 10 fuses /breakers	No Buss
PDMKIT-564T	3-5 x Relays & 10 fuses /breakers	Fuse Buss Only
PDMKIT-664T	3-5 x Relays & 10 fuses /breakers	Relay Buss Only*

Both module kits contain the following components;

- I x Module with deep cover black
- I x Stud input cap silicone red (bussed modules only)
- I x Medium profile bracket black powder coated
- 4 x Bolts & washers for mounting module to bracket
- 55 x Tangless Terminal assortment for different wire gauges
- 55 x Cable seal assortment for different cable diameters
- 20 x Cavity plugs silicone green colour
- I x Instruction book (download via QR code)
- I x instruction book (download via QR code
- I x Fuse / relay circuit identification label

Note: Fuses, circuit breakers & relays are not included.

Please refer for page 133 for dimensions.



Scan this QR Code for more information on module kits.

Included Nbrof



Max Nhr of

QR Code: 11005

#### **MODULES ONLY**

			meraaca	1401 01	
Part Number	Block Layout	Bussing	Cover	Cavities	Terminals
15305-4-0-4	3-5 x Relays & 10 Fuses / Breakers	No Buss	Deep	50	45
15305-5-6-4	3-5 x Relays & 10 Fuses / Breakers	Fuse Buss Only	Deep	40	35
15305-6-6-4	3-5 x Relays & 10 Fuses / Breakers	Relay Buss Only*	Deep	45	40

<sup>\*</sup>Input stud bussed to pin 86 on relay.

Relays: Micro ISO 280 Relays or Mini ISO 280 Relays with 4 or 5 terminals (SPST / SPDT)

**Notes:** Module includes cover and input stud caps only. Fuses, circuit breakers, relays, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



All Models Front View



15305-4-0-4 (No Buss) Rear View



15305-5-6-4 (Fuse Buss) Rear View



15305-6-6-4 (Relay Buss) Rear View



Assembled (Deep Cover)

Scan this QR Code for more information on modules only.



QR Code: 9040



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#### MINI FUSE, MINI / MICRO RELAY SEALED MODULE - CONTINUED

## Bussmann

This weatherproof 3 x Mini Relays & 10 x Mini Fuse / Circuit Breaker module is designed to provide fuse protected power and relay switching. Relays and fuses can be wired together or independently of each other. All fuses are powered by a single power input stud. A secondary input stud connects all relay coil pins (86) to either Negative or Positive power via an internal buss.

Suits applications in marine, construction, agriculture, heavy trucking, specialty vehicles and 4x4 wheel drives.

This new 15305 series RTMR has new refinements but remains backward compatible and interchangeable with the original 15303 series RTMR.





3 x Mini 280 Relays 10 x Fuses / Breakers

#### **MODULE KIT**

Part Number Kit Description PDMKIT-364T 3 x Relays & 10 Fuses / Breakers

Module kit contains the following components;

- I x Module with deep cover black
- 2 x Stud input caps silicone red colour
- I x Medium profile bracket black powder coated
- 4 x Bolts & washers for mounting module to bracket
- 10 x Tangless Terminals 0.8 1.0mm<sup>2</sup> (#18-16 AWG)
- 35 x Tangless Terminals 1.0 2.0mm<sup>2</sup> (#16-14 AWG)
- 10 x Tangless Terminals 2.0 3.0mm<sup>2</sup> (#14-12 AWG)
- 10 x Cable seals 2.03 2.85mm diameter cable
- 35 x Cable seals 2.81 3.49mm diameter cable
- 10 x Cable seals 3.45 4.30mm diameter cable
- 20 x Cavity plugs silicone green colour
- I x Instruction book (download via QR code) I x Fuse / relay circuit identification label

Note: Fuses, circuit breakers & relays are not included. Please refer for page 133 for dimensions.



Scan this QR Code for more information on module kit.



QR Code: 11005

Max Nbr of

#### **MODULE ONLY**

Included Nbr of Part Number **Block Layout** Cover **Terminals** Bussing Cavities 15305-3-6-4 3 x Mini 280 Relays and Fuse & Relay Buss\* Deep 10 x Mini Fuses / Circuit Breakers \*Input stud bussed to pin 86 on relay.

Relays: Mini ISO 280 Relays with 4 or 5 terminals (SPST / SPDT)

Notes: Module includes cover and input stud caps only. Fuses, circuit breakers, relays, terminals, seals, cavity plugs and bracket are not included. Please refer for page 133 for dimensions and accessory parts.



Front View Relay & Fuse Rows



Rear View **Dual Busbar Studs** 



Assembled with Deep Cover (Suits Fuses, Breakers & Relays)

Scan this OR Code for more information on module only.



QR Code: 9040



#### MINI FUSE, MINI / MICRO RELAY SEALED MODULE - CONTINUED

## Bussmann

Components: Accepts Mini fuses, Mini bladed circuit breakers, Mini 280 relays & Micro 280 relays and 280 Flashers.

Input Stud Rating: 80A max.

Output Terminal Rating: 30A max per terminal. Block: Black thermoplastic with silicone seal.

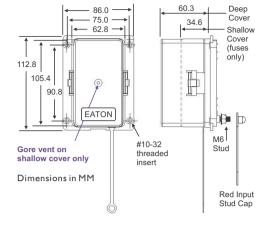
**Cover:** Black thermoplastic with tether.

Internal Buss: Tin-plated copper (bussed versions). Input Studs: M6 stud nickel plated brass (bussed

versions only).
Wire Size: #2

Wire Size: #22 - #12 AWG / 0.35mm<sup>2</sup> - 3mm<sup>2</sup>. Ingress Protection Rating: IP66-IEC 60529. Valid when properly installed with cover, cable seals and cavity plugs (to fill all unused output cavities). Mounting: Threaded inserts #10-32 as standard Mounting S/S Hardware (optional):
Scraw: #MTI033PBIS Wather: #5W3165

Screw: # MT1032PPHS. Washer: # SW316S. Temperature Rating: -40°C to +125°C (PDM only) Notes: Module includes cover. Stud caps included for bussed versions. Kits include terminals, seals and a bracket. All other parts to be ordered separately.







Part Number	Cable Dia.(mm)	Colour
15324983	1.29 - 1.70	Dark Red
15324982	2.03 - 2.85	Green
15324980	2.81 - 3.49	Grey
15324981	3.45 - 4.30	Blue
12010300	N/A Plug	Green

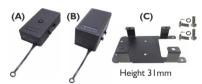
#### **APTIV DELPHI METRI-PACK 280**

TERMINALS: TANGLESS
Female Sealed, Tin Brass / Tin plated

Part Number	Wire (AWG)	Wire (mm²)
12110846	#22 - #20 ´	0.35 - 0.50
12110847	#18-#16	0.80 - 1.0
12129409	#16-#14	1.0 - 2.0
12110845	#14-#12	2.0 - 3.0
12110853	#12-#10	3.0 - 5.0

#### **OTHER ACCESSORIES**

Part Number	<u>Picture</u>	Description	
B151-7168-1-J	(A)	Shallow Cover With Gore Vent (Mini fuses only) - Spare Part	34.6mm
B151-7168-2-J	(B)	Deep Cover (Mini fuses, breakers, devices, 280 relays) - Spai	re Part 60.3mm
PROBRK002	(C)	Low Profile Bracket, Zinc Anneal Black Powder Coated	31.0mm
PROBRK001	(D)	Medium Profile Bracket, Zinc Anneal Black Powder Coated	45.0mm
PROBRK008K	(E)	Tall Profile Brackets, Stainless Steel Natural 1.5mm x 2pcs	56.0mm
CAB2.0X85TS1J	(F)	Red Terminated Jumper Cable Tangless Terminals 1.	84mm <sup>2</sup> x 90mm
B066-7008	(Ġ)	Red Input Stud Cap Silicon - Spare Part	





Height 56mm

(F)
Terminated & Sealed

Height 45mm

Jumper (see p.186)



#### **RELATED PRODUCTS:**



Terminal Crimper & Removal Tools. (see p. 185 - 186)



Mini & LED Mini Fuses, Mini Blade Breakers, Resistors & Transorbs.



Micro 280 Relays, Mini 280 Relays, 12VDC or 24VDC.



Tangless Terminal Seal & Plug Kits. TERMKIT001 (See page 187)



Scan this



QR Code: 9040



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Russmann

Designed to provide efficient power distribution in a rugged compact form with applications in marine, construction, agriculture, heavy trucking, and specialty vehicle industries. It accommodates a combination of up to 40 x Mini fuse or Mini bladed breakers and 10 x ISO 280 Micro relays. Also features a slot to hold a fuse puller and 4 slots for spare fuses. Optional common bussing for fuses.



Voltage Rating: 32VDC Ampere Rating: 200A max.

Components: Accepts Mini fuses. Mini bladed circuit breakers and ISO 280 Micro relays.

All components must have 2.8mm blades on 8.1mm centerline spacing. Mounting: Threaded inserts #10-32 as standard (M5 optional). Intended for horizontal to vertical mounting orientations.

Block & Cover: Black UL-Rated 94V0 thermoplastic. Silicone rubber gasket. Deep cover with internal tether. Cover included with base.

Cover: Replacement deep cover available. # B151-7182-1. Suits Minifuses, ISO 280 Micro relays and Mini bladed circuit breakers.

Internal Buss: Plated copper (optional, feeds fuses only).

Input Studs: M8 x 1.25 stud (on bussed versions). Input Stud Rating: 100A max per bus bar.

Output Terminal Rating: 30A max per terminal.

Ingress Protection Rating: IP66 (Valid when properly installed with

cover, cable seals and cavity plugs).

Wire Size: #22 - #12 AWG / 0.35mm<sup>2</sup> - 3mm<sup>2</sup>

Temperature Rating: -40°C to +85°C (Module only).

Terminals: Delphi Metri-Pack 280 Female Sealed (Tanged) Cavity Plugs: Required to fill unused output cavities for ingress protection.

Cable Seals: Please check the overall diameter of your cable before ordering cable seals.

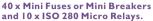
Terminal Tools: Terminal crimping & removal tools see pages 185-186. Ordering: Block is supplied with cover & one nut for each input stud.

Not Included: Terminals, cable seals, cavity plugs, mounting brackets or mounting screws.

Module does not include any plug-in components such as fuses, circuit breakers, relays or the fuse puller.

Pack Size: Ipc, 20pcs, 100pcs. Approvals: RoHS







#### **MODULES & COVER OPTIONS:**

Part	Mini Fuse	Fuse	Left	Right	Relay	Nbr of	Max Nbr of
Number	Positions*	Bussing	Fuse Side	Fuse Side	Contents	<b>Cavities</b>	<u>Terminals</u>
15401-1-2-1-0A	40x Mini Fuses	Dual	Bussed	Bussed	10x ISO 280 Micro	130	90
15402-1-2-1-0A	40x Mini Fuses	Single	Bussed	Unbussed	10x ISO 280 Micro	130	110
15404-1-0-1-0A	40x Mini Fuses	No Bus	Unbussed	Unbussed	10x ISO 280 Micro	130	130

Notes: \* Mini circuit breakers can be fitted in mini fuse positions. Relays are un-bussed.

#### **ACCESSORIES:**

Part Number	Description
12084201	Tanged Terminal Female (#22-20AWG), 0.35 - 0.5mm <sup>2</sup>
12077411	Tanged Terminal Female (#18-16AWG), 0.80 - 1.0mm <sup>2</sup>
12129493	Tanged Terminal Female (#14-12AWG), 2.0 - 3.0mm <sup>2</sup>
12077413	Tanged Terminal Female (#10AWG), 5.0mm <sup>2</sup>
15324983	Cable Seal, 1.70 - 1.29mm Cable Diameter, Dark Red
15324982	Cable Seal, 2.85 - 2.03mm Cable Diameter, Green
15324980	Cable Seal, 3.49 - 2.81mm Cable Diameter, Grey
15324981	Cable Seal, 4.30 - 3.45mm Cable Diameter, Blue
12010300	Cavity Plug Silicone Green, 6.7mm Cavity inside Dia.
PROBRK003	Bracket Stainless Steel, Black Powder Coated, 90° Angle
TERMKIT003	Tanged Terminal, Seal & Plug Assortment Kit (310pcs)
CAB2.0X85TS1TJ	Red Jumper Cable 1.84mm <sup>2</sup> x 90mm. Tanged (1pc)
B151-7182-1	Replacement Cover. Black Thermoplastic.
32013BS	Mini Fuse & Mini Circuit Breaker Puller



**Tanged Female** Sealed Terminals



Cable Seals & Cavity Plug



(see p.185 - 186)



Fuse & Breaker Puller (see p.44)



**Mounting Bracket** # PROBRK003

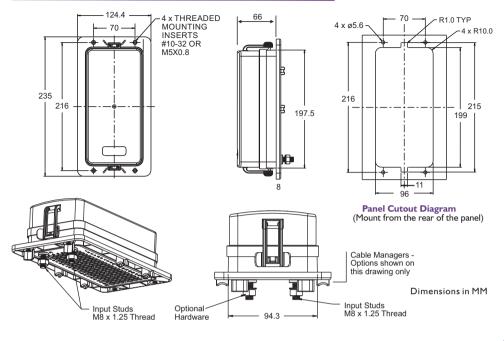


Tanged Terminal Kit TERMKIT003 (see p. 187)

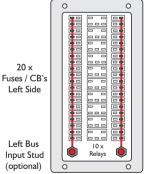


#### MINI FUSE & MICRO RELAY SEALED MODULE - CONTINUED

## FAT • N Bussmann







20 x Fuses / CB's Right Side

Right Bus Input Stud (optional)

= Input Stud (Optional) Powers Fuses / Breakers

Rear View - Inputs / Outputs



**Dual Bus Version Pictured Above** 

Front View - Component Loading



Unloaded RFMR Pictured Above



Mini Fuses, Mini Resistors, Mini Transorbs & Mini Blade Circuit Breakers.



ISO 280 Micro Relays 4 or 5 Pin. 12V or 24V (see p.164)





Tanged Pre-Terminated Cables, Jumpers & Butt Splice Connectors. (see p. 186)



## FATON

#### Bussmann

These power distribution modules suit high current applications for placement in extreme moisture and high vibration environments. Multiple units may be connected together using a buss bar. They can also be bussed to Bussmann's other PDMs (RTMR see p. 129-133, ssVEC / ssDVEC see p. 142).

IGNITION PROTECTED



#### Power Fuse Module (PFM)

- Housing for 2 fuse positions.
- Each fuse is a separate circuit.
- Removable fuse cover included.



Power Fused Relay Module (PRM)

• Includes a molded-in High Power Mini relay.

• Housing for 2 fuse positions. One fuse protects the relay and the other is a single-circuit inline fuse.

Removable fuse cover included.







- M6 Output Stud Switched

Fuse Cover

M6 Output Stud Non-Switched

Rating (PFM): Each inline fuse; up to 60A.

**Relay Rating (PRM):** 70A (12VDC) or 25A (24VDC) steady-state relay. **Relay Protection Fuse:** Up to 60A. Non-switched inline fuse; up to 60A. **Temperature Rating:** -40  $^{\circ}$ C to +85  $^{\circ}$ C.

Body: UL-Rated 94V-0 thermoplastic with silicone seal.

Input Termination: M8 threaded plated steel stud. Includes keps nuts. Output Termination: 2 x M6 threaded plated steel studs. Inc. keps nuts. Relay Signal Connector Kit: Only for use with PRM's. (1.0 to 1.5mm²) Crimping tool available # CT-P79 contact sales for further information. Ingress Protection Rating: IP66 (excluding stud connections). Mounting Option: Counter Rotation Feature (CRF) included to prevent the module rotating on single bolt installations. 6.5x35.4 Mount Hole Bussing: Use 377 I BUS busbars to join multiple PRMs/PFMs. Stud insulator caps included with busbars.

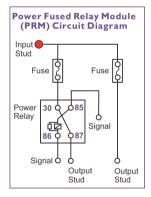
Contact sales for options to bus PRMs / PFMs to other Bussmann PDM's. **Accessories:** Relay signal connector, bus bars, separators and fuses.

Suitable Fuses: JTFxxx (20A - 0A), not included.

Notes: Each Power Relay Module requires 1 x PRM Relay Signal Connector Kit (50126K) to control the relay. Fusible links are not included. Compliances: SAE 31171 (Ignition protected).

Part Number	Description
37701-INN0011	32V Dual Fuse Only Module Without CRF (PFM)
37701-1NN0025	32V Dual Fuse Only Module With CRF (PFM)
37702-1AN0025	12V Fuse & Fused Relay Module With CRF (PRM)
37703-1AN0025	24V Fuse & Fused Relay Module With CRF (PRM)
50126K	PRM Relay Signal Connector Kit
3771BUS-2	2 Position Bus Bar With Stud Covers
3771BUS-3	3 Position Bus Bar With Stud Covers
3771BUS-4	4 Position Bus Bar With Stud Covers
B162-7003/J	Short Joiners / Output Stud Barriers
B162-7002/J	Long Joiners / Output Stud Barriers

# Power Fuse Module (PFM) Circuit Diagram Input Stud Fuse First Output O Stud Stud Stud Second Output Stud





Fusible Links JTF (20A-80A) (See page 21)



Joiners Barriers Short/Long



PRM Relay Signal Connector Kit Inc. Terminals 0.75-1.5mm<sup>2</sup> Cable seals 1.7-2.4mm



Bus Bar With Covers 2, 3 & 4 Way Multiple modules can be joined together with these optional Bus Bars.



Scan this QR Code for more information



QR Code: 9002



#### **AUTO FUSE MODULAR BLOCK KIT - 16 WAY**



Part Number 00655K

Fuse Block Kit Contents:

I x 00670 (Clear Cover with Gasket)

1 x 00650 (16 Way Housing with 5 Secondary Locks)

I x 00680 (Bottom Cover)

35 x 07900 (Terminals 0.5 to 1.5 mm<sup>2</sup> 14A, F 6.3 mm)

2 x 00690 (Mounting Bracket Male) 2 x 0069 I (Mounting Bracket Female)

Fuse block can accommodate one fuse puller 00358.

**RELATED** PRODUCTS:







(see p.44)

Fuse Puller

**Busbar Terminals F 6.3** 07912RL (2 - 3mm2) 20A 079 I I RL (4 - 6mm<sup>2</sup>) 37A



<u>Micro relay modular block kit</u> - 7 way (4 or 5 pin)

Part Number 00705K

Micro Relay Kit Contents;

(see p. 17)

I x 00670 (Clear Cover With Gasket)

I x 00700 (Micro Relay Housing with 7 Secondary Locks)

I x 00680 (Bottom Cover)

25 x 01940 (Terminals 0.5 - 1.5mm<sup>2</sup> F 4.8mm) 15 x 01655 (Terminals I - 2.5mm<sup>2</sup> 20A, F 6.3mm)

2 x 00690 (Mounting Bracket Male) 2 x 0069 I (Mounting Bracket Female)

RELATED PRODUCTS: ISO Micro Relays. 12VDC or 24VDC.

(See page 166)

**Optional Terminals F 6.3** 01651RL (2.5 - 6mm²)



## MINI RELAY MODULAR BLOCK KIT - 4 WAY (4 OR 5 PIN)

Part Number 00665K

Mini Relay Kit Contents;

I x 00670 (Clear Cover With Gasket)

I x 00660 (Mini Relay Housing with 4 Secondary Locks)

I x 00680 (Bottom Cover)

20 x 01650 (Terminals I - 2.5mm<sup>2</sup> 20A, F 6.3mm)

2 x 00690 (Mounting Bracket Male) 2 x 00691 (Mounting Bracket Female)

RELATED PRODUCTS: ISO Mini Relays. 12VDC or 24VDC. (See page 166)

**Optional Terminals F 6.3** 01651RL (2.5 - 6mm<sup>2</sup>)

#### Features:

- All 3 blocks can be ganged to create a power distribution centre.
- Side wall locks can attach MTA Auto fuse holders. (p78)
- Side wall locks can attach MTA Mini & Maxi relay holders. (p171)

Voltage: 32V

Maximum Continuous Current Ratings: 225A (00655K), 150A (00705K), 120A (00665K) Body: Black, Cover: Transparent, includes gasket. Terminals: Axial connections. Other terminal options include various terminal sizes, reeled and busbar types. Contact sales for further information.

Notes: Fuses, fuse extractor and relays are not included.

Pack Size: |

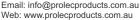
Approval: RoHS



89 93.6 130.2 Dimensions in MM

Mounting: M8 screw Overall Height: 64mm







Side wall lateral lock feature.

Add MTA fuse or relay holders.

46

#### **MODULAR FUSE AND RELAY MODULES**

DAN L MILLO



To simplify ordering, we now offer Module Kits which include suitable terminals for the components. If you wish to order a module without terminals, simply remove the 'K' suffix from the part number. Once you have selected the module(s), select a mounting bracket or frame and a cover to suit your installation.

Note: Plug-in components such as fuses, relays, pullers etc. are not included with the modules or module kits.

#### **FUSE MODULE KITS - INCLUDES MODULE & TERMINALS**

Part Nu	mber Module Capacity	lerminals included in the Kit
01460K	I 20 x Mini Fuses.	40 x 08332 (Mini Fuse).
01470K	6 x Maxi Fuses. (Includes Busbar	c). 6 x 07660 (Maxi Fuse). Busbar Included. Rated to 120A.
01600K	I 6 x Auto Fuses & 3 x Maxi Fuses.	12 x 07930 (Auto Fuse), 6 x 07660 (Maxi Fuse).
01690K	NEW 4 x Mini Fuses & 6 x Jcase Fuses*	*. 5 x 08331, 5 x 08332 (Mini Fuse), 10 x 07992, 4 x 07993 (Jcase)
01698K	NEW 20 x Mini Fuse / Diodes	10 x 08331, 40 x 08332 (All products with 2.8mm blades)

Notes: 01690 module will accept both standard Jcase (JTF) & low profile Jcase (LJC) fuses.

#### **RELAY MODULE KITS - INCLUDES MODULE & TERMINALS**

Part Number	Module Capacity	Terminals Included in the Kit
01484K	6 x ISO Micro Relays.	18 x 08401 (4.8mm), 12 x 08503 (6.3mm).
01494K	I x ISO Mini & I x ISO Maxi Relay.	7 x 08503 (6.3mm), 2 x 07741 (9.5mm).
01660KI	2 x ISO Maxi Relays.	4 x 08502 (6.3mm), 4 x 07741 (9.5mm).
01698K NEW	10 x ISO280 Ultra Micro relays or	10 x 0833 l, 40 x 08332 (All products with 2.8mm blades)
	6 x ISO280 Micro Relays or a mixtur	e of both.

Relay Compatibility: Micro & Mini relays with 4 or 5 terminals.

Ultra Micro and Maxi relays with 4 terminals.

#### **FUSE & RELAY MODULE KITS - INCLUDES MODULE & TERMINALS**

Fart Number	Produle Capacity	rerminals included in the Kit
01510KI	10 x Mini Fuses & 1 x ISO Maxi Relay.	20 x 08332 (Mini Fuse), 2 x 02050 (6.3mm), 2 x 07741 (9.5mm).
01564K	8 x Mini Fuses & 4 x ISO Micro Relays.	.16 x 08332 (Mini Fuse), 12 x 08401 (4.8mm), 8 x 08503 (6.3mm)
01504K	4 x Mini Fuses & 2 x ISO Mini Relays.	8 x 08332 (Mini Fuse), 10 x 08503 (6.3mm).
01698K <b>NEW</b>	Mix of Mini Fuse / Diodes / Breakers,	10 x 0833 I, 40 x 08332 (All products with 2.8mm blades)
	ISO280 Relays (Ultra Micro or Micro)	).

Tanasinala lu alcoda din sha Kis

**Relay Compatibility:** Micro & Mini relays with 4 or 5 terminals.

Ultra Micro and Maxi relays with 4 terminals.

#### KITTED TERMINAL SPECIFICATIONS

Dant Number Madula Canasitu

Part	Suits	Terminal	Wire	Ampere	Product
Number	Components	Size	Size	Rating	<u>Description</u>
08331	Mini Fuses, Breakers, 280 Relays	2.8mm	I to 2mm <sup>2</sup>	I6A	Box F2.8mm - Standard
08332	Mini Fuses, Breakers, 280 Relays	2.8mm	2.5 to 4mm <sup>2</sup>	28A	Box F2.8mm - Standard
07930	Auto Fuses	5.2mm	2 to 3 mm <sup>2</sup>	20A	Open F6.3mm - Spring clip
07660	Maxi Fuses	8mm	4 to 6mm <sup>2</sup>	36A	Box F8mm - Spring clip
08401	ISO Micro Relays	4.8mm	1.5 to 2.5 mm <sup>2</sup>		Box F4.8mm - Standard
08503	ISO Mini Relays	6.3mm	4 to 6mm <sup>2</sup>	37A	Box F6.3mm - Standard
02050	ISO Micro, Mini, Maxi Relays	6.3mm	2.5 to 4mm <sup>2</sup>	28A	Open F6.3mm - Spring clip
08502	ISO Maxi Relays	6.3mm	2 to 2.5mm <sup>2</sup>	20A	Box F6.3mm - Standard
07741	ISO Maxi Relays	9.5mm	6 to 8mm <sup>2</sup>	48A	Box F9.5mm - Spring clip
07992	Jcase Fuses	6.3mm	6 to 8mm <sup>2</sup>	48A	Open M6.3mm - Standard
07993	Icase Fuses	6.3mm	I 0 mm <sup>2</sup>	53A	Open M6.3mm - Standard

**Notes:** Not all terminals are compatible with all modules. Terminals are available in other wire sizes and configurations to suit the MTA modules. Please refer to our QR datasheet.

#### **MODULE FRAMES, COVERS & BRACKETS**

All modules require brackets or a frame for mounting in your vehicle. Please refer to page 140 for options.

Scan this QR Code for more information



QR Code: 9000



#### **MODULAR FUSE AND RELAY MODULES - CONTINUED**

20 x MINI FUSES Part Number: 01460K1

Note: Includes room for 6 spare Mini fuses.



Mini Fuse not included.



Secondary locks included.



ISO Micro Relay not included.



Secondary lock included.

10 x MINI FUSES I x MAXI RELAY (4 PIN) Part Number: 01510K

Note: Includes room for 3 spare Mini fuses





Mini Fuse & ISO Maxi Relay not inc.



Secondary locks included.



6 x MICRO RELAYS (5 PIN)





Mini Relay Maxi Relay

ISO Mini & ISO Maxi Relay not inc. Secondary lock included.

8 x MINI FUSES 4 x MICRO RELAYS (5 PIN)

Part Number: 01564K





Mini Fuse & ISO Micro Relay not inc. Secondary lock included.

4 x MINI FUSES 2 x MINI RELAYS (5 PIN) Part Number: 01504K





2 x Maxi Relays (4 PIN)



Mini Fuse & ISO Mini Relay not inc. Secondary lock included.

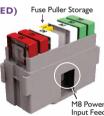
6 x MAXI FUSES (SINGLE FEED) Part Number: 01470K

Note: Includes room for fuse puller 00358 (optional). M8 Input



Busbar Terminals 123456

Maxi Fuse not inc



Input Feed Secondary lock included.





ISO Maxi Relays not included.



Secondary lock included.

4 x MINI FUSES 6 x JCASE FUSE LINKS\* (\*Standard or Low Profile) Part Number: 01690K





Jcase Fuse





Secondary lock included.

**6 x AUTO FUSES** 3 x MAXI FUSES Part Number: 01600KI



Maxi Fuse and Auto Fuse not included.



Secondary locks 4x 01601, 1x 01602 (optional).

#### MODULAR OPEN PLAN MODULE 2.8MM TERMINAL

20 x MINI FUSES, DIODES, CIRCUIT BREAKERS 10 x ULTRA MICRO ISO 280 RELAYS

6 x MICRO ISO 280 RELAYS

Part Number: 01698K Terminal Capacity: 40 Layout Matrix:  $4 \times 10$ . Note: May use combination of any of these components.



Mini

Fuse



Mini

Diode

LED Mini

Fuse





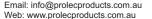
Breaker



Ultra Micro & Micro ISO 280 Relays







#### **MODULAR FUSE AND RELAY MODULES - CONTINUED**

# MIA

#### **MOUNTING BRACKETS, MOUNTING FRAMES & COVERS**

Part Nun	nber	Description
01580		Single Module Mounting Bracket (2pcs required)
01590		Single Module Cover, Finger Release
00699		Dual Module Mounting Bracket Low (2pcs req'd)
01180	NEW	Dual Module Mounting Bracket High (2pcs req'd)
01550		Dual Module Cover, Finger Release
01520		Four Module Frame Low Profile Mount
01530		Four Module Cover, Finger Release
01706	NEW	Five Module Frame High Profile Mount
01707	NEW	Five Module Cover, Finger Release





Dual Module Cover (01550)



Single Module Brackets Low Profile (01580)





Four Module Cover (01530)



Dual Module Brackets Low Profile (00699)





Four Module Frame (01520) Low Profile

Dual Module Brackets High Profile (01180)





Five Module Cover (01707)

Five Module Frame (01706) High Profile



#### **ADAPTOR, RETAINERS & FUSE PULLER**

Part Number	<u>Description</u>	Pack Size
01620 <b>NEW</b>	Single Module Adaptor	250
01630 <b>NEW</b>	Relay Retainer	350
01376 <b>NEW</b>	Relay Retainer	TBC
01237 <b>NEW</b>	Mini Circuit Breaker Retainer	TBC
00358	Fuse Puller Yellow	1

Mini Breaker Retainer (01237)





Single Bracket



**Dual Bracket** 



**Four Frame** 



Fuse Puller

(00358)





Single Module Adaptor (01620)
Cannot use with cover

#### **TERMINAL SECONDARY LOCKS (Optional)**

Part Numb	<u>per Description</u>	
01601	Fits Module 01600 (Auto Fuse Ter	minals)
01602	Fits Module 01600 (Maxi Fuse Ter	minals)





#### Notes:

All terminals lock into the module body. A secondary lock ensures the terminal can't dislodge under force or vibration.

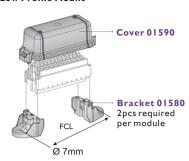


UPDATED

#### **MODULAR FUSE AND RELAY MODULES - CONTINUED**



# SINGLE MODULE BRACKET & COVER Low Profile Mount



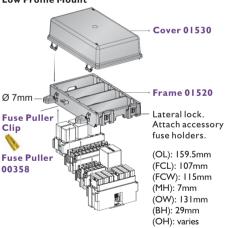
Overall Length (OL): 150mm Fixing Centre Length (FCL): 132mm Mounting Hole (MH): 7mm Overall Width (OW): 39mm Bracket Height (BH): 25mm

Overall Height With Cover (OH): Varies by module

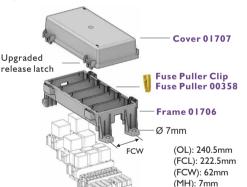
#### **DUAL MODULE BRACKETS & COVER** Low Profile Mount Fuse Puller 00358 (optional) Cover 01550 (OL): 131mm (FCL): 115mm Fuse Puller Storage (MH): 7mm (OW): 77.5mm (BH): 25mm (OH): varies 2pcs required per module Bracket 00699 Ø 7mm







# FIVE MODULE FRAME & COVER High Profile Mount



#### **TERMINALS**

Female 2.8mm 08331, 08332

















Female 8.0mm 07660



Female 9.5mm 07741



Scan this QR Code for more information

(OW): 114mm

(BH): 58.7mm

(OH): 96.4mm



QR Code: 9000



#### **POWER DISTRIBUTION UNITS - LOADED**



ssVEC

# Bussmann UPDATED IP66

These ssVEC and ssDVEC provide efficient, compact power distribution. The rugged design means they are capable of operating in severe environments with high vibration and moisture. Typically power is supplied via the input studs and output through connectors, but the Dual + / Quad + units feature mini fuses and relays that are standalone circuits (not connected to power input studs). Please refer to our QR datasheet for the internal circuit diagram of each unit & other specifications. The unit includes mini fuses, ISO 280 relays and a fuse puller. Connectors, terminals, cable seals and cavity plugs are not included, order separately. Each connector is keyed and will only fit the matching colour socket on the unit. Custom circuit design with preloaded specific components and labelled to suit OEM requirements also available.

#### General Specifications (for both ssVEC and ssDVEC)

Connector Terminals: Delphi Metri-Pack 280 Female Séaled (Tanged), 30A max each. See page 134 for details.

Connectors: 100A max each, colour coded. Quantity varies depending on the model. Cable Seals & Cavity Plug: Delphi Metri-Pack 280 series.

Input Studs M8: 100A Max each. Unit Rating Max: 200A (ssVEC), 400A (ssDVEC)
Operating Temperature: -40 °C to +105 °C.

Notes: The unit must be installed and oriented in accordance with factory guidelines (available on request).

Includes Components: Mini fuses, ISO 280 relays & fuse puller.

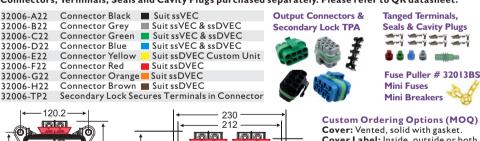
Does Not Include: Connectors, terminals, terminal seals and cavity plugs.

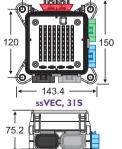


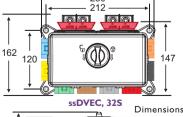
Part	PDU	Input M8	Mini	ISO 280 I 2V	ISO 280 Ultra	Fuse	Output Connectors
Number	Model	Bus Bar	<u>Fuses</u>	Micro Relay	Micro Relay	Puller	Quantity & Colours
31S-000-0	ssVEC	Dual	8pcs	8pcs x I 2V SPDT	-	lpc	4 🔳 🔳 🖠
31S-001-0	ssVEC	Dual	16pcs	4pcs x I2V SPDT	2pcs x I 2V SPST	lpc	4 🔳 🔳 📕
31S-002-0	ssVEC	Single	16pcs	-	8pcs x I 2V SPST	lpc	3 🔳 📗
31S-003-0	ssVEC	Dual	29pcs	-	-	lpc	4
31S-004-0	ssVEC	Dual+*	8pcs	8pcs x I2V SPDT ^	-	lpc	4 🔳 🔳 🔳
32S-300-0	ssDVEC	Quad	16pcs	16pcs x 12V SPDT ^	-	lpc	6
325-301-0	ssDVEC	Quad	58pcs	- 1	-	lpc	8
32S-302-0	ssDVEC	Quad+*	24pcs	12pcs x 12V SPDT ^	2pcs x I 2V SPST	lpc	8

<sup>\*+</sup> Version includes relay & fuse circuits powered via plug-in connectors instead of bus bar studs, please refer to circuit diagrams in QR datasheet.  $^{\circ}$  SPDT Relay Pin 87a not available for use in some circuits.

#### Connectors, Terminals, Seals and Cavity Plugs purchased separately. Please refer to QR datasheet.









Cover: Vented, solid with gasket.
Cover Label: Inside, outside or both.
Power Input: Studs or
8mm blade terminals

Mounting: Ext. feet or Interior holes.

Busbar: Twin #B109-7081

Quad #B109-7031

Voltage: 24V versions also available.

Scan this QR Code for more information



QR Code: 9026



#### POWER DISTRIBUTION UNITS LOADED & MULTIPLEXED



**Bussmann** IP66 NEW

The multiplexed Vehicle Electrical Center (mVEC) is a power distribution node on a [1939 network, controlling relays based on information from the central vehicle controller. The mVEC will also return power distribution status information like relay state, failed relay, missing component or blown fuse. High Power: 200A Rated. Individual outputs rated up to 30A (max of 32 outputs). I2V and 24V versions. Flexible: The mVEC is offered in various standard and customized versions. Custom versions are configured to OEM wiring requirements. The mVEC accepts fuses, relays, circuit breakers. resistors, diodes, etc.- based on industry standard 2.8mm footprint.

Cost Effective: An alternative to high current, solid-state power distribution modules and features serviceable components. The mVEC is designed as a slave module, it is controlled by master modules. Standard units below come pre-loaded with relays, fuses and a fuse puller. Custom Ordering Options: Cover marking: laser etching inside, outside or both. Compression limiters on mounting feet. Stuffed (with/without) components ie. fuses, relays, diodes, breakers, fuse puller. Customised circuit layouts, standard and custom CAN messages.

Part Number 31M-327-0	24V mVEC Part Number 31M-328-0	Input M8 Bus Bar Single	Fuses	ISO 280 Ultra Micro Relay Apcs x SPST		Output Connectors	Output Total 24
3 I M-000-2	31M-329-0	Single	l 6pcs	8pcs x SPST	l pc	2	16
3 I M-300-0	31M-330-0	Single	8pcs	12pcs x SPST	lpc	2	16

Part Number	Accessory Description
32006-A22	Output Connector Black Colour, 8 Position Keyed
32006-B22	Output Connector Grey Colour, 8 Position Keyed
32006-C22	Output Connector Green Colour, 8 Position Keyed
32006-TP2	Output Connector Secondary Terminal Lock 8 Pos.
MVECCCK	CAN Connector Kit includes;
	I x Connector, I2 x Terminals, I2 x Seals, I x TPA.



Fuse / Breaker Puller # 32013BS

CAN Connector Kit # MVFCCCK

MVEC 31M Series

Voltage: 12VDC or 24VDC Options. Rating: 200A max. Input Studs: 2 x M8, 100A max each. Fuses: 10A Mini fuses (pre-installed).

Relays: 4 pin ISO 280 Ultra Micro (SPST). I2VDC 20A or 24VDC I0A (pre-installed).

CAN Connector: AMP SSC 12-position sealed connector.

Output Connectors: up to 4, 100A max each, colour coded & sealed.

Output Connector Terminals: Delphi Metri-Pack 280 Female Sealed (Tanged). See QR Code or page 134 for further details on terminals, seals and cavity plugs.

Output Connector Terminal Rating: 30A max each.

Output Connector Cable Seals & Cavity Plug: Delphi Metri-Pack 280 series. Operating Temp.: -40 °C to +85 °C. Fuse Puller: 32013BS (pre-installed). Notes: Customers must follow the factory guidelines and adhere to installation instructions which include restrictions on mounting orientation. Each connector is

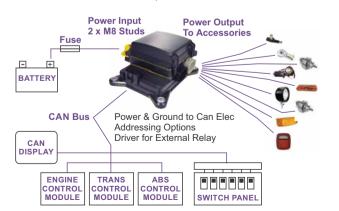
keyed and only fits into the same colour connector on the unit.

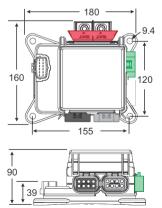
Documentation is available on request.





QR Code: 9027





Dimensions in MM



#### POWER DISTRIBUTION UNIT (MiniFLEC™)



#### Mini Flexible Electrical Center (MiniFlec)

The MiniFlec is a compact, front access, internally bussed, connectorized, sealed IP67/69K rated power distribution module. It is suitable for mounting in rugged commercial vehicle applications, has a dense concentration of high power circuits and accepts plug-in devices like automotive fuses, diodes and relays to protect and control complex electrical systems. An internally mounted Printed Circuit Board (PCB) feeds power from a single M8 input stud to 9 x fuse protected relay controlled power output circuits and 6 x fuse only power output circuits. Relay switching and power output wires are connected to the module using Tyco HDSCS connectors located at the base of the unit. All plug-in components ie. fuses, relays and Tyco connectors are not included with the module and must be ordered separately. Contact sales for further information on Littelfuse custom designed units.

Cover Fitted

- Module includes cover. A fuse puller is also fitted in the cover.
- 6 locations for spare fuses (4 x Mini fuses).
- Cover is tethered to the module to prevent misplacement.
- Yellow Assure Latch system for secure locking of cover to the module.
- Module is rated to 150A max load.
- All relays share a common ground circuit for relay coil.
- Vent plug located at the base of the unit.



Part Number:

Description

LFMX0007Z-01 Standard Unpopulated PDM & Cover for; Up to I2 x Mini Fuses (2A-30A)

Up to 2 x MCase + Slotted Fuses (15A-60A)

Up to I x ISO Mini Relay 5 pin

Up to 3 x ISO280 Micro Relays 4 Pin

Up to 3 x ISO 280 Ultra Micro Relays 4 Pin

Voltage: 9 to 16VDC (with 12V relays fitted) 18 to 32VDC (with 24V relays fitted)

Rating: Max Load 150A. Power Input Stud: 1 x M8 stud. Fuse Ratings: Max fuse ratings shown in circuit diagram. Connectors (x4): Tyco HDSCS series with MCP terminals.

Housing: 94V-0 glass reinforced nylon.

Cover: Includes Mini fuse puller and slots for 4 x spare Mini fuses. Base: Includes vent for pressure equalization and slots for 2 x

spare MCASE+ slotted fuses. Tether: Included. Ingress Protection Rating: IEC 529, IP67, IP69K

Cover Gasket: Internal, silicone.

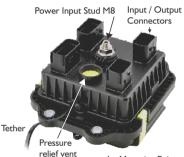
Mounting: Panel Mount (Rear fed connectors)...

Vibration: ISO 16750-4

**RELATED PRODUCTS:** 

Temperature Rating: -40 °C to +85 °C.





4 x Mounting Points 9mm for M8 Studs



QR Code: 9032

x Mini Fuse Puller (included)

Scan this **OR Code** for more

2 x Mcase + Slotted Fuses

3 x ISO280 Ultra Micro Relays

3 x Assure Latches for Cover Retention

Storage for 2 x Spare Mcase + Slotted Fuses

12 x Mini Fuses

3 x ISO 280 Micro Relays

Storage for 4 x Spare Mini Fuses

I x ISO Mini Relay

ISO280 Ultra Micro Relays, ISO280 Micro Relays, ISO Mini Relay

Mini Fuses & Mini LED Fuses. Mini Blade Breakers. Mcase + Slotted Fuses.



# POWER DISTRIBUTION UNIT (FLEC & CAN-BUS FLEC)





#### Flexible Electrical Center (FLEC™)

The FLEC™ is a configurable power distribution module. It accommodates circuit protection components in a sealed IP67 rated housing with a compact footprint & high component density. Littelfuse offers both standard versions (loaded or unloaded) as well as custom designs. Contact sales for further information on custom made products. The module is also equipped with terminals for plug-in components such as fuses and relays. Power is supplied to the module using three M8 power input studs (100A each). Power is output from the module using standard Delphi GT series sealed connectors that provide up to 76 output circuits for powered accessories.



Scan this QR Code for more information

Twist-on cover with internal silicone gasket. Internal storage for 4 spare fuses & fuse puller. Tether included. Optional custom lid label.

QR Code: 9031 Stud caps to protect from shorts. M8 studs for power input & ground

Part Number FLEC3000Z-0U Description

Unpopulated PDM 12VDC / 32VDC Up to 28 x Mini Fuses / Mini Breakers Up to 18 x Micro ISO 280 Relays 5 Pin

FLEC3000Z-0 Popu

Populated PDM I2VDC includes:

28 x Mini Fuses. (6ps x 15A & 22pcs x 30A) 18 x Micro ISO 280 12VDC Relays 5 Pin.

CFLEC001Z-01

Populated Can-Bus PDM 12VDC includes; 29 x Mini Fuses. (8ps x 20A & 21 pcs x 30A) 12 x Ultra Micro ISO 280 12VDC Relays 4 Pin. 3 x Micro ISO 280 12VDC Relays 5 Pin.

Voltage: See above for corresponding unit.
Rating: Max Load 300A. Max Fuse Rating 30A
Power Input Studs: 3 x 100A rated M8 studs. Plated
copper and stainless steel. Red or black covers included.
Power Output Terminals: 38 x 1.5mm blades (15A) &
38 x 2.8mm blades (25A) suit Delphi GT 150 & 280 series
sealed plug-in connectors.

**Internal PCB:** FR4 board with multi-layer high current 6oz copper. Conformal coating available.

Materials: UL94V0 thermoplastic.

Cover: Twist-on design with easy single-handed removal / installation. No latches to break and low over-head clearance requirements. Inside cover features slots for 4 x spare Mini fuses and includes a fuse puller.

**Base:** Includes vent for pressure equalization.

Ingress Protection Rating: IP67

Cover Gasket: Internal, high temperature silicone. Connectors: FLEC 6 connectors. \*CFLEC 5 connectors. Custom Layout Component Options: Mini fuses, JTF fuses, MJC fuses, Relays & PCB mount components. Can be designed to accept other components (development/tooling may be required). Internal PCB allows for custom circuit configurations, including designs requiring electronics such as those used in CAN 11939 and LIN systems.

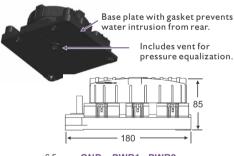
Temperature Rating: -40 °C to +85 °C.

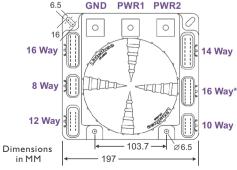
**Options:** MegaFlex holders can be interlocked to the base for high current protection with a stepped busbar # 882-841. A Mega fuse can be installed across the M8 input studs to pre-fuse multiple circuits in the FLEC. Custom component label or inside cover label.

Test Specifications: SAE, USCAR and ISO.

Pin. FLEC3000Z-0

Standard 1.5 & 2.8mm terminals for use with standard Delphi GT series sealed connectors.







### POWER DISTRIBUTION UNIT (EPC)



This sealed power distribution module is an internally bussed and connectorized unit, suitable for mounting in rugged commercial vehicle applications. This unit has dense concentration of high power circuits and accepts plug devices like automotive fuses, diodes and relays to protect and control complex electrical systems. An internal Printed Circuit Board (PCB) provides bussed connections to a large number of devices. You decide which fuses and which wires.

**NEW** 

**IP67** 

IP69K

#### **Features**

• 2 Individual power input circuits power fuses and relays using internal buses.

- Stand-alone relays & fuses for seperate power sources.
- Cover is tethered to the module to prevent misplacement.
- Custom configurations available.
- Module is rated to 200A max load.
- Vent plug located at the base of the unit.

 Sealed rugged enclosure (IP67/69K) protects internal circuitry from harsh environments such as high shock, vibration, as well as moisture and contaminants



Part Number: Description

LFLX0006Z-01 Standard Unpopulated PDM & Cover for:

Up to 27 x Mini Fuses

Up to 9 x ISO280 Micro Relays 4 or 5 Pin\* Note:\*Pin 87a is not used on some relays.

Voltage: I2VDC (with I2V relays fitted) 24VDC (with 24V relays fitted)

Rating: Max Load 200A.

Power Input: Multiple sources via connector terminals.

Wire Sizes: 0.5mm<sup>2</sup> to 2.5mm<sup>2</sup>

Fuse Ratings: Max fuse ratings shown in circuit diagram.
Connectors (x4): Tyco HDSCS with AMP MCP terminals.

Base: Includes vent for pressure equalization.

Ingress Protection Rating: IP67/69K

Body Gasket: Silicone.

Body & Cover Material: Pet glass filled (UL94-V0)

Mounting: Surface Mount.

Custom Options: Please contact sales. Temperature Rating: -40 °C to +85 °C. Bolt Mounting Torque: 6 - 8 Nm

Notes: Connectors, fuses & relays are not included.



#### **Internal Circuit Summary**

#### Power input I supplies:

- 2 x SPST relays supply fuse protected power\*.
- I x Fuse protected output (relay by-pass).
- 15 Mini fuses.

#### Power input 2 supplies:

- 3 x SPST relays supply fuse protected power\*.
- 2 x Fuse protected outputs (relay by-pass).
- 5 Mini fuses.

#### Stand-alone circuits (independent power):

- I x SPST ISO280 Micro relay\*.
- 2 x SPDT ISO280 Micro relays\*.
- I x SPDT ISO280 Micro relay.
- 2 Mini fuses.

RELATED PRODUCTS:





OR Code: 9033



Mini Fuses, Mini Resistors, Mini Diodes, Mini Shunts & Mini Blade Circuit Breakers.



Micro ISO280 Relays, I2VDC or 24VDC.



 $<sup>{\</sup>rm *Relay\ coil\ is\ connected\ to\ the\ common\ ground\ stud}.$ 

#### TERMINAL BLOCKS DIN RAIL MOUNT

#### MORSETTITALIA

Part			Pack	
Number	Product Description	Conductor	Size	Colour
43408	Terminal block 24A, 1000V (Inputs / Out)	Flexible (0.5-2.5mm <sup>2</sup> ), Rigid (0.5-4m <sup>2</sup> )	1/100	Grey O
43409	Terminal block 32A, 1000V (Inputs / Out)	Flexible (0.5-4mm <sup>2</sup> ), Rigid (0.5-6m <sup>2</sup> )	1/100	Grey 🔘
43409BL	Terminal block 32A, 1000V (DC Control)	Flexible (0.5-4mm <sup>2</sup> ), Rigid (0.5-6m <sup>2</sup> )	1/100	Blue 🔵
43409E	Terminal block 32A, 1000V (Earth)	Flexible (0.5-4mm <sup>2</sup> ), Rigid (0.5-6m <sup>2</sup> )	1/100	Ylw / Gr 🕕
43401	Terminal block 41A, 1000V (Inputs / Out)	Flexible (0.5-6mm <sup>2</sup> ), Rigid (0.5-10m <sup>2</sup> )	1/50	Grey O
43525/24	Jumper (pitch 5.1 mm) 25A, 600V	Flexible (2.5mm²)	1/5	Orange 🛑
43520/24	Jumper (pitch 6.1 mm) 25A, 600V	Flexible (4mm²)	1/5	Yellow O
43621/24	Jumper (pitch 7.1 mm) 50A, 600V	Flexible (6mm²)	1/5	Green 🔵
43010	End plate (1.5mm wide), Suit Euro 2.5 - Eu	uro 4	1/100	Grey
43011	End plate (1.5mm wide), Suit Euro 6 - Euro	o 10	1/100	Grey 🔘
43444	End bracket (stop modules sliding on DIN	rail)	1/100	Grey O
43300	Marking tags. Printed numbers 1-10 (2 set	1/25	White O	
43310	Marking tags. Printed numbers 1-100 (1 se	1/5	White O	
43311	Marking tags. Printed numbers 101-200 (1	1/5	White $\bigcirc$	
43192	Marking tags. Blank stem. I stem = 20 Ma	rking Tags.	1/25	White $\bigcirc$

Connection: Slot screw terminals. Mounting: DIN Rail 35. End Plates: The blocks feature 1 x open and 1 x closed wall so only one End Plate is required to finish either a single module or multiple adjoining modules.

Jumpers: Jumpers can be used to share power from one input cable across multiple modules and are supplied in strips of 24. Ratchet jumper cutting tools also available contact sales.

**End Stop:** These modules feature a screw which tightens onto the DIN rail to stop modules sliding along the rail.

Accessories: Euro Omega DIN 35 Rails. Angled rail brackets. Protection covers. Test plugs. Complete range of marking tags. Colour Options: Blue, Yellow/Green, Yellow, Orange, Red, Green, Black. Brown and White.

Extended Range: Terminal blocks to suit 10mm<sup>2</sup>, 25mm<sup>2</sup>, 50mm<sup>2</sup>, 70mm<sup>2</sup>, 95mm<sup>2</sup> cable sizes are also available.

Notes: Contact sales for further information.

Approvals: (1) (1)







43525/24 - Insulated Jumper (2.5mm²) Note: Optional cutting tool P/N: 43515



43520/24 - Insulated Jumper (4mm²) Note: Optional cutting tool P/N: 43516

43621/24 - Insulated Jumper (6mm²)
Note: Can be seperated by hand, no tools required.

Note: Can be seperated by hand, no tools required.



43408 Terminal Block 2.5mm<sup>2</sup> 44 (L) x 36 (H) x 5mm (W) Connecting capacity: I 2mm (CC)



43409 Terminal Block 4mm<sup>2</sup> 44 (L) x 36 (H) x 6mm (W) Connecting capacity: 12mm (CC)



43401 Terminal Block 6mm² 50 (L) x 44 (H) x 7mm (W) Connecting capacity: 18mm (CC)



**43444 - End Bracket** 55 (L) x 34 (H) x 6mm (D)



**43010 - End Plate, Euro 2.5-4** 44 (L) x 35 (H) x 1.5mm (D)



**43011 - End Plate, Euro 6-10** 50 (L) x 43 (H) x 1.5mm (D)









Н

4358630

43509/12

43506/22

43300

43310

43311

43192

# BLADE FUSE TERMINAL BLOCKS DIN RAIL MOUNT



- Push in various circuit protection devices including auto blade fuses or bladed circuit breakers.
- Blocks can facilitate plug in modules. Module options include diodes, MOV's and cartridge fuses.
- Disconnector options include bladed plug or knife type for on / off switching of a circuit.
- Single or multiple pole terminal blocks with optional insulated and dividable jumper. • Termination options include screw terminals, screw-less spring terminals or hybrid terminals.
- Marking accessories are a available for both the blocks and cables.

Separator / End Plate (3.0mm wide) ^

Marking tags. Printed No. 1-10 (2 sets)

Marking tags. Printed No. 1-100 (1 set)

Marking tags. Printed No. 101-200 (I set)

Insulated lumper 12 Pole (Pitch 9, Imm) ^ 25A, 300V

Insulated lumper 22 Pole (Pitch 6, Imm) 25A, 600V

Marking tags. Blank stem. I stem = 20 Marking Tags.

• I 2V and 24V LED indication options.



 $\begin{tabular}{ll} \textbf{Mounting:} DIN Rail 35 & \textbf{Connection:} Screw standard. Optional cage clamp or hybrid connection. \\ \textbf{Cable:} 0.5 mm^2 to 4 mm^2 (\#24-I0AWG) \\ \end{tabular}$ 

Optional Components: Mini fuse module, non-fused terminal block modules and Euro Omega DIN 35 Rails. Jumpers: Jumpers can be used to share power from one input cable across multiple fuse modules and are supplied in strips of 12. They can be cut using the ratchet jumper cutting tool #43517. ^ One x 3.0mm or two x 1.5mm separator / end plates are required between each fuse module when using jumpers.

Fuse Modules: Feature I x open and I x closed wall so only I x end plate is required to finish either a single module or multiple modules. Fuse modules accept both auto blade fuses and auto blade circuit breakers. Cartridge fuses can be fitted by purchasing the appropriate fuse holder module which plugs directly into the fuse module. Fuse Holders: \*One x 1.5mm separator / end plate is required between each adjoining fuse module.

End Stop: These modules feature a screw which tightens onto the DIN rail to stop modules sliding along the rail.

**Blade Fuse / Breaker Modules** Wire fixing: 2 x screw connectors. Optional 12V / 24V LED indicator.



Disconnector (I) Plug type. Push in / pull out. (2) Knife type. Slidable.

1/50

1/12

1/22

1/25

1/5

1/5

1/25

55

11.9

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4.8 **NEW** 

4.8 **NEW** 

4.8 **NEW** 

4.8 **NEW** 





Connecting

Capacity

Separator / End Plates Separates terminal blocks. Completes a row. 1.5mm or 3.0mm width options.

**Plug In Component Modules** Cartridge Fuse Module. M205 or 3AG. Diode Modules. Contact sales. MOV / Surge Supply Module VI 30LA2.



Ratchet Tool - Cuts Plug In Jumpers P/N: 43517 cuts jumper 9.1mm pitch. P/N: 43516 cuts jumper 6.1mm pitch.



**End Stop** 

Fitted to each end of a row of terminal blocks. Stops modules sliding on DIN





### CARTRIDGE FUSE TERMINAL BLOCKS DIN RAIL MOUNT



Part Number	Description
43445H	M205 Fuse Block 4mm <sup>2</sup> 30A, 300V Max (CSA)*
43433H	3AG Fuse Block I 0mm <sup>2</sup> 30A, 600V Max (CSA)*
43444	End Bracket (stop modules sliding on DIN rail)
43300	Marking Tags. Printed No.1-10.   Stem = 20pcs
43310	Marking tags. Printed No. 1-100. 1 stem = 20pcs
43311	Marking tags. Printed No. 101-200. I stem = 20pcs
43192	Marking tags. Blank stem. I stem = 20 Marking Tags.
43097	Neutral Link Solid 5 x 20mm (M205 fuse size)
43099	Neutral Link Solid 6.35 x 31.75mm (3AG fuse size)

Mounting: DIN Rail 35

Connection: Slot screw terminals.

End Plates: Not required, enclosed holder.

End Stop: Optional

Accessories: Euro Omega DIN 35 Rails.

Extended Range: LED indicating versions also available.

Notes: Contact sales for further information.

Do not disconnect fuse under load. Fuses not included. Approvals:\*

# 43445H (15A / 300V), (30A / 300V), IEC (6.3A / 250V)

# 43433H (0) (30A / 600V), (30A / 600V), IEC (6.3A / 250V)

Conductor

Flexible (0.5-4mm<sup>2</sup>), Rigid (0.5-6mm<sup>2</sup>) Flexible (1.5-10mm<sup>2</sup>), Rigid (1.5-16mm<sup>2</sup>)



43445H - M205 Fused Terminal Block 66 (L) x 44 (H) x 10 (W)



43433H - 3AG Fused Terminal Block 82 (L) x 53 (H) x 10 (W) 3AG Fuses see p.11



# POWER DISTRIBUTION BLOCKS - FINGER SAFE 1000V

# FATON

**Bussmann** 

#### Features

Part

- Enclosed, safer installation; IP-20 finger-safe under specific conditions.
- High Short-Circuit Current Ratings up to 200,000A: PDBs do not have to be the weak link in achieving high SCCR for an industrial control panel.
- · Small footprint saves panel space.
- DIN rail or panel mount: \*PDBFS330 & \*PDBFS504 panel mount only.
- · Sliding DIN rail latch for easy mounting.
- DIN rail end anchors required to prevent damage to block when torqueing.
- Elongated hole for panel mounting; easier mounting with greater flexibility.
- Captive termination screws; screws do not get misplaced.
- Wire ready: captive termination screws shipped backed out to save time on conductor installations.
- Single pole or gang mountable for multiple pole applications with interlocking dovetail accessory (optional). Part 2A1279: Interlocking dovetail pin accessory, one pin interlocks two units, two pins to interlock three units.



mpere	Cont	gurati	on O	penings	Per Poi	е

Number	Rating	Line		Line Wire Range	Load		Load Wire Range
PDBFS204	175A		•	2/0 - 8AWG (70-10mm <sup>2</sup> )	I	•	2/0 - 8AWG (70-10mm <sup>2</sup> )
PDBFS220	175A		•	2/0 - 8AWG (70-10mm <sup>2</sup> )			4/0 - I4AWG (25-2.5mm <sup>2</sup> )
PDBFS303	310A		•	350kcmil - 6AWG (150-16mm²)	1		350kcmil - 6AWG (150-16mm <sup>2</sup> )
PDBFS330*	380A		•	500kcmil - 6AWG (240-16mm²)	6	:::	2 - I4AWG (35-2.5mm <sup>2</sup> )
PDBFS377	570A	2	10	300kcmil - 4AWG (150-12mm²)	12		4 - I4AWG (25-2.5mm²)
PDBFS500	620A	2	D	350kcmil - 4AWG (185-12mm²)	2	• •	350kcmil - 4AWG (185-12mm <sup>2</sup> )
PDBFS504*	760A	2	I.	500kcmil - 6AWG (240-16mm²)	2	• •	500kcmil - 6AWG (240-16mm <sup>2</sup> )

Voltage: 690VAC/DC (IEC), 600VAC/DC (UL 1953), 1000VDC (factory self certified to UL 1059 Pt.II).

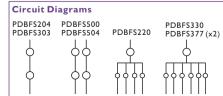
I.R.: Short-Circuit Current Ratings up to 200,000kA.

Body: UL 94VO.

Studs: Tin plated AL connectors suitable for CU conductors.

Dimensions and Pack Size: Please contact sales.

Approvals: ⊕ **(** EC (€





### **SCREW DOUBLE ROW TERMINAL BLOCKS**



#### Features

- Allows fully insulated independent terminal blocks for applications where circuits must be isolated.
- Closed back design completely insulates power from the mounting surface.
- Each screw pair is one isolated circuit. Barriers separate all circuits.
- Terminal block jumpers allow creation of common circuits.

Part		Amp*			Dimensi	ons in MN
Number	Poles	Rating	Voltage	Diagram	Α	В
TB200-04B	4	30	300V	T	63.8	55.4
TB200-06B	6	30	300V	I	85.9	77.8
TB200-08B	8	30	300V	1	108.0	99.9
TB200-10B	10	30	300V	I	130.4	122.3
TB200-12B	12	30	300V	1	152.4	144.2
TB300-04B	4	30	600V	2	82.6	71.4
TB300-06B	6	30	600V	2	111.1	100.2
TB300-08B	8	30	600V	2	139.8	128.6
TB300-10B	10	30	600V	2	168.3	157.3
TB300-12B	12	30	600V	2	197.0	185.8



Wire Range: #12 - 22 AWG CU (TB200 series)

# 8 - 22 AWG CU (TB300 series)

Screw Size: #6-32 Philslot screws (TB200 series) #8-32 Philslot screws (TB300 series)

(see other screw options below)
Operating Temperature: -40°C to 130°C
Base: UL rated 94V0 thermoplastic (black)
Breakdown Voltage: 4800V (TB200 series)
7500V (TB300 series)

Terminal: Tin plated brass.

Screws: Nickel plated brass (Philslot) screws included.

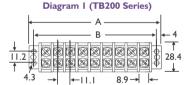
Pack Size: Varies, please contact sales.

**Note:** \*Maximum rating, some options may be rated lower,

please contact sales.

Approvals: (1) (E) IEC







# 

#### Jumper Options for TB200 / TB300

TB200	TB300	
20A Jumpers	30A Jumpers	Description
J201-J	J301-J	Flat slip on
OJ7-J	OJ6-J	Closed over barrier

Note: Jumpers allow creation of common circuits.



Flat Slip On



**Closed Over Barrier** 



# STUD JUNCTION TERMINAL BLOCKS #10-32

# **EAT•N** Bussmann

Part	Nbr. of	Dimen	sions in N	MM
Number	<b>Positions</b>	<u>A</u>	<u>B</u>	<u>C</u>
C5237-1	1	50.8	31.7	-
C5237-2	2	66.7	47.5	15.9
C5237-3	3	82.5	63.4	31.7
C5237-4	4	98.4	79.4	47.5
C5237-6	6	130.8	111.1	79.4
C5237-8	8	161.9	142.9	111.11
C5237-10	10	193.7	174.6	142.9
C5237-12	12	225.4	206.4	174.6



**Rating & Voltage:** 30A at 600V (CSA) 30A at 300V (UL)

**Body:** Black Thermoplastic

**Studs:** Yellow zinc plated brass. #10-32 threaded studs on 0.625" (15.9mm) centers. Studs feature a "dog point" to guide nut onto thread.

Torque Rating: 2.8Nm max.

Mounting Holes: 9/32" x 3/8" Slot. (7.14mm x 9.52mm)

Hardware: Nuts & washers included.

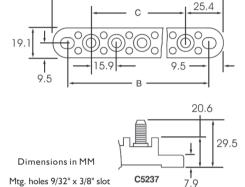
Pack Size: Please call sales. Temperature Rating: 120°C

Features: Numbers & arrows molded on top of barriers

to indicate terminals.

Notes: Extended range also available contact sales.

Approvals: (1) (E



# STUD JUNCTION TERMINAL BLOCKS #10-24



Part	Nbr. of	Dimer	sions in	MM
Number	<b>Positions</b>	A	<u>B</u>	C
C4559-2	2	76.2	57.I	19.0
C4559-3	3	95.2	76.2	36.I
C4559-4	4	114.3	95.2	57.I
C4559-5	5	133.3	114.3	76.2
C4559-6	6	152.4	133.3	95.2
C4559-8	8	190.5	171.4	133.3
C4559-10	10	228.6	209.5	171.4
C4559-12	12	266.7	247.6	209.5

Rating & Voltage: 30A at 600V Body: Black Thermoplastic

Studs: Zinc plated steel. #10-24 threaded studs on 0.75" (19mm) centers. Studs feature a "dog point" to guide nut onto thread.

Torque Rating: 2.7Nm max.

Mounting Holes: 9/32" x 3/8" Slot. (7.14mm x 9.52mm)

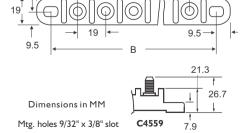
Pack Size: Please call sales.

Options: Nuts & washers included. Temperature Rating: 120°C

Features: Numbers & arrows molded on top of barriers

to indicate terminals.

Approvals: (1) (6)



С



C4559 # 10-24 Stud

28.5

# EAT•N Bussmann

Heavy-duty ground or power connection points in AC or DC circuits. Ideal for creating a centralized power distribution or grounding point.



C1933 1/2"-13 Stud



C1933R 1/2"-13 Stud



C1933-6B 3/8"-16 Stud



C1933-6R 3/8"-16 Stud



IB3816-2 3/8"-16 Stud



IB3816-3 3/8"-16 Stud



IB51618-2 5/16"-18 Stud



IB51618-3 5/16"-18 Stud

Part	Body	Amp	Thread	Stud	Stud Dimensions in MM									
Number	Colour	Rating	Size M	Material	<b>Plating</b>	Dia.	Α	В	C	D	E	F	H	K
C1933	Black	400A	1/2"-13	Brass	Zinc	1	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
C1933R	Red	400A	1/2"-13	Brass	Zinc	1	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
C1933-6B	Black	250A	3/8"-16	Brass	Zinc	- 1	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
C1933-6R	Red	250A	3/8"-16	Brass	Zinc	I	69.8	36.6	31.7	38.I	28.6	9.5	4.8	50.8
JB3816-2	Black	250A	3/8"-16	Steel	Zinc	2	54.0	24.9	15.9	22.2	17.5	7.9	1.6	34.9
JB3816-3	Red	250A	3/8"-16	Steel	Zinc	2	54.0	24.9	15.9	22.2	17.5	7.9	1.6	34.9
JB51618-2*	Black	250A	5/16"-18	Stainless	N/A	2	54.0	24.9	22.0	22.2	17.5	8.0	1.6	34.9
JB51618-3*	Red	250A	5/16"-18	Stainless	N/A	2	54.0	24.9	22.0	22.2	17.5	8.0	1.6	34.9

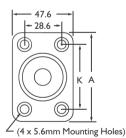


Diagram I



(2 x 5.6mm Mounting Holes)

M (thread size) В +E→

Diagram 2

Voltage: AC / DC

**Body:** Thermoplastic (\*Glass Filled Nylon)

Mounting Torque Rating: 5.4Nm max.

Hardware: Hex nut & spring washer supplied in bulk. Also available without hardware.

Pack Size: 1, 10, 50, 100

Notes: \*|B51618-x rated 250A at 12VDC, 48VDC max.



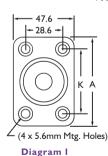
# STUD TYPE JUNCTION BLOCKS - FEED THROUGH

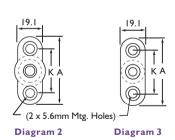


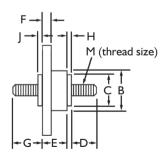
Feed-Through blocks are designed to be used on a firewall or panel.



Part	Body	Amp	Thread	Stud	Stud				Dim	ension	s in M	Μ				
Number	Colour		Size M			Dia.	Α	В	С	D	E	F	G	Н	1	K
C1925B	Black	400A	1/2"-13	Brass	Zinc	T	69.8	38. I	31.7	31.7				4.8	4.8	
C1925	Red	400A	1/2"-13	Brass	Zinc	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-1B	Black	400A	1/2"-13	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-1	Red	400A	1/2"-13	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-2B	Black	250A	3/8"-16	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1925-2	Red	250A	3/8"-16	Brass	Tin	1	69.8	38. I	31.7	31.7	28.6	9.5	28.6	4.8	4.8	50.8
C1938-1	Black	200A	5/16-18	Brass	Tin	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C1938-1R	Red	200A	5/16-18	Brass	Tin	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C1938	Black	250A	3/8"-16	Brass	Zinc	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C1938R	Red	250A	3/8"-16	Brass	Zinc	2	52.4	23.8	17.5	22.2	17.5	7.9	23.8	1.6	1.6	33.3
C2791	Black	100A	1/4"-20	Brass	Zinc	3	52.4	17.5	11.2	15.9	17.5	7.9	17.5	1.6	1.6	33.3
C2791-R	Red	100A	1/4"-20	Brass	Zinc	3	52.4	17.5	11.2	15.9	17.5	7.9	17.5	1.6	1.6	33.3







Voltage: AC / DC Body: Thermoplastic

Studs: Brass

Mounting Torque Rating: 5.4Nm max.

Hardware: Hex nut & spring washer supplied in bulk. Also available without hardware.

Pack Size: 1, 10, 50, 100





Bussmann



GB3000-1R

Designed to meet multiple power / ground requirements, the GB3000 provides 3 pass-thru M6 studs for easy cable attachment in both the cabin and engine compartment of your vehicle. These blocks provide robust connections, eliminates the need to stack cables and reduces associated warranty claims based on affiliated problems. The GB3000 also provides power distribution suitable for many feed thru applications in marine, construction, agriculture, bus, military, RV and specialty vehicles.

The GB3000 series block includes 2 bus bars (removable) to create a common single circuit across the 3 feed thru studs. The GB3001 series block does not include the 2 bus bars, provides power or ground feed thru for 3 individual circuits, one for each stud.

Part	Block	Current	Body
Number	Description	Rating	Colour
GB3000-1R	Single Circuit Feed Thru	200A Max Total	Red
GB3000-1B	Single Circuit Feed Thru	200A Max Total	Black
GB3001-1R	3 Circuit Feed Thru	60A Max Per Stud	Red
GB3001-1B	3 Circuit Feed Thru	60A Max Per Stud	Black



Temperature Rating: -40°C to 85°C

Hardware: M6 nuts included.

Torque: M6 stud & mounting 5.6Nm max. Current Carrying Studs: Zinc-plated brass.

Mounting Studs: Stainless steel.

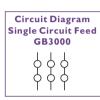
Housing: Black UL rated 94V0 thermoplastic.

Cover Colours: Black or red.

Cover Material: Santoprene cover rated 94V0 for protection from accidental shorts.

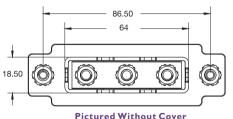
Gasket: Included for ingress protection. Black santoprene gasket rated 94V0.

Approvals: RoHS

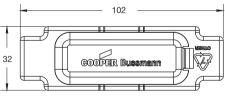




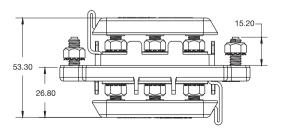


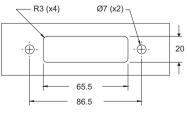






Dimensions in MM





Panel Cutout



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# **HEAVY DUTY BATTERY FEEDER STUDS 3/8"**



These battery feed studs are designed to bring power through fire walls and bulk heads.

#### **Features**

- Easy to install for quick distribution of power.
- Impact resistant threaded mount bushing.
- Self locking mounting nut.
- Suits panel up to 9mm thick.
- Colour coordinated to serve as easy-to-identify power points.

Part Number Description

46211-R 3/8"-16 Feeder Stud Red Body 46211-01 3/8"-16 Feeder Stud Black Body Hex Nut



Voltage: 6VDC to 36VDC

**Current Ratings:** 

- Up to 250A (continuous) at  $50 mm^2$  cable.

- Up to 600A for up to 20 seconds ON (10 minutes OFF).

**Temperature Rise:** (up to 400A at 24V) from  $55.6^{\circ}$ C to  $67^{\circ}$ C using 0 AWG cable.

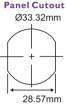
Stud: Brass.

Terminal Size: 3/8"-16, 5/8" (15.9mm) long. Hardware: 2 x Lock washer and 2 x brass hex nut.

Plastic Insulator: PBT Valox 420 SEO. Flammability Rating: V0-V2 UL94.

Bushing Size: 32.1 mm diameter, 15.9 mm length.

**Body Diameter:** 36mm **Overall Dimensions:** 40 D x 40 W x 52 H(mm)



**¼** Littelfuse°

# **HEAVY DUTY BATTERY JUMPER STUDS 3/8"**

A battery jumper studs allow direct connection to the battery at more easily accessible locations inside or outside the vehicle.

#### **Features**

- $\bullet$  Easy to install for quick distribution of power.
- · Impact resistant threaded mount bushing.
- Self locking mounting nut.
- Suits panel up to 9mm thick.
- Colour coordinated to serve as easy-to-identify power points.

Part Number Description

46210-02 3/8"-16 Jumper Post, Red Band & I x Red Cap 46210-03 3/8"-16 Jumper Post, Black Band & I x Black Cap

Voltage: 6VDC to 48VDC

Current Rating: 285A (continuous) at 120mm<sup>2</sup> cable, with temperature rise 25°C above ambient.

Stud: Brass

Stud Size: 3/8"-16 dia, (14.5mm) long.

Terminal Size: 13/16" (20.6mm)dia., 1-1/8" (29.9mm) long.

Contact Post: 20.6mm diameter, 28.8mm length. Grooved double nut accepts standard jumper cables.

Body: Nylon 66

Hardware: I x Lock washer and I x brass hex nut.

I x Brass double nut.





**Body Diameter:** 36mm **Overall Dimensions:** 40 D x 40 W x 67 H (mm)





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# LIGHT DUTY BATTERY FEEDER STUDS 1/4"

Flange Nut

MIL-STD

3/8"-16 Stud Pass Thru

IP67 Seal Nut Mounting Nut

Double Nut

#### **Features**

- Small and light application through a firewall or bulkhead.
- High rating in a small package Military Grade.
- High torque rating due to patented material combination.

Part Number	Stud	<u>Hardware</u>	Colour
PTR-14D-05	1/4"-28	Serrated Flange Nuts	Red
PTB-14D-05	1/4"-28	Serrated Flange Nuts	Black
OR-022	-	O-Ring Seal	Black
		· ·	

Voltage: 58VDC Rating: 400A (0 AWG or larger wire). Grade: Commercial & Military

Torque Rating: Body-Locknut 10 foot lbs.

Materials: Body-Nylon 66, Conductive-Core-Copper.

Studs: Stainless Steel.

Mounting Locknut: 1.25" Nylon 66. Option: Steel. Hardware: 2 x Serrated Flange Nut-Zinc Plated Steel.

O-Ring Material: Silicon Size: AS568-022

O-Ring Seal Dimensions: Cross Section: 1.59mm Internal Dia. 25.4mm, Outside Dia. 28.58mm.

Note: No Caps. RoHS



Panel Cutout Ø 22 1mm



MIL-STD 1/4"-28 Stud Pass Thru Mounting Nut Serrated

Overall Dimensions: 58 H x 36 W x 32 D (mm)

# **HEAVY DUTY BATTERY FEEDER STUDS 3/8"**

- Military grade, power feed for applications through a firewall or bulkhead.
- Higher electrical rating and lower resistance due to a larger cross sectional area and the utilization of a higher conductive material.
- Increased installation torque values GEP's unique manufacturing.

Part Number	Stud	<u>Hardware</u>	Mtg Nut	Caps	Colour
PTR-38A-01	3/8"-16	Double Nuts SS	Stainless	Yes	Red
PTB-38A-01	3/8"-16	Double Nuts SS	Stainless	Yes	Black
PTR-38A-02	3/8"-16	Double Nuts SS	Nylon	Yes	Red
PTB-38A-02	3/8"-16	Double Nuts SS	Nylon	Yes	Black
PTR-38A-05	3/8"-16	Flange Nuts SS	Nylon	No	Red
PTB-38A-05	3/8"-16	Flange Nuts SS	Nylon	No	Black
C14-1003	N/A	Seal O-ring Blk	Nylon	-	Black
SC10-2000A-B008	N/A	Seal Nut Red	Nylon	-	Red
SC10-2000A-B001	N/A	Seal Nut Blk	Nylon	-	Black

Voltage: 58VDC

Rating: 400A (2/0 or larger wire).

Torque Rating: Body-Locknut 10 foot lbs.

Body: Nylon 66,

Conductive Core: 110 Copper. Studs: Stainless Steel (SS).

Grade: Commercial & Military.

Mounting Nut & Hardware: See above.

Options: Custom configuration, contact sales.

# **Panel Cutout** O-Ring Seal Ø 38.2 38.2 33.8 28.7

O-Ring Seal







#### **RELATED PRODUCTS:**

















QR Code: 9053



# **HEAVY DUTY BATTERY FEEDER STUDS 1/2"**

#### Features:

- Military grade, heavy duty power feed for applications through firewalls or bulkhead.
- Higher electrical rating and lower resistance due to a larger cross sectional area and the utilization of a higher conductive material.
- Increased installation torque values resulting from our unique manufacturing design and stud material choice.

Part Number	Description
PTR-12B-02	1/2"-13 Stud, Red Body & 2 x Red Caps
PTB-12B-02	I/2"-13 Stud, Black Body & 2 x Black Caps ■
C14-1003	Pass Thru Seal Black

Voltage: 58VDC Rating: 500A (4/0 or larger wire)

Grade: Commercial & Military

Torque Rating: Retaining nut-40 foot lbs. Locknut-10 foot lbs.

Conductive Core: Copper. Studs: Stainless Steel. Body: Nylon 66. Caps: PVC Mounting Locknut: 1.5" Nylon 66. Hardware: 2 x 1/2"-13 Double Nuts Zinc Plated Steel. Options: Steel Locknuts & Serrated Flange Nuts. Approvals: RoHS O-Ring Seal Ø 38.2



Panel Cutout Ø 33.4

28 7

Dimension in MM



Ø 48.3mm

45.8mm





Stud Cap

Double Nut

**Overall Dimensions:** 86 H x 57 W x 44 D (mm)

# **MAXIMUM DUTY BATTERY FEEDER STUDS 1/2"**

#### Features:

- Commercial grade maximum duty power feed for high current applications through firewalls or bulkhead.
- Higher electrical rating and lower resistance due to a larger cross sectional area and the utilization of a higher conductive material.
- Increased installation torque values resulting from our unique manufacturing design and stud material choice.

Part Number	Description
PTR-12C-01	1/2"-13 Stud, Red Body & 2 x Red Caps
PTB-12C-01	I/2"-13 Stud, Black Body & 2 x Black Caps ■
	Rating: 1000A (500 MCM wire)
Grade: Comm	ercial
Torque Rating	g: Locknut-10 foot lbs.
Conductive Co	re: 110 Copper.
Studs: Stainless	Steel.
Body: Nylon 66	Caps: PVC





PTB-12C-01



**Overall Dimensions:** 92 H x 93 W x 63 D (mm)



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### STUD TYPE JUNCTION BLOCKS



Dimensions in MM

Heavy-duty ground or power connection points for DC circuits. Compact profile with insulated base. Ideal for creating a centralized power distribution or grounding point.

#### Single Stud JBS

Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBSM6B	Black	M6	30	100A
JBSM6R	Red	M6	30	100A
JBSM8B	Black	M8	3 I	200A
JBSM8R	Red	M8	3 I	200A
JBSM10B	Black	MI0	34	300A
JBSM10R	Red	MI0	34	300A

Voltage: 48VDC max.

Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).



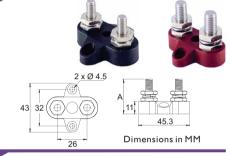
#### **Dual Stud JBD**

Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBDM6B	Black	2 x M6	30	100A
JBDM6R	Red	2 x M6	30	100A
JBDM8B	Black	2 x M8	31	200A
JBDM8R	Red	2 x M8	31	200A

Voltage: 48VDC max.

Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).



#### **Dual Stud With 80A Busbar Link JBDB**

Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBDBM6B	Black	2 x M6	30	100A
JBDBM6R	Red	2 x M6	30	100A
JBDBM8B	Black	2 x M8	31	200A
JBDBM8R	Red	2 x M8	3 I	200A

Voltage: 48VDC max. Link Rating: 80A max.

Link Material: Nickel plated brass. Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).

# Feature Includes busbar removable link.

Dimensions in MM

26

Feature 
Includes stud barrier.

# **Dual Stud With Stud Barrier JBDPM**

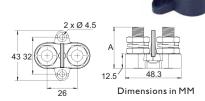
Part	Body	Thread	Height	Stud Amp
Number	Colour	Size	A (mm)	Rating
JBDPM8B	Black	2 x M8	32.5 ´	100A
JBDPM10B	Black	2 x M I 0	35.5	200A
IRDPMRIOR	Black	$I \vee M8 + I \vee MI0$	35.5	3004

Voltage: 48VDC max.

Body: Nylon, glass fibre reinforced.

Studs & Hardware: Stainless steel (included).

**Notes:** Provides a termination point for extending the length of harnesses or other conductors. Use dual entry cable insulators to protect from accidental short circuits.





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### **COMMON BUSBARS WITH COVER & LABELS**



- Heavy-duty busbars for ground or power connection points for DC circuits.
- Ideal for creating a centralized power distribution or grounding point.
- Compact profile with insulated base.
- All common busbars include sticker set and mounting hardware.

# DC GROUND Mounting

12 Way

Hardware

Sticker Set

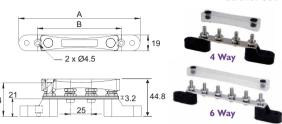
#### Single Row Busbar With M6 Studs

Busbar	Dimensio	ons in MM
Studs	Α	<u>B</u>
4 x M6	146	101
6 x M6	206	161
	Studs 4 x M6	<u>Studs</u> <u>A</u> 4 x M6 I46

Voltage: 48VDC max. Rating: 100A Body: Nylon, glass fibre reinforced. Bus Material: Brass

Studs & Hardware: Stainless steel (inc).

Cover: Transparent (included).



#### Single Row Busbar With M6 Studs & M4 Screws

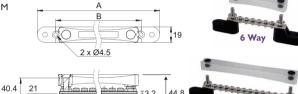
Part	Busbar	Dimensi	ons in MM
Number	Screws	A	<u>B</u>
BB6M4	6 x M4	146	101
BB12M4	12 x M4	206	161

Voltage: 48VDC max. Rating: 150A Body: Nylon, glass fibre reinforced. Bus Material: Copper, Tin plated.

Studs: 2 x M6 (1/4")

Studs & Hardware: Stainless steel (inc).

Cover: Transparent (included).



# Dual Row Busbar With M6 Studs & M4 Screws

Part	Bus	Busbar	Dimensio	ns in MM
Number	Bar	Screws	A	В
BBD6M4	Dual	2 x 6 x M4	118	107
BBD12M4	Dual	2 x 12 x M4	178	167

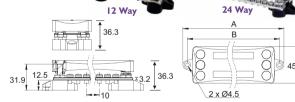
Voltage: 48VDC max. Rating: 150A Body: Nylon, glass fibre reinforced. Bus Material: Copper, Tin plated.

Studs: 4 x M6 (1/4")

Studs & Hardware: Stainless steel (inc). Cover: Transparent (included).

Features: Removable connecting link to

seperate or join the 2 bus bars.



#### Dual Row Bushar Stepped With M6 Studs & M4 Screws

Part	Bus	Busbar	Dimensi	ons in	MM
Number	Bar	Screws	Α	<u>B</u>	
BBD6M4S	Dual	$2 \times 6 \times M4$	94	75	
BBD12M4S	Dual	2 x 12 x M4	154	135	

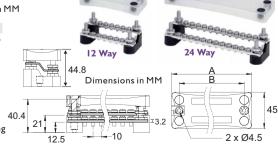
Voltage: 48VDC max. Rating: 150A Body: Nylon, glass fibre reinforced. Bus Material: Copper, Tin plated.

Studs: 4 x M6 (1/4")

Studs & Hardware: Stainless steel (inc).

Cover: Transparent (included).

Features: Stepped design, removable connecting 'Z' link to seperate or join the 2 bus bars.





# **COMMON BUSBAR MAXIBUS 5/16" STUDS**

# **Littelfuse**

#### Features:

- · Heavy duty busbar terminal block.
- Insert-molded stainless steel studs.
- One-piece serrated flange nuts ensure correct and secure connection.

Rating: 250A

Voltage: 300VAC / 48VDC

Body: Black

Bus Material: Tin plated copper. Studs: 5/16"-18 (M8) Stainless steel.

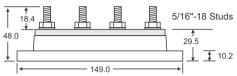
Recommended Terminals: 5/16" or M8 ring.

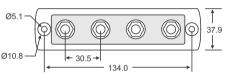
Hardware: Serrated flange nuts SS.

Mounting Holes: 5mm Pack Size: 1, 10, 50, 100

> Clearance for #10 or M5 Mounting Hardware







Dimensionsin MM

### **COMMON BUSBAR POWERBUS 3/8" STUDS**

#### Features:

- Compact heavy duty busbar terminal block.
- Insert-molded stainless steel studs.
- One-piece serrated flange nuts ensure correct and secure connection.

Part Number Busbar Studs 880097 2 x 3/8"-16

Rating: 600A Voltage: 48V

Body: Glass reinforced polycarbonate

Bus Link: Tin plated copper.

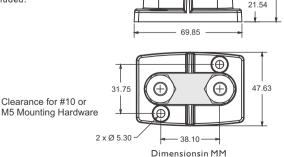
Studs: 3/8"-16 (M10) Stainless steel. Mounting Holes: #10 or M5 screws

Hardware: Stainless steel nuts & washers included.

Pack Size: 1, 10, 50, 100



41.28





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2 x 3/8"-16 UNC Studs

# **BATTERY TERMINALS DIE CAST**

These terminals are designed for connecting a cable to a standard DIN post type battery. Available in both positive and negative versions. Optional cover fits the positive terminals.



Part			"A"
Number	Polarity & Symbol	Description	Dimension
1506270	Positive (+)	Saddle Terminal	25 to 50mm <sup>2</sup>
1506280	Negative (-)	Saddle Terminal	25 to 50mm <sup>2</sup>
1506120	Positive (+)	Stud Terminal	M10 Stud
1506130	Negative (-)	Stud Terminal	M8 Stud



**Saddle Terminal** 

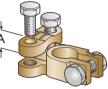
Rear View

Saddle Terminal Top View









# **BATTERY TERMINALS STRIP TYPE**

These terminals are designed for connecting a cable to a standard DIN post type battery. Available in both positive and negative versions. Optional cover fits the positive terminals.

Part		Description	
Number	<b>Polarity</b>	& Colour	Cable Size
1506656	Negative	Terminal	10 to 20mm <sup>2</sup>
1506666	Negative	Terminal	25 to 40mm <sup>2</sup>
1506721	Positive	Terminal	10 to 20mm <sup>2</sup>
1506731	Positive	Terminal	25 to 40mm <sup>2</sup>
4410480	Positive	Cover	-

Terminal: Brass tin plated

Terminal Hardware: Steel zinc plated (M6) Terminal Temperature Rating: -40°C to 120°C

Cover Material: PP Pack Size: 1.10



**Positive Terminal Cover** 4410480





**Negative Terminal** (Black Band)



**Positive Terminal** (Red Band)

### BATTERY TERMINAL DISTRIBUTION QUICK LOCK - 3 WAY

These double ring terminals are designed for quick hand release battery terminal disconnection. Available in two versions, stud only and stud + crimp combination.

Part Number Polarity & Symbol 3 Connection Options 1507956 M6 stud, M6 stud, Cable 25 to 40mm<sup>2</sup> Negative (-)

Terminal: Brass tin plated

Terminal Hardware: Steel zinc plated (M6)

Pack Size: 1.10



2x Stud & Ix Crimp



# **BATTERY TERMINAL DISTRIBUTION UNIT - 3 WAY**

- Battery Distribution Units (BDU) for Positive or Negative battery terminal.
- Simple connection to battery top post terminal.
- Double ring battery terminal connection. Positive I 9mm / Negative I 7mm.
- Two M6 studs and one M8 stud on the unit. Kit version includes terminals.
- Optional clip-on red colour protection cover, labelled with (+) symbol.

Part Number Kit Contents

1507701K 3 Way Positive includes 3 x terminals & red cover.

1507701, 4510503, 2 x 1606770, 1606785

1507704K 3 Way Negative includes 3 x terminals (No cover).

1507704, 2 x 1606770, 1606785

Part Number	Individual component ordering
1507701	3 Way Positive battery distribution unit. (+)
4510503	Red Clip-on housing. Suit Positive BDU only. (+
1507704	3 Way Negative battery distribution unit. (-)
1606770	M6 Scrow 90 dograp terminal 10, 20mm <sup>2</sup>

1606785 M8 Screw 90 degree terminal 25-40mm<sup>2</sup>.



**BDU** with Terminals Fitted



(-) BDU Kit 1507704K





**Red Clip-on Housing** 

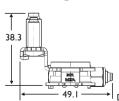
82.6 55.3 42.7

**Terminal 1606770** M6 hole 10-20mm<sup>2</sup>

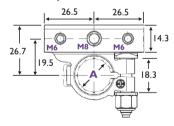


**Terminal 1606785** M8 hole 25-40mm<sup>2</sup>





**Battery Distribution Unit** 



- (+) Positive Terminal 'A' = 19mm (-) Negative Terminal 'A' = 17mm
  - 36.0 **M8** 20.0

Dimensions in MM



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# RELAY + SWITCH

# Relays, Switches, Breaker Panels & Tools

# Designed for the application.





		Contact	Ampere	Rating			
Part Number	Voltage	Action	N/O	N/C	Terminals	Protection	Bracket
3031AHCR112	I2V	SPST	20A	-	4 x 2.8mm	½W I.IKΩ resistor	No
3031AHCR124	24V	SPST	IOA	_	4 x 2 8mm	1/2W 4 3KO resistor	Nο

Contact Rating (Motor /Lamp) N/O: 16A (14VDC), In-rush 80A

Coil Current: 80mA (12V), 40mA (24V)
Coil Resistance: 150Ω (12V), 600Ω (24V)
Contact Voltage Drop: Typ. 50mV at 10A
Contact Material: Silver Tin Oxide alloy (AgSno)
Operate / Release Time: 10ms max. / 10ms max.

Enclosure: flux tight seal.

Temperature: -40 to + 125°C (no freezing)

Mechanical Life Expectancy: 10 million operations.

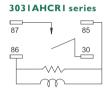
Pack Size: Ipc, 10pcs, 100pcs, 500pcs.

Options: Sealed washable enclosure. Diode protection.

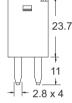
Suits Power Distribution Modules: Pages 120 - 128, 138-144.

Approval: ELV-2000/53/EC RoHS

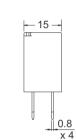
#### 







16



### MICRO 280 RELAYS - 301 SERIES



		Contact	Ampere	Kating			
Part Number	Voltage	Action	N/O	N/C	Terminals	Protection	<u>Bracket</u>
3011ACR112	I2V	SPST	35A	-	4 x 2.8mm	½W 680Ω resistor	No
3011CCR112	I2V	SPDT	35A	20A	5 x 2.8mm	⅓W 680Ω resistor	No
3011ACR124	24V	SPST	I5A	-	4 x 2.8mm	½W 2700Ω resistor	No
3011CCR124	24V	SPDT	I5A	I0A	5 x 2.8mm	⅓W 2700Ω resistor	No

Coil Current: 97.5mA (12V), 49.6mA (24V)

Coil Resistance: 123Ω (12V), 483Ω (24V)

Contact Voltage Drop: Typ. 40mV at 10A

Contact Material: Silver Tin Oxide alloy (AgSno)

Operate / Release Time: 10ms max. / 10ms max.

Enclosure: flux tight seal.

**Temperature:** -40 to + I 25°C (no freezing)

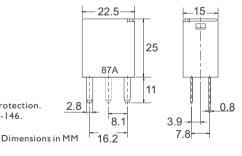
Mechanical Life Expectancy: 10 million operations.

Pack Size: Ipc, 10pcs, 100pcs, 500pcs.

Options: Sealed washable / Dust cover enclosure. Diode protection.

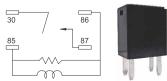
Suits Power Distribution Modules: Pages 120 - 135, 138-146.

Approval: ELV-200/53/EC RoHS

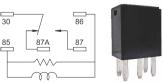


#### 

#### 3011ACRI series



#### 3011CCRI series





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### MINI 280 RELAYS - 898 SERIES



		Contact	Ampere	rating				
Part Number	<b>Voltage</b>	Action	N/O	N/C	<u>Terminals</u>	Protection	Bracket	Enclosure
898HIAHCRI24	24V	SPST	20A	-	4 x 2.8mm	½W 2700Ω resistor	No	Flux Tight
898H1CHCR124	24V	SPDT	20A	I5A	5 x 2.8mm	½W 2700Ω resistor	No	Flux Tight

Note: This product has been discontinued. There is no alternative available at this stage. Please contact sales for the most current update.

25.8 25.8 7 8 25.0 87A 8. 11.0 Discontinued 2.8 0.8

Terminal Size

□ 2.8mm

898HIAHCRI24 Series





Dimensions in MM

#### 898HICHCRI24 Series





# STANDARD FLASHER RELAYS

FAT-N Bussmann

These flashers work with standard bulbs and rely on electronic circuitry (not heat) to operate ensuring excellent performance in extreme climates. Flashes at twice the normal speed to indicate lamp outage, and features an audible click when engaged.

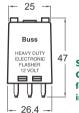
NO.761



Part Number Number Flasher Type Terminals **Electrical Rating** of Bulbs NO.761 H-D Electronic 3 x 2.8mm 12.6A at I2VDC 2 to 4 NO 762 H-D Electronic 4 x 2.8mm 12.6A at 12VDC 3 to 6

> Terminal Size

Dimensions in MM



Scan this **OR Code** for more information



QR Code: 9024

Bussmann

# **LED FLASHER RELAYS**

The LED flashers should always be used with LED turn signals because they require less current. Using traditional thermal / mechanical flashers for LEDs will cause erratic operation by flashing too fast or too slow.

Part Number Number **Terminals Electrical Rating** of Bulbs NO-727-LED 5 x 6.3 mm 12.6A at 12.8VDC 2 to 4 NO-758-LED 3 x 6.3mm 12.6A at 12.8VDC 2 to 6 NO-759-LED 3 x 6.3 mm 12.6A at 12.8VDC 2 to 6 NO-760-LED 3 x 6.3 mm 12.6A at 12.8VDC 2 to 4 4 x 2.8mm NO-762-LED 12.6A at 12.8VDC 2 to 6

> **Terminal Sizes**  ☐ Various Types

NO-758 (6.3mm Pins)





FAT-N



Scan this QR Code for more information



QR Code: 9023



#### MICRO ISO RELAYS 871 SERIES



		Contact	Ampere	Kating				
Part Number	Volt	Action	N/O	N/C	<u>Terminals</u>	Protection	Bracket	Enclosure
8711ACR112	12V	SPST	35A	-	2x 4.8mm, 2x 6.3mm	½W 680Ω resistor	No	Flux Tight
8711CCR112	12V	SPDT	35A	20A	3x 4.8mm, 2x 6.3mm	½W 680Ω resistor	No	Flux Tight
8711ACR124	24V	SPST	I5A	-	2x 4.8mm, 2x 6.3mm	½W 2700Ω resistor	No	Flux Tight
8711CCR124	24V	SPDT	I5A	I0A	3x 4.8mm, 2x 6.3mm	½W 2700Ω resistor	No	Flux Tight

Coil Current: 97.5 mA (12V), 49.6 mA (24V) Coil Resistance:  $123\Omega$  (12V),  $483\Omega$  (24V) Contact Voltage Drop: Typ. 40 mV at 10 AContact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 10 ms max. / 10 ms max.

Enclosure: Flux tight.

Temperature: -40 to + I 25°C (no freezing)

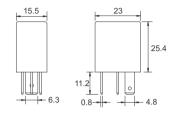
Mechanical Life Expectancy: 10 million operations.

Pack Size: Ipc, 10pcs, 100pcs, 500pcs.

Options: Sealed Washable / Dust cover enclosure.
Diode protection. RoHS

Approval: ELV-2000/53/EC

Suits Holders & Blocks: Pages 137-138, 170.



Dimensions in MM

# Terminal Sizes

4.8mm 6.3mm (1/4")



Contact Ampore Rating







### **MINI ISO RELAYS 896H SERIES**



		Contact	Amperer	varing				
Part Number	Volt	Action	N/O	N/C	<u>Terminals</u>	Protection	<u>Bracket</u>	Enclosure
896HIAHCRII2	12V	SPST	50A	-	4 x 6.3 mm	⅓W 680Ω resistor	No	Flux Tight
896HICHCRII2	12V	SPDT	50A	30A	$5 \times 6.3$ mm	⅓W 680Ω resistor	No	Flux Tight
896H2AHCR112	12V	DPST	2 x 30A	_	5 x 6.3 mm	½W 680Ω resistor	No	Flux Tight
896H1AHCR124	24V	SPST	20A	-	4 x 6.3mm	½W 2700Ω resistor	No	Flux Tight
896HICHCRI24	24V	SPDT	20A	I5A	5 x 6.3mm	½W 2700Ω resistor	No	Flux Tight
896H2AHCR124	24V	DPST	$2 \times 10A$	-	$5 \times 6.3$ mm	½W 2700Ω resistor	No	Flux Tight NEW

Coil Current: 133mA (12V), 66.7mA (24V) Coil Resistance:  $90\Omega$  (12V),  $360\Omega$  (24V) Contact Voltage Drop: 7p, 50mV at 10A

Contact Voltage Drop. 1yp. 30mV at 10a Contact Material: Silver Tin Oxide alloy (AgSno) Operate / Release Time: 20ms max. / 20ms max.

Enclosure: Flux tight.

Temperature: -40 to + I 25°C (no freezing)

Mechanical Life Expectancy: 10 million operations. Pack Size: Ipc, 10pcs, 100pcs, 400pcs, 1200pcs.

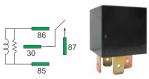
**Options:** Sealed Washable / Dust cover enclosure. Diode protection.

Approval: ELV-2000/53/EC RoHS

Suits Holders & Blocks: Pages 137-138, 170 - 172.

# All Terminals 6.3mm (1/4") Dimensions in MM e protection.

#### 896HIAHCRI series



#### 896HICHCRI series



# 896H2AHCRI series Double Pole (N/O)







# MINI ISO RELAYS WITH BRACKET 896H SERIES





		Contact	Ampere F	Rating			Steel	
Part Number	Volt	Action	N/O	N/C	Terminals	Protection	Bracket	Enclosure
896HIAHCISRII2	I2V	SPST	50A	-	4 x 6.3 mm	½W 680Ω resistor	Yes	Sealed
896HICHCISRII2	I2V	SPDT	50A	30A	5 x 6.3mm	½W 680Ω resistor	Yes	Sealed
896HIAHCISRI24	24V	SPST	20A	-	4 x 6.3 mm	⅓W 2700Ω resistor	Yes	Sealed
896HICHCISRI24	24V	SPDT	20A	I5A	5 x 6.3mm	⅓W 2700Ω resistor	Yes	Sealed

Details: Refer 896H Series on page 166. Pack Size: Ipc, 10pcs, 100pcs, 400pcs. Approval: ELV-2000/53/EC RoHS

Notes: Steel bracket is removable.

#### **RELATED PRODUCTS:**

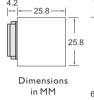


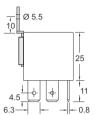
**Relay Connectors** (see p.171)

4 Pin SPST



87 30







Sealed Relay with Steel Bracket

#### MINI ISO SKIRTED RELAYS WITH BRACKET 896H SERIES







		Contact	Amper	e Kating			Steel	vvaterprooi
Part Number	Volt	Action	N/O	N/C	Terminals	<u>Protection</u>	<u>Bracket</u>	Enclosure
896HICHDISWRII2	I2V	SPDT	50A	30A	5 x 6.3mm	½W 680Ω resistor	Yes	Skirted
896H1CHD1SWR124	24V	SPDT	20A	I5A	5 x 6.3mm	⅓W 2700Ω resistor	Yes	Skirted

# Relay Circuit Diagram



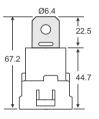
6.3mm (1/4") 35.5

**All Terminals** 

Sealed Relay Connector (see p.172)

# 44.7 28.5 -32.5 →

Dimensions in MM





Skirted Relay with Removable Steel Bracket

# MINI ISO RELAYS WITH FUSE, FUSE COVER & BRACKET





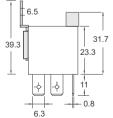
Part		Contact	Amper	e Rating			Suits Fuse.	Steel	Fuse
Number	Volt	Action	N/O	N/C	Terminals	Protection	Not Included	Bracket	Cover
995850	12V	SPST	30A	-	4 x 6.3 mm	resistor	IA to 30A	Yes	Yes
995870	24V	SPST	I5A	-	4 x 6.3 mm	resistor	IA to I5A	Yes	Yes

#### **RELATED PRODUCTS:**



**Auto & LED Auto Fuses** (see p.17)









Clear Fuse Cover and Steel Bracket are Both Removable







# **MAXI ISO RELAYS 897 SERIES**



			, unper c	racing				
Part Number	Volt	Action	N/O	N/C	<u>Terminals</u>	Protection	Bracket	
8971AHCR112	12V	SPST	70A	-	2x 6.3mm, 2x 9.5mm	½W 680Ω resistor	-	
8971AHCISRI12	12V	SPST	70A	-	2x 6.3mm, 2x 9.5mm	½W 680Ω resistor	Metal	NEW
8971AHCR124	24V	SPST	25A	-	2x 6.3mm, 2x 9.5mm	½W 2700Ω resistor	-	
8971AHCISRI24	24V	SPST	25A	-	2x 6.3mm, 2x 9.5mm	½W 2700Ω resistor	Metal	NEW

Contact Ampere Rating

Coil Current: 133mA (12V), 66.7mA (24V) Coil Resistance: 90Ω (12V), 360Ω (24V) Contact Voltage Drop: Typ. 30mV at 10A

Contact Material: Silver Tin Oxide alloy (AgSno)
Operate / Release Time: 20ms max. / 20ms max.

**Enclosure:** Flux Type.

Temperature: -40 to + I 25°C (no freezing)

Mechanical Life Expectancy: 10 million operations.

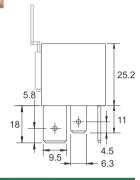
Options: Sealed type washable, dust cover & diode protection.

Pack Size: Ipc, Iopcs, 100pcs, 400pcs.

Suits Holders & Blocks: Pages 138, 170 - 171.

Approval: ELV-2000/53/EC RoHS

# 26.0 17.9 26.0 Dimensions in MM



# Relay Circuit Diagram

# Terminal Sizes 6.3mm (1/4") 9.5mm (3/8")



### **POWER RELAYS**

These Power Relays can switch high power loads on/off to electrical accessories using a separate remote switch and well suited for use in commercial vehicles and heavy trucks.

#### 12V Power Relay (P/N: 05903300)

Designed for use in 12V circuits, it can supply intermittent current loads up to 200A and continuous current loads up to 120A max.

#### 24V Power Relay (P/N: 05903500)

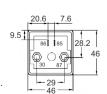
Designed for use in 24V circuits, it can supply intermittent and continuous current loads up to 100A max.

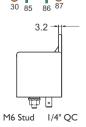
	Contact		
Volt	Action	Amperage	Terminals
I2V	SPST	200A*	2x 6.3mm Q.C, 2x M6
24V	SPST	100A	2x 6.3mm Q.C, 2x M6
	I2V	Volt Action 12V SPST	Volt Action Amperage 12V SPST 200A*

Contact Material: Silver Plated Copper Terminals: M6 Tin-plated Brass Hardware: Brass contact nuts

Bracket: Plastic Temperature: -40 to +100°C Pack Size: |pc, |0pcs.

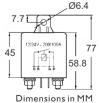
Notes: \*Continuous current load I 20A max.







6.3mm (1/4")M6 stud





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### SD BI-STABLE RELAY WITH AUXILIARY CONTACTS



The SD series relay provides remote power switching for applications that require high continuous current passage, large engine starting needs and high ambient temperatures. Relay switching is controlled via a plug-in connector (with small cables) to switch I or 2 high amp circuits. The 2 pole version suits dual battery configurations. The SD series relay helps reduce your costs and saves weight by positioning the relay close to the battery and high current loads to reduce heavy copper cable routing. Applications include; Heavy Duty Trucks and Lifting Equipment, Construction & Agricultural Equipment.

# NEW

- Compact footprint saves space in your installation.
- Supports US DOT 11579 and EU ADR requirements for hazmat vehicle compliance.
- Plug-in connector controls relay switching and provides additional circuits and features.
- Dedicated 24-hour output to power your tachograph or other keep-alive functions.
- · Local and remote indication of the state of the relay.
- · Bi-stable internal mechanism draw no current in the on or off state saving your batteries voltage supply

Part	Switch	No.	Control	Contact	Continuous	Inrush
Number	Circuit	<u>Poles</u>	<b>Voltage</b>	<u>Voltage</u>	Rating	Current
880103	SPST	Single	9V - 16V	9V - 32V	600A	2000A x 30sec., 3000A x Isec.
880107	DPST	Double	12V - 24V	9V - 32V	600A (2 x 300A)	1000A x 30sec., 2000A x Isec.

Scan this **OR Code** for more information



QR Code: 12001







HD BI-STABLE RELAY WITH AUXILIARY CONTACTS



The HD Series Bi-Stable Relay is designed to supply high continuous current to electrical accessories on a vehicle eg. large invertor loads. It is designed for use in harsh weather, high shock and vibration environments as well as high ambient temperatures. The HD Relay is controlled using a remote switch that is connected to the relay via small gauge cable. The HD Relay delivers high performance in a compact size, perfect for heavy-duty vehicles, lifting, construction & agriculture equipment, military vehicles etc.



#### Features

- Remotely-operated device eliminates long runs of heavy cable, minimizes cabling complexity, cost and weight.
- · Bi-stable (latched) operation draws no current in On or Off. Eliminates a continuous demand on the batteries.
- LED output wire enables remote indication of relay status Open or Closed.
- Silver alloy contact assure the lowest voltage drop / resistance and extends cycling life of the device.
- · Stainless steel hardware and tin-plated copper contacts maximize resistance in harsh environments.
- · Eliminates routing of heavy gauge cables to user-accessible mechanical disconnect switches, lowering system costs.
- Supports high-amp intermittent or continuous current loads.

Part			Continuous
Number	Description	<u>Voltage</u>	Rating
880086	Relay Module	I2V	300A
880088	Relay Module	24V	300A
880092	Remote Switch		

Scan this **OR Code** for more information



QR Code: 12002



Remote Control Switch







# MICRO RELAY HOLDER KIT - SINGLE (4 OR 5 PIN)

Part Number 990401K

Micro Relay Kit includes;

I x Micro relay holder with bracket mount

3 x Terminals 0.5-1.0mm<sup>2</sup> (F4.8mm) (F6.3mm)

2 x Terminals I-2.5mm<sup>2</sup>

**RELATED PRODUCTS:** ISO Micro Relays see page 166









# MINI RELAY HOLDER KIT - SINGLE (4 OR 5 PIN)

Part Number 990421K

Mini Relay Kit includes:

Ix Mini relay holder with bracket mount

5 x Terminals I-2.5mm<sup>2</sup> (F6.3mm)

**RELATED PRODUCTS:** ISO Mini Relays see page 166



Dimensions in MM



# **MAXI RELAY HOLDER KIT - SINGLE (4 PIN)**

Part Number 990411K

Maxi Relay Kit includes:

I x Maxi relay holder with bracket mount

2 x Terminals I-2.5mm<sup>2</sup> (F6.3mm)

2 x Terminals 6-10mm<sup>2</sup> (F9.5mm)

**RELATED PRODUCTS:** 

ISO Maxi Relays see page 168





Dimensions in MM



GE(9)BE

# AUTO FUSE HOLDER KIT - SINGLE (2 PIN)

Part Number 990431K

**RELATED** 

PRODUCTS:

Auto Fuse Kit includes;

I x Auto fuse holder with bracket mount

2 x Terminals 2.0-3.0mm<sup>2</sup> (F6.3mm)

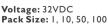




Fuse Cover 00359 (see p. 17)







Features: Gangable.

Options: Terminals 0.5-1.5mm<sup>2</sup> (F6.3mm) also available.

Approvals: RoHS









Slide lock fuse holders and relay connectors.



# MINI RELAY CONNECTOR KIT - SINGLE (4 OR 5 PIN)

Part Number Description

10246K Mini Relay Socket Connector Kit includes;

I x 10246 (Mini relay connector)

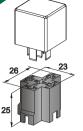
5 x 01650BK (Terminals 1-2.5mm<sup>2</sup> 20A, F6.3mm)

Voltage: 32VDC Pack Size: 1, 10, 100 Approvals: RoHS



ISO Mini Relays see page 166









MTA

# MINI RELAY HOLDER KIT - SINGLE (4 OR 5 PIN)

Part Number Description

50135K Mini Relay Holder Kit includes;

I x 10245 (Mini relay holder) I x 00430 (Fixing plate single screw)

5 x 01650BK (Terminals 1-2.5mm<sup>2</sup> 20A, F6.3mm)

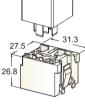
Voltage: 32VDC Pack Size: 1.10 Features: Gangable. Approvals: RoHS

### **RELATED PRODUCTS:**

ISO Mini Relays see page 166







Dimensions in MM





# MAXI RELAY HOLDER KIT - SINGLE (4 PIN)

Description Part Number

50136K Maxi Relay Holder Kit includes:

I x I 0247 (Maxi relay holder)

I x 00430 (Fixing plate single screw)

2 x 07000BK (Terminals 0.5-1.5mm<sup>2</sup> F6.3mm)

2 x 01720BK (Terminals 6-10mm<sup>2</sup> F9.5mm)

Voltage: 32VDC Pack Size: 1, 10 Features: Gangable. Approvals: RoHS

# RELATED PRODUCTS:

ISO Maxi Relays see page 168







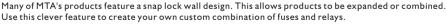
Dimensions in MM

34.5











**Snap Mount Fixing Plate** (see p.78-79)



Screw Mount **Fixing Plate** (see p.78-79)



Slide Lock M & F **Bolt Down Brackets** (see p.78-79)



Slide Lock **Fuse Holders** (see p.78-79)

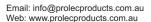


Slide Lock Relay Holders (as above)



**Lateral Lock** To Modules (see p.137 & 141)







# MINI RELAY SEALED CONNECTOR (4 OR 5 PIN)



The Series PTSR-X Push-to-Seat sealed relay connector is specifically designed to accept standard Mini ISO skirted relays, Delphi 630 Metri-Pack terminals and 480 Metri-Pack seals. This uniquely designed sealed unit features a Push-to-Seat connection system. Terminals are crimped to cable, then pushed into base of unit. This eliminates the costly labor intensive "5 step" pull-to-seat assembly approach required by other connectors.







#### Features:

- Sealed, Ingress Protection Rated IP66.
- Labor saving "Push to Seat" connection system.
- Molded in rugged polyester thermoplastic material.
- Finger release latch.
- Accepts any wire size, in any cavity using Aptive 630 Metri-Pack sealed push to seat terminals together with 480 Metri-Pack seals.

Connector shown assembled with skirted mini ISO relay.



Part Number Kit Contents;

PTSR-KIT I x Connector with Seal Assembly

- I x Blue TPA Term, Pos. Assurance
- 2 x Terminals (20-18AWG)
- 2 x Yellow Seals (18AWG)
- 3 x Terminals (12-10AWG)
- 3 x Orange Seals (IOAWG)
- I x Cavity Plug Grey





Description
Connector with Red Silicon Seal Assembly.
Terminal Position Assurance (TPA) Blue Nylon.
Terminal Female Sealed Tin (10AWG) 4.0 - 6.0mm <sup>2</sup>
Terminal Female Sealed Tin (12-10AWG) 3.0 - 5.0mm <sup>2</sup>
Terminal Female Sealed Tin (16-14AWG) 1.0 - 2.0mm <sup>2</sup>
Terminal Female Sealed Tin (20-18AWG) 0.5 - 0.8mm <sup>2</sup>
Cable Seal Orange (10AWG) 4.40 - 5.16mm Cable Dia.
Cable Seal Purple (12AWG) 3.61 - 4.50mm Cable Dia
Cable Seal Red (14AWG) 2.81 - 3.76mm Cable Dia.
Cable Seal White (16AWG) 2.01 - 2.85mm Cable Dia
Cable Seal Yellow (18AWG) 1.60 - 2.15mm Cable Dia
Cavity Plug Grey 9.05mm Diameter

















7.2

41.0







Base Material: Polyester thermoplastic

Seal Material: Silicon TPA Material: Nylon

Terminals: Tin Plated Brass Metri-Pack 630. Cable Seals & Cavity Plug: Silicone.

Pack Size: 1, 10, 100, 500

Approvals: RoHS

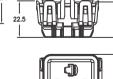




Mini ISO Skirted Relay With Bracket 896HICHDISWR Series

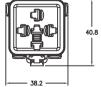
12V and 24V SPDT (see p. 167)













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### **CIRCUIT BREAKER / SWITCH PANELS**



PROPNL24S4WB

Prolec offer a range of three standard black powder coated panels that can accommodate either 4 or 6 of the Series 24 switches or switchable circuit breakers. These panels can be mounted either vertically or horizontally.

#### Features

- · Australian designed and manufactured..
- Panels can be mounted either vertically or horizontally.
- Quick assembly. Snap mount components include switch or circuit breaker.
- Mount via 4 x 4mm holes. Black pan head screws included.
- Strong panel is 2mm aluminum black powder coated.
- 4 Way mounting orientation.









NEW





PROPNL24S6WB

Part Number PROPNL24S4WB PROPNL24S6WB

Description 4 Positions Panel (130mm x 100mm) 6 Positions Panel (190mm x 100mm) Breaker Switch Hole Plug Blank



24HP2151

#### **Custom Panels**

24HP2151

Prolec can create custom panels and labelling to suit any components or layout. Custom panels can be produced in a variety of materials, thicknesses and labelled with your own design & branding. Contact sales for further information.









2410-102 Series (See p.55)







PROLEG



Alternative Switch or Switch Circuit Breaker Options

# CIRCUIT BREAKER PUSH TO RESET DISTRIBUTION PANEL

Prolec now offers a new Australian designed and made range of standard blank black powder coated panels that suit the Series 14, 15 and 16 panel mount manual reset circuit breakers. These panels can be mounted either vertically or horizontally. Adhesive stickers can be added to the panel or it can be custom screen printed or a full colour branded label can be fitted over the entire panel. Circuit breaker thread size 3/8"-27. Components are screw mount. Electrical connection options are quick connect or screw terminal. Includes mounting hardware black counter sunk screws. Circuit breakers are not included.



Description

PROPNLI4SI2WB 12 Position Blank Panel (185mm x 110mm) 14HP38 Circuit Breaker Hole Plug 3/8" (9.5mm)



Circuit breakers page 54 (Bushing specification 3/8"-27) Circuit breaker boots page 54



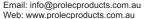




PROPNLI4SI2WB

Example of a loaded breaker panel.





173

# ROCKER SWITCHES, ACTUATORS & BRACKETS CONTURA II



#### Switch Units

Part Number	Switch Type	Switching*	LED Indication	Rating
VIDI00I	Single Pole	On / Off	Blue Backlight / Green On	12VDC, 20A
V2D1001	Single Pole	(On) / Off	Blue Backlight	12VDC, 20A
V8D1001	Single Pole	(On) / Off / (On)	Blue Backlight	12VDC, 20A



\*(ON) = Momentary switch, must be held in ON position.

#### Switch Actuators Contura II

Part Number	Actuator Type	Marking	
VAAC001	Square & Bar Lens	(No Marking)	
VAAC002	Square & Bar Lens	Air Compressor	S
VAAC003	Square & Bar Lens	Front Locker	(Wi
VAAC004	Square & Bar Lens	Rear Locker	Pro
VAAC005	Square & Bar Lens	Fog Lights	
VAAC006	Square & Bar Lens	Driving Lights	
VAAC007	Square & Bar Lens	Reverse Lights	
VAAC008	Square & Bar Lens	Interior Light	
VAAC009	Square & Bar Lens	Roof Lights	
VAAC010	Square & Bar Lens	LED Light Bar	Acti
VAAC011	Square & Bar Lens	Work Lights	1
VAAC012	Square & Bar Lens	Accessories	00
VAAC013	Square & Bar Lens	Winch Isolator	The state of the s
VAAC014	Square & Bar Lens	Fuel Transfer	
VAAC015	Square & Bar Lens	Auxiliary Lights	Winch
VAAC016	Square & Bar Lens	<b>Auxiliary Battery</b>	······································
VAAC017	Square & Bar Lens	Power	
VAAC018	Square & Bar Lens	12V Outlet	
VAAC019	Square & Bar Lens	Battery Parallel	
VA9C002	Square Lens Only	Winch	Ass
VA9C003	Square Lens Only	Horn	733
VVPZC00-000	Laser Etchable	Blank / Custom	NEW





**Daytime** 

(Not Lit)



**Daytime** 

(Illuminated)



Nighttime

(Illuminated)

Actuator

Switch Assembled Unit

▶ Blank

(Contura V) Actutor



eg. Laser

Etched

Rear of

Actuator

**Mounting Panel Brackets & Accessories** 

Part Number	Accessory Description	
VMS01	Stand-alone Mounting Panel Bracket. No Further Parts Requ	ired.
VMM01	Modular Mounting Panel Bracket (Middle Unit), Requires En	ıds.
VME01	Modular Mounting Panel Bracket (End Unit), Reversible.	
VPS	Switch Unit Panel Seal.	
VCH01-K	Connector Kit - 8 x Female I/4" QC Terminals 16-14AWG.	NEW
VHP01	Hole Plug, Snap Mount, Blank Insert.	NEW

Dual Purpose Removal Tool. Removes Actuator & Switch Body.

3x Panels & Switches



Alone Panel

VRT



Middle Panel



**End Panel** 



Hole Plug



**VPS Switch** Panel Seal

2x VME01 + 1x VMM01 Assembled Panels Example

Actuator: Black, hard optical grade polycarbonate, Nylon 66 overlay. Switch Housing: Thermoplastic polyester alloy, flame retardant. Switch Mechanism: Brass roller pin eliminates need for lubricants.

Terminals: 1/4" Quick Connect, tin plated. Contacts: Silver plated. Endurance: 50,000 to 100,000 electrical cycles.

Ignition Protected: Sealed construction. ULI 500 / ISO8846, 94/25/EC. Backlighting LED: Blue controlled intensity for even illumination. Ingress Protection Rating: Dual seal protection locks out elements.

Certified to IP66 / IP68 for front panel components. Panel seal prevents water/dust ingress into the panel.

Bulk Pack Size: 1, 10, 20, 100

Retail Pack Size: 1, 10



Removal Tool VRT 101.4 x 22.9mm

Scan this OR Code for more information

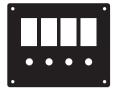


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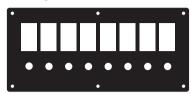




Prolec's Australian made 4, 6 or 8 way panels, enable you to build your own customised circuit breaker / switch panel. Simply order the panel that suits your requirements, then order the switches and circuit breakers (sold separately). Switches are available with different electrical configurations and the switch actuators come in a wide variety of symbols & labelling. Our manual reset circuit breakers are available in ratings from 3A to 20A. Once the switches and breakers are fitted into the panel, connect your cables to them using standard 1/4" Q/C terminals.





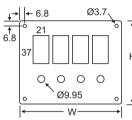


PROPNLI4V4WSB

PROPNLI4V6WSB

PROPNLI4V8WSB

RELATED PRODUCTS:



4 Way Panel

Part

Number

VHP01

14HP38

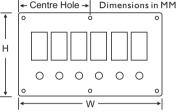
PROPNLI4V4WSB

PROPNLI4V6WSB

PROPNLI4V8WSB

Manual Reset TIII

(Weatherproof Boot Black)



6 & 8 Way Panel

Centre

Hole

95mm

I20mm

9.5mm

Black

37 x 21 mm

**Hardware** 

Dimensions

135 x 110mm

190 x 110mm

240 x 110mm

13 x 10.5mm

48 x 23mm

 $(W \times H)$ 

	<b>A</b>	
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Rocker Switch Snap Mount (Refer page 174)

Circuit Breaker 3/8"-27 Bushing (Refer page 54)



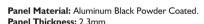


Rocker Switch Hole Plug 37x21mm

Circuit Breaker Hole Plug 3/8" (9.5mm)







Hardware: Includes black countersunk screws.

**Note:** Switches & circuit breakers are not included with the panel.

Description

4 Way Blank Panel

6 Way Blank Panel

8 Way Blank Panel

Hole Plug Breaker

Hole Plug Switch

#### How to order to complete your custom DIY switch breaker panel:

Step One: Choose a 4, 6 or 8 way blank panel. (As above) Step Two: Choose the rocker switch units / bases. (Page 174)

Step Three: Choose the rocker switch actuators / covers. (Page 174)

Step Four: Choose the panel mount circuit breaker for each position. (Page 54)

Step Five: If required choose protective boots for the circuit breakers. (Page 54)

#### Weatherproof Boots Clear or Black Options 3/8"-27 Thread, IP67 (Refer page 54)

#### Sample Loaded 8 Way Panel (Non Wired).







Loaded Rear View 8 Way Switch & Breaker Panel



# Bussmann

Battery Switch Terminals are primarily designed to prevent battery drain by providing a quick and safe way to completely disconnect the negative (-) terminal of a battery. Simply unscrew the plastic knob one 1/4 turn and the battery is disconnected. To restore power, screw the knob down again.

A secondary application of this product is for use as an anti-theft device. By completely removing the knob, the vehicle cannot be started. Installing the included fuse holder (to bypass the switch) allows power flow to low current accessories ie, alarm, clock or door locks, but high current loads like a starter motor will not function until the knob is re-installed. The fuse can be removed to completely disconnect power.



BMS-I (Kit - Suit Top Post)

BMS-2 (Kit - Suit Side Post)

Part Number BMS-I

BMS-2

Description Top Post Battery Switch Kit Side Post Battery Switch Kit

#### **Both Kits Contain:**

- I x Battery switch.
- I x Inline mini fuse holder.
- I x 20A Mini fuse.
- 2 x Crimp terminals.
- I x Wing nut & bolt. Ampere Rating: 100A continuous, 600A cranking.

fuel injection systems, but use without fuse and holder.



**Negative Top Post** 



**Negative Side Post** 



Scan this **OR Code** for more information



QR Code: 9019

### BATTERY DISCONNECT WITH CIRCUIT BREAKER

Notes: Use on Negative (-) terminal. Suitable for boats. Recommended by inboard and outboard motor manufacturers using DFI / FFI / EFI electronic



The Series 53, Branch Disconnect Switch with Circuit Breaker, incorporates a traditional battery disconnect switch (non-engine) & circuit breaker into a single device. This unique single rotary switch allows OEM cost savings by eliminating the added components, material and labour of a separate battery switch and circuit breaker / fuse. For end users and maintenance personnel, it provides a quick way to disconnect traditional downstream circuit(s) to prevent unintentional battery drain or provide disconnected battery power during storage and/or maintenance.

#### **Features**

- Current ratings IOA to 70A. Voltage 32VDC.
- · Rotary switch knob, with Push to Reset breaker button.
- One-Piece terminal stud design never loosens over time.
- Panel Mount Options: Front or rear panel mount.
- Surface Mount: With standoff accessory #530-320-2.
- Ignition protected and weatherproof IEC 60529, (IP66 & IP67).
- · Designed and manufactured in USA.
- · Housing: Thermoplastic.
- · Approvals: UL 1077, SAE J553, ABYC, CE







Surface Mount

Panel Mount



For complete product details on this product please see catalogue page 56.



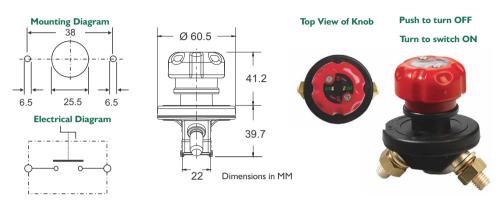
# **EMERGENCY BATTERY DISCONNECT SWITCH 12-24VDC**



Emergency Manual Battery Disconnect Switch with ROTATE to SWITCH ON & PUSH KNOB to SWITCH OFF in the event of an emergency. Switch status is indicated though a window on the top of the knob.



Part		Intermittent		Ingress		Copper	
Number	Amperage	Current	Circuitry		Mounting	Terminals	Notes
08080200	150A	1200A at 5s	SPST	IP65	I hrough-Hole	MIO Ag Plated	Push to Off



# **EMERGENCY BATTERY DISCONNECT SWITCH 12-24VDC**



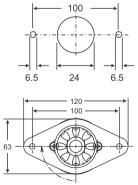
The Littelfuse Emergency Battery Disconnect Switch features a TURN to SWITCH ON and PUSH to OFF operation. Easy to operate and shut off vehicle power in emergency situations. Switch features an identical mounting pattern to metal body removable key switches, so the same application has multiple options with minimal design changes.

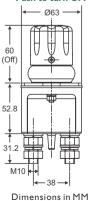


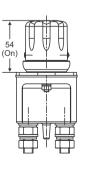
#### **Features**

- 250A continuous current rating.
- Waterproof and dust proof to IP65.
- Push to off emergency shutdown feature.
- Highly visible bright red handle.

Part Number 08098400	Amperage 250A	Intermittent Current 2500A at 3s	<u>Circuitry</u> SPST	Ingress Rating IP65	Mounting Flange	Brass Terminals M I O Ag Plated	Notes Push to Off
Mour	nting Diagram	F	ush to turn O	FF	Turn to switch	ON 🚮	
-0	100		Ø63 —	*	1 (1)		









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**Electrical Diagram** 



RELAY + SWITCH

### **BATTERY DISCONNECT SWITCHES 12-24VDC**



These battery disconnect switches all feature a removable key handle and compact plastic body. The 08098700 is the standard manual battery disconnect switch rated to 100A with M8 terminals. The 08098780 is rated to 150A max. continuous current with M10 stud terminals designed for heavier current loads which makes it one of the most popular products for 12V or 24V applications. The 08099080 is also rated to 150A with M10 terminals, but features both a seal on the handle and a tethered cover to seal the key hole when the handle is removed. It's weatherproof to IP43.



Part		Intermittent		Ingress		Copper	Terminal	
Number	Amperage	Current	Circuitry	Rating	Mount	Terminals	<b>Hardware</b>	Notes
08098700	100A	500A at 5s	SPST	IP4X	Flange	M8	Steel-Zinc	-
08098780	150A	1000A at 5s	SPST	IP4X	Flange	MI0	Brass	-
08099080	150A	1000A at 5s	SPST	IP43	Flange	MI0	Steel-Zinc	Key Seal & Cap

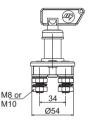
# Electrical Diagram



38

**Mounting Diagram** 

Dimensions in MM





08098700 08098780



08099080

### **BATTERY DISCONNECT SWITCH 12-24VDC**



Manual battery switch with removable or fixed handle and available with weather protective boots. 08098800 - Switch with removable handle. Interchangeable with Bosch. 0341002003 switches. 08098881 - Switch with removable handle and chain. Includes red, yellow rubber boots & black cover for weather protection and to help identify different applications.

08098882 - Switch with fixed handle and integrated lock-out tag-out. Red, yellow and black rubber boots for weather protection and to help identify different applications. This new design that does not require an accessory for lock-out tag-out functionality.



P69K

Part		Intermittent		Ingress		Copper	Terminal	
Number	Amperage	Current	Circuitry	Rating	Mount	Terminals	Hardware	Handle
08098800	250A	2500A at 3s	SPST	IP65	Flange	MI0	Zinc-Plated	Removable
08098881	250A	2500A at 3s	SPST	IP65/IP69K	Flange	MI0	Zinc-Plated	Removable
08098882	250A	2500A at 3s	SPST	IP65/IP69K	Flange	MI0	Zinc-Plated	Fixed

#### **Electrical Diagram**



#### **Mounting Diagram**





08098800



08098881



08098882



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# **MASTER DISCONNECT SWITCH 6-32VDC**



The 75920 Master Battery Disconnect switch is designed to protect service personnel and your vehicle systems. The switch protects vehicles from both battery drain and theft as well as allowing service personnel to lock-out tag-out. It also serves as an effective emergency power cutoff.





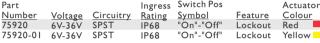




#### **Features**

- High amperage capacity: 400A at 12V DC.
- Can be used in high side or low side applications.
- Waterproof and dustproof to IP68.
- Composite engineered polymer housing will not rust or corrode.
- Tested per SAE 1455 for salt, calcium chloride and magnesium chloride.
- Large red knob is easy to operate with gloves.
- 90° switch travel makes it easy to identify the switch position.
- Large divider on base prevents accidental shorting of high energy cables.
- Fits standard Master Disconnect mounting pattern.







Continuous Current: | 2V:400A

24V:300A 36V:200A

Intermittent Current: 12V:1000A, 90sec on, 5 min off.

12V:1500A, 60sec on, 5 min off. 12V:2000A, 30sec on, 5 min off. 12V:3000A, 15sec on, 5 min off.

Operating Temperature: -40 to 85 degC Terminal Studs: Copper 3/8"-24. Hardware: Stainless steel nuts (included)

Corrosion Test: 96 hours - salt spray test to ASTM standard.

Vibration and Shock Test: SAE 11455 Ingress Protection Rating: IP68.

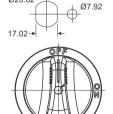
Approvals: SAE ( RoHS

#### **Mounting Diagram #I Without Panel Punch**

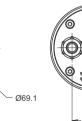


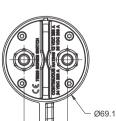
#### #2 With Panel Punch

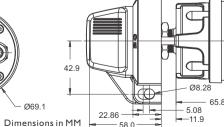
Ø20.62



- 11.43













# **MASTER DISCONNECT SWITCH 48VDC**

battery box or on vehicles carrying hazardous loads.

• Switch can be mounted anywhere on the vehicle.

minimize resistance in harsh environments.

The Littelfuse Master Disconnect Switch isolates the batteries and eliminates battery drain when vehicle is stored overnight or for longer periods. Electrically cuts off battery power for safety or when the vehicle is being serviced. Units have a depth of only 75mm (knob front to end of studs) - can be installed in locations where behind-panel space is limited.

 $\bullet$  Ignition protected to SAE JI I 7  $\breve{\text{I}}$  and ISO 8846 for installation in a

# **¼** Littelfuse





















Part Cranking Rating Ingress Number Voltage Amperage 12VDC, 30 Sec Circuitry Rating IP67/IP69K 880062 1250A (1 x 4/0 cable) SPST

• Stainless steel hardware (included) and tin-plated copper contacts

Mounting: Panel Mount. Front or Rear Options. Front Panel Mount: 67mm (2-5/8") Hole. See (A) Rear Panel Mount: 60mm (2-3/8") Hole. See (B) Terminal Stud Size: 3/8"-16 (accepts MI0 terminals).

Terminal Studs: Tin-plated copper. Hardware: Stainless steel nuts (included). Ingress Protection Rating: IP67 / IP69K.

Ignition Protection: Meets ISO 8846 & SAE JI 171

Inrush Rating (2 sec): 3,500A.

Features

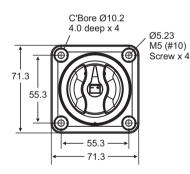
• 300A continuous current rating.

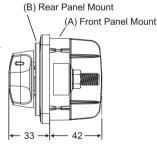
• Plastic construction will not corrode. • Stands up to road splash and salt spray. • Ingress protected to IP67/ IP69K.

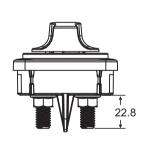
Cranking rating (2 sec): 1,250A (1 x 4/0 cable)



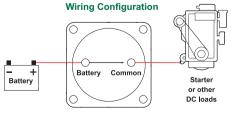
Rear Side







Dimensions in MM



Master Battery Disconnect (shown in ON state)



# **MASTER DISCONNECT SWITCH 36-48VDC**

**¼** Littelfuse®

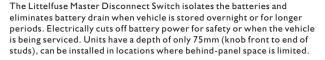












### **Features**

- 300A continuous current rating.
- Lockout feature. Padlock capability.
- Switch can be mounted anywhere on the vehicle.
- Plastic construction will not corrode.
- Stands up to road splash and salt spray.
- Ingress protected to IP67/ IP69K.
- Ignition protected to SAE J1171 and ISO 8846 for installation in a battery box or on vehicles carrying hazardous loads.
- minir

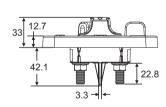
Stainless steel nardware (Included) and tin-plated copper contacts minimize resistance in harsh environments.						OFF
Part <u>Number</u> 880064 880154	Voltage 48V 32V	Amperage 300A 600A	Cranking Rating 12VDC, 30 Sec 1250A (1 x 4/0 cable) 2500A (1 x 4/0 cable)	Circuitry SPST SPST	Ingress Rating IP67/IP69K IP67/IP69K	Feature Lockout High Cranking & Lockout

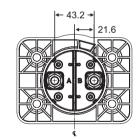
Mounting: Flange Mount.

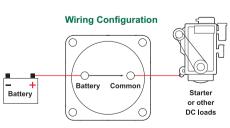
Terminal Stud Size: 3/8"-16 (accepts MI0 terminals).

Terminal Studs: Tin-plated copper. Hardware: Stainless steel nuts (included). Ingress Protection Rating: IP67 / IP69K. Ignition Protection: Meets ISO 8846 & SAE | 1171

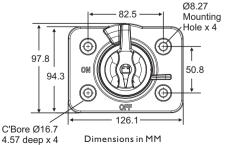








Master Battery Disconnect (shown in ON state)





# **MASTER DISCONNECT SWITCH 12-48VDC**

multiple batteries, in either the positive or the negative line.

**Littelfuse** 











- 500A continuous current rating per circuit.
- Ingress protection to IP67 and IP69K means that the switch can be mounted in exposed locations on the vehicle.

The Littelfuse Master Disconnect 2 Pole Switch cuts all battery power from vehicle electrical systems with applications needing switching of two circuits. Can be used to switch two vehicle voltage circuits simultaneously (24V & 12V). Disconnect a battery or

- Drop-in replacement for competitive Master Disconnect Switches, with higher vibration and shock capabilities.
- Direct lockout/tagout capability in On or Off position, with padlock or hasp.

Part Number 880175 880175-0001 880175-0002	Amperage 500A 500A 500A	Switch Circuit DPST DPST DPST	Ingress <u>Rating</u> IP67 / IP69K IP67 / IP69K IP67 / IP69K	Mount Surface Surface Surface	Actuator Colour Black Red Yellow
880175-0002	500A	DPST	1P6//1P69K	Surface	Yellow



Voltage: 48VDC.

Max Continuous Current Ratings:

500A per circuit with 2 x 4/0 input and 2 x 4/0 output cables. 350A per circuit with 1 x 4/0 input and 1 x 4/0 output cables.

Terminal Stud Size: M12 x 25mm. Terminal Studs: Tin-plated copper Hardware: Stainless steel nuts (included) Ingress Protection Rating: IP67/IP69K.

Inrush Rating (I sec): 3,000A per circuit with  $2 \times 4/0 + 1 \times 2$  AWG.

Cranking rating (30 sec):

2,250A per circuit with  $2 \times 4/0$  input and  $2 \times 4/0$  output cables. 1,750A per circuit with  $1 \times 4/0$  input and  $1 \times 4/0$  output cables.

Temperature Rating: -50 °C to +85 °C, DC-Rated to 105 °C.
Recommended Terminal Torque: 20 Nm (30Nm max).

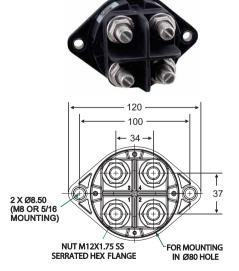
Recommended Terminal Torque: 20 Nm (30Nm max).

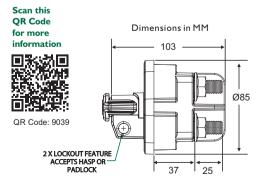
Recommended Mounting Torque: 15Nm (20Nm max).

**Notes:** Ambient temperature can reach 105  $^{\circ}$ C with appropriate derating. Stud terminals must never exceed 125  $^{\circ}$ C under any condition.











# BATTERY DISCONNECT SWITCH 24VDC



250A-500A bipolar disconnect switch with fixed or removable handle. Modern design, made of high performance materials in terms of resistance to high temperatures, chemical and atmospheric agents. This battery master switch represents an evolution of our expertise and is also supplied in up to 500A DC version.





### **Features**

- Product series features modern advancements in the design evolution of manual battery disconnects.
- Smartkey allows operator to make the handle removable or fixed, locking it in either the OFF or ON position.
- Protective rubber cap with an auto-protection feature ensures dirt protection when the handle is inserted.
- Up to 500A continuous current.
- IP69K rating for high pressure wash.

### **Applications**

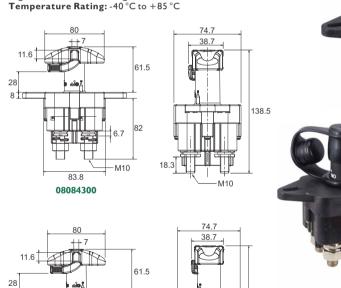
Heavy Trucks Off-Road Construction Material Handling Mining Vehicles Agriculture Marine Emergency Vehicles

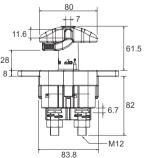
Part		Intermittent		Ingress		Silver Plated
Number	Amperage	Current	Circuitry	Rating	Mounting	CopperTerminals
08084300	250A	1000A at 10s	DPST	IP67/IP69K	Flange	MIO
08084400	500A	1500A at 10s	DPST	IP67/IP69K	Flange	MI2

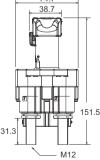
Voltage: 24VDC.

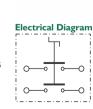
Terminal Stud Size: noted above.
Terminal Studs: Tin-plated copper
Hardware: Staipless steel puts (included)

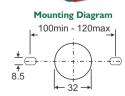
Hardware: Stainless steel nuts (included) Ingress Protection Rating: IP67 / IP69K.















### Part Number 9602460

Economy Crimper: Suits insulated terminals. Wire Size Range: 0.25mm<sup>2</sup> to 6mm<sup>2</sup>

Notes: Economy Type.

Pack Size:



### **Crimping Range**

0.25-1.5mm<sup>2</sup> AWG20-16

2.5mm² AWG14

4-6mm² AWG12-10

### Part Number 9602500

Ratchet Crimper: Suits insulated terminals. Wire Size Range: 0.25mm2 to 6mm2

Pack Size: I

### Crimping Range

0.25-1.5mm<sup>2</sup> AWG20-16

2.5mm² AWG14

4-6mm² AWG12-10

# TERMINAL CRIMPING TOOL

Part Number 9602450

Economy Crimper: Suits terminals. Wire Size Range: 1.5mm<sup>2</sup> to 6mm<sup>2</sup>

Pack Size: |







### Part Number 9602455

Ratchet Crimper: Suits terminals. Wire Size Range: 0.5mm<sup>2</sup> to 6mm<sup>2</sup>

Pack Size: |



# **TUBULAR TERMINAL CRIMPING TOOL**

PROLEG

Part Number CRIMPER-04

Crimps: Tubular terminals.

Wire Size Range: 10mm<sup>2</sup> to 95mm<sup>2</sup> Wire Size Range: #8AWG to 3/0AWG Notes: Tool can also be held in vice jaws.

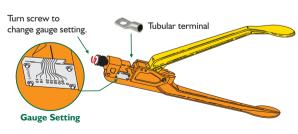
Pack Size: |

### **RELATED PRODUCTS:**



(see p. 188)

**Tubular Terminals** 





# **TERMINAL CRIMPING TOOL - WEATHER PACK**



This tool is designed to crimp a terminal and a seal onto a stripped end of a electrical cable.

Part Number CT-P78

Crimps: Aptiv Delphi Metri-Pack 150 & 280, Weather Pack Tyco AMP MCP 2.8 terminals.

Terminal Gauge Range: AWG22-12 (0.35mm² to 3mm²) Features: Parallel jaw design eliminates terminal rocking. Notes: Suits terminals used with PDM's products including; Bussmann: CFH-A, 15305 & 1540X, 31S, 31M, XTCK4 GEP: FRH-A12, FRH-A24, PDM-R3A, PDM-S3A, PDM-U3A Littelfuse: BPDMA104, PDM7100, PDM3100, PDM2100 Pack Size: 1



Need help using this crimp tool? Scan the QR code to view instructions.

### **Crimping Tool Head Legend**

- A: Crimp Metri-Pack 150 seals
- B: Crimp Metri-Pack 280 & AMP MCP 2.8 seals
- I: Crimp AWG22 (0.35mm²) terminals
- 2: Crimp AWG20 -18 (0.5 to 0.8mm<sup>2</sup>) terminals
- 3 : Crimp AWG16 -14 (1.0 to 2.0mm²) terminals
- 4: Crimp AWG12 (3.0mm²) terminals



Scan this QR Code for more information



QR Code: 8001

NEW

# RATCHET CRIMPING TOOL KIT - WEATHER PACK 280



These tools are designed to crimp a terminal and cable seal onto a stripped end of a electrical cable.

### Features:

- Quickly change between different jaw sets.
- Ratchet mechanism with automatic quick release.
- Parallel jaw design eliminates terminal rocking.
- Crimps terminal and seal in one press.



CT-JA18B pictured with jaw set inserted

Part Number Kit Includes

CT-JA18B Quick change ratchet crimper tool (8.7") 220mm H6 Jaw set suits: (AWG22/20-18) 0.35/0.5-0.8mm<sup>2</sup> H7 Jaw set suits: (AWG16-14/12) 1.0-2.0/3.0mm<sup>2</sup> Weather Pack connector terminal removal tool

Crimps: Aptiv Delphi Metri-Pack 280 & Weather Pack terminals.
Terminal Gauge Range: AWG22 - 12 (0.35mm² to 3mm²)

Notes: Suits terminals used with PDM's products including; Bussmann: CFH-A, 15305 & 1540X, 31S, 31M, XTCK4 GEP: FRH-A12, FRH-A24, PDM-R3A, PDM-S3A, PDM-U3A Littelfuse: BPDMA104, PDM7100, PDM3100, PDM2100

Pack Size: |

# H6 Jaw Set Position (2) (1) (2) (1)

## **Crimping Tool Set Legend**

H6 Jaw Set Position I: Crimp AWG22 (0.35mm²) terminals

H6 Jaw Set Position 2 : Crimp AWG20 -18 (0.5 to  $0.8 mm^2)$  terminals H7 Jaw Set Position 1 : Crimp AWG16 -14 (1.0 to  $2.0 mm^2) terminals$ 

H7 Jaw Set Position 2 : Crimp AWG12 (3.0mm²) terminals

### Delphi Weather Pack Connector Terminal Removal Tool











# TERMINAL CRIMPING TOOL DELPHI APTIV



Part Number 06285847

Crimps: Aptiv Delphi Pack-Con Series 3 & 5 Terminals. Two cavity crimp tool. Spring loaded.
Terminal Gauge Range: #20 - #10AWG (0.5mm² to 5mm²)
Notes: Suits terminals used with Bussmann RTA Autofuse panels 157 series fuse blocks (p.92). Crimps core wings only.
Pack Size: 1



# TERMINAL REMOVAL TOOLS DELPHI APTIV



These tools are designed to remove terminals fitted in PDM's, holders or connectors.

Part Number 12094429



Extracts: Delphi GT 150; GT 280; 150 Metri-Pack; 280 Metri-Pack; 280 Tangless & 280 Bus Bar; 630 Pull-To-Seat; Lamp Socket Bases, B-1 & W-3; 800 Metri-Pack Female.

Notes: As used in Bussmann I 5303, I 5305, I 5401, CFH-A series Power Distribution Modules.

As used in GEP FRH-A12, FRH-A24, PDM-R3AC1, PDM-S3AC1, PDM-U3AC1 Power Distribution Modules. As used in Littelfuse BPDMA104, PDM31001, PDM21001 and PDM71001 Power Distribution Modules.

Pack Size: |

Part Number 12094430 12094430

Extracts: Delphi Pack-Con series 3 & 5 terminals.

Notes: As used in Bussmann RTA 157 series rear terminal fuse blocks (p.92).

Pack Size: |

Part Number

# TERMINATED, SEALED CABLES & JUMPERS DELPHI APTIV



These pre-terminated and sealed cables and jumpers have been designed for quick installation into Power Distribution Modules (PDM's) with cavities that mate with Delphi Aptiv 280 Metri-Pack terminals and seals. They are available in two models: Tangless or Tanged. The dual terminated and sealed jumpers are a quick way to link a mini fuse cavity to a ISO 280 relay cavity. Whilst the single terminated and sealed cables can be used for power or signal applications. The un-terminated end can be joined to other cables simply with a butt splice connector.

CAB2.0X85151]	Jumper	Dual End, Tangless	Red 1.84mm <sup>2</sup> x 90mm
CAB2.0X300TS1	Cable Lead	Single End, Tangless	Red 1.84mm <sup>2</sup> x 300mm
CAB2.0X300TS2	Cable Lead	Single End, Tangless	Blue I.84mm <sup>2</sup> x 300mm
CAB2.0X85TS1TJ	Jumper	Dual End, Tanged	Red 1.84mm <sup>2</sup> x 90mm
CAB2.0X300TS1T	Cable Lead	Single End, Tanged	Red 1.84mm <sup>2</sup> x 300mm
CAB2.0X300TS2T	Cable Lead	Single End, Tanged	Blue I.84mm <sup>2</sup> x 300mm

Termination Type

<u>Suit Various PDM's</u> 15303-1 to 15303-6, 15305-1, 15305-2, 15305-3, 15305-4, 15305-5, 15305-6.

BPDMA104, CFH-Axx, FRH-A12, FRH-A24, PDM-R3ACI, PDM-S3ACI, PDM-U3ACI, PDM-31001, PDM21001, PDM71003, 15401, 15402, 15403, 15404

Terminal Type: Delphi Aptiv Metri-Pack 280

Notes: As used in various PDM fuse and relay blocks.

Pack Size: 1, 10, 50, 100

Tanged

Product











Cable Specifications



# TERMINAL, SEAL AND CAVITY PLUG KITS



Features: • Suits various brands and models of hard wired power distribution modules.

• Fitted with genuine original equipment components.

• Australian designed & made compartment box. Kitted locally.



# 280 Tangless Female Sealed - I 20pcs

Suits: Bussmann RTMR's 15305 Series

Part Number

Kit Contains:

TERMKIT001 Terminals:

 $10 \text{ pcs} \times 0.8 - 1.0 \text{ mm}^2$ 

 $30pcs \times 1.0 - 2.0mm^2$ 10pcs x 2.0 - 3.0mm<sup>2</sup>

Cable Seals: 10pcs x 2.03 - 2.85mm Green 30pcs x 2.81 - 3.49mm Grey

10pcs x 3.45 - 4.3mm Blue

Cavity Plugs: 20pcs x 6.7mm Green







# 280 Tanged Female Sealed - 170pcs

Suits: GEP Power PDM's 280 Style Bussmann CFH Series Littelfuse HWB18 & HWB60

Kit Contains: Part Number TERMKIT002

Terminals:  $10pcs \times 0.8 - 1.0mm^{2}$ 

40pcs x 2.0 - 3.0mm<sup>2</sup> 20pcs x 5.0mm<sup>2</sup>

Cable Seals: 10pcs x 2.03 - 2.85mm Green

40pcs x 2.81 - 3.49mm Grey 20pcs x 3.45 - 4.3mm Blue

Cavity Plugs: 30pcs x 6.7mm Green







# 280 Tanged Female Sealed - 310pcs

Suits: GEP Power PDM's 280 Style Bussmann RFMR's 154 Series

Part Number TERMKIT003 Kit Contains:

Terminals:  $20pcs \times 0.8 - 1.0mm^2$ 

 $70pcs \times 2.0 - 3.0mm^2$ 40pcs x 5.0mm<sup>2</sup>

Cable Seals: 20pcs x 2.03 - 2.85mm Green

70pcs x 2.81 - 3.49mm Grey 40pcs x 3.45 - 4.3mm Blue

Cavity Plugs:50pcs x 6.7mm Green



Tanged





# MCP 2.8 Barbed Female Sealed - 170pcs

Suits: Bussmann RTMR 15310 Series Littelfuse HWB12

Part Number TERMKIT004

Kit Contains:

Terminals: 30pcs x 0.5 - 1.0mm<sup>2</sup>

40pcs x 1.0 - 2.5mm<sup>2</sup>

Cable Seals: 30pcs x 1.5 - 2.1mm Blue 40pcs x 2.2 - 3.0mm White Cavity Plugs: 30pcs x 6.7mm Natural



**Barbed** 







# **INSULATED HEAT SHRINK BUTT SPLICE CONNECTORS**



Perma-Seal splices provide a rugged, environmentally sealed connection for wire sizes that will insulate, seal and protect joints from physical abuse and abrasion, water, salt and other corrosive compounds.

Part Number	Connector	Wire Gauge	Colour	A (mm)	B (mm)	C (mm)
19164-0013	Butt Splice	22-18AWG	Red	15	39.4	4.7
19164-0044	Butt Splice	16-14AWG	Blue	15	39.4	4.95
19164-0056	Butt Splice	12-10AWG	Yellow	15	45.7	6.99



**Voltage:** Maximum 600V **Barrel Type:** Closed

Material Plating - Mating & Termination: Tin

Material Metal: Copper Insulation: NiAc™

Temperature Range Operating: -55°C to +125°C

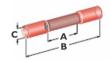
Wire Insulation Diameter: 5.97mm max.

Pack Size: 10, 50, 100, 500









# MALE & FEMALE PVC INSULATED DISCONNECTS



Part Number	Nylon Insulated	Wire Section	LI (mm)	L2 (mm)	Dia	Colour
1852000	I/4" Male Push On	0.25-1.00mm <sup>2</sup>	12	21.0	1	Red
1856000	I/4" Male Push On	1.00-2.50mm <sup>2</sup>	12	21.0	2	Blue
1862000	I/4" Male Push On	2.50-6.00mm <sup>2</sup>	13	22.5	3	Yellow
1851500	I/4" Female Push On	0.25-1.00mm <sup>2</sup>	-	23.5	4	Red
1855500	I/4" Female Push On	1.00-2.50mm <sup>2</sup>	-	23.5	5	Blue
1860500	I/4" Female Push On	2.50-6.00mm <sup>2</sup>	-	24.0	6	Yellow







Crimping Tools (see p.184)













# **TUBULAR TERMINAL CRIMPING TOOL**

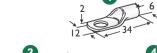


NEW

Part Number	Screw Hole	Wire Section	Dia.
05000BK	M6	I6mm <sup>2</sup>	1
05100BK	M8	I6mm <sup>2</sup>	I
05010BK	M8	25mm <sup>2</sup>	2
05021BK	M8	35mm <sup>2</sup>	2
05110BK	MI0	25mm <sup>2</sup>	3
05020BK	MI0	35mm <sup>2</sup>	3
05030BK	MII	50mm <sup>2</sup>	4
05040BK	MI3	75mm²	5















# Information, Notes & Part Number Index

# Industry know-how.



INFORMATIC



Fuses are current sensitive devices and selected to be the weakest link in the circuit. Circuit protection is provided when the fuse link melts and safely interrupts the over current demand. The key criteria to judge the performance of a fuse is the time versus current characteristic curve. This curve can be used to match the fuse with the anticipated over current load expected in the application.

### **Types of Over Current**

Short Circuit: A short circuit is a current condition that greatly exceeds the rating of the device. It is caused when a malfunction or accident creates a break in the normal path allowing electricity to flow directly to ground. This shorter current path bypasses the resistance offered by the circuit components connected in the normal current path. In this situation, there is virtually no resistance to impede the current and the current will build to a level where the heat generated can cause insulation or equipment breakdown.

**Overload:** An overload is an over current that is within the normal current path. Overloads occur when the current exceeds the value for which the equipment or associated wiring is rated. This typically occurs when too many devices are connected to the circuit or when a device connected to the circuit malfunctions. Sustained overloads may slowly cause overheating of the wiring and the components. The circuit protection device must open before these types of overloads cause damage.

### **Selecting Over Current Protection**

During normal conditions, an over current protection device must carry the current without nuisance openings. However, when an overload or short circuit occurs, the device must interrupt the over current and withstand the voltage across the device after arcing. To properly select an over current device, the following items must be carefully considered:

**Voltage Rating:** Represents the maximum system voltage present in the circuit in which the over current device is installed. The system voltage should not exceed this value for proper operation of the device during an over current event

**Current Rating:** This is the ampere value marked on the circuit protection device. It is established by the manufacturer as a value of current which the device can carry, based on a controlled set of test conditions. The current rating of a fuse is typically de-rated by 25% to ensure continuous operation in an ambient temperature of  $25^{\circ}$ C and avoid nuisance blowing. Example: A fuse with a current rating of 10A is usually recommended for operation at no more than 7.5A ( $10A \times 0.75$ ) based on an ambient temperature of  $25^{\circ}$ C. If the ambient temperature is higher, a re-rating must be calculated as per the section below.

**In-rush Characteristics:** During the operation of protected equipment, system current can significantly vary. This is particularly evident when motor or other inductive loads in the circuit cause large current surges during start-up or shutdown. A time-delay fuse should be used in applications where in-rush currents are possible.

### **Re-rating For Ambient Temperature**

The current carrying capacity tests of fuses are performed at 25°C and will be affected by changes in ambient temperature. At higher ambient temperatures, a fuse will respond faster to a given overload. Conversely, at lower ambient temperatures, a fuse will respond slower to a given overload. Selecting the correct fuse for higher or lower ambient temperatures requires the use of an ambient temperature re-rating chart. These charts vary by product and manufacturer ie. a slow acting fuse will have a different re-rating curve to a fast acting fuse.

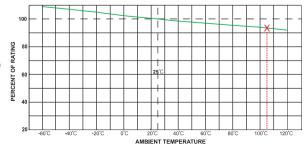
**Example:** We need to select the correct fastacting fuse for a circuit with a normal operating current of 15A and an ambient temperature of 105°C.

The formula below uses a 105°C re-rating factor of 0.88 (read from the chart on the right) and the standard 25°C de-rating factor of 0.75

Normal Operating Current
Re-rating x De-rating

15A 0.88 × 0.75

The fuse rating we require is: 22.73A at 105°C.







### Thermal Circuit Breakers

The basic components of a thermal circuit breaker are the composite alloy reed, two precious metal contacts and the interconnecting terminals. When an over current occurs, heat is generated as the current flows through the reed causing the reed to deflect and snap open. This separates the contacts and safely interrupts the current flow. Two important parameters used to judge the performance of thermal circuit breakers are the time versus current characteristic curve, similar to the fuse, along with the speed at which the contacts snap open. The relative speed at which the contacts separate is a measure of the cycle life under electrical loading demands.

### **Types Of Thermal Circuit Breakers**

In contrast to fuse links, thermal Circuit Breakers are resettable. There are SAE definitions for the different types of thermal circuit breakers. Four different reset operational methods are generally available. Type II, Type III and Type III\*.

Type I (Automatic Reset): Cycles or continuously resets until the fault is corrected. Type I circuit breakers are typically used to protect circuits which occasionally experience momentary overloads such as wiper motor and headlamp circuits where a self resetting device is preferred. They are not designed for long term cycling. It is recommended they are installed downstream of a main fuse, manual reset breaker or momentary switch.

Type II (Modified Reset): Non-cycling. Once tripped, the open circuit condition is maintained, except for a low milliamp draw through the resistor. The circuit breaker resets when power is turned off. Requires a minimum voltage/current to maintain open circuit. Type II circuit breakers are typically used in applications where fuse replacement is objectionable, such as power window, seat and sunroof circuits.

**Type III (Manual Reset):** Non-cycling. Manually resettable circuit breakers remain in the open position until a button, lever or other external reset device is manually depressed to re-engage the circuit. Type III circuit breakers are typically used in applications where a manual reset is desired for safe diagnosis of a circuit fault.

**Type III\* (Manual Reset - Push to Trip):** Same as a Type III manual reset breaker however the user can press a button on the breaker to open the circuit manually.

Type III\* (Manual Reset - Switchable): Same as a Type III manual reset breaker however the user can open the circuit by moving an external switch lever to the OFF position. This same lever can be used to re-engage the circuit by moving the lever back to the ON position, just like a switch.

















Type II

Modified Reset
(Switch Power
Off / On To Reset)



Type III

Manual Reset
(Push Button To Reset)



Type III P.T.T Manual Reset (Push Button To Trip Move Lever To Reset)



Type III Switchable Manual Reset (Moveable Lever)





### Match Wire Gauge To Fuse

In order to protect wiring under all overload and short circuit conditions, it is necessary to standardize the fuse and wire selection process. Fuses have controlled opening characteristics and each wire gauge has its respective current carrying capacity. Fuses need to be selected to always protect the wire insulation from damage. In the selection of wire gauge at various ambient temperatures, it is important to consider the worst case or highest ambient temperature for the application. Wires derate to a much higher degree than fuses, because wire insulation temperature capability is affected much more severely.



Littlefuse provide the following table advising the recommended maximum continuous current rating for the size of wire based on the type of insulation (either GXL or GPT) and the ambient temperature (25°C, 80°C or 105°C).

W	/ire Size			Maximum Continuous Current (Amperes)				
AWG	B&S	mm²	mm (dia.)	At 2 GXL	25°C GPT	At 8 GXL	0° <b>C</b> GPT	At 105°C GXL
-	-	0.3	0.62	15	10	Ш	4	9
20	-	0.5	0.81	21	15	16	6	13
-	-	0.75	0.98	27	21	20	7	17
18	-	0.8	1.02	31	22	23	7	19
16	-	1.0	1.29	33	23	25	9	20
15	-	1.5	1.45	43	30	33	12	27
14	-	2.0	1.63	50	36	37	14	32
13	-	2.5	1.83	60	42	45	15	38
12	-	3	2.05	68	47	51	18	42
-	-	4	2.26	80	56	61	22	50
10	-	5	2.59	90	65	68	23	58
-	-	6	2.76	103	73	78	28	64
8	8B&S	8	3.26	125	87	96	30	79
-	-	10	3.57	146	103	111	40	90
6	6B&S	13	4.12	170	120	129	47	105
4	-	19	5.19	221	156	166	61	137

### Wire Size Definitions:

American Wire Gauge or AWG for short (used within the US) - is the standard method denoting wire diameter. Measuring the diameter of the conductor (the bare wire) with the insulation removed. AWG is sometimes also known as Brown and Sharpe (B&S) Wire Gauge. Whilst countries outside of the US use a metric measurement ie  $mm^2 = Millimetres$  Squared.

### Wire Insulation Types SAE J-1128:

**GXL**: General purpose cross link polyethylene insulation wire with a maximum insulation temperature of 155°C. Type GXL automotive primary wire is the most common type. It works with most standard automotive wire connectors and may be applied in engine compartments where higher heat resistance is required according to SAE J-1128. GXL automotive wire is thin-walled, giving it a small diameter for hard-to-fit areas in trucks and trailers. Its recommended temperature range is -51°C to 125°C.

**GPT**: General purpose thermoplastic insulation wire with a maximum insulation temperature of  $90^{\circ}$ C. Type GPT automotive wire is intended for use whenever SAE J-I 128 specifies general circuit wiring. GPT automotive primary wire features extruded insulation and has a recommended temperature range of  $-40^{\circ}$ C to  $80^{\circ}$ C.



# **WIRE GAUGE SELECTION (CONTINUED)**



Maximum Allowable Amperage Of Conductors Under 50 Volts (Per SAE J-378)

						<u> </u>		
	Wire Siz	ze	80			Rating of Conductor Insulati 105°C		
Wire	Wire	Wire	Outside	Inside	Outside	Inside	Outside	Inside
Gauge	Gauge	Gauge	Engine	Engine	Engine	Engine	Engine	Engine
AWG	mm²	mm (dia.)	Spaces	Spaces	Spaces	Spaces	Spaces	Spaces
18	0.8	1.02	I5A	11.7A	20A	17.0A	20A	22.3A
16	1	1.29	20A	15.6A	25A	21.3A	30A	26.7A
14	2	1.63	25A	19.5A	35A	29.8A	40A	35.6A
12	3	2.05	35A	27.3A	45A	38.3A	50A	44.5A
10	5	2.59	50A	39.0A	60A	51.0A	70A	62.3A
8	8	3.26	70A	54.6A	80A	68.0A	90A	80.IA
6	13	4.12	100A	78.0A	120A	102.0A	125A	111.3A
4	21	5.19	130A	101.4A	160A	136.0A	170A	151.3A
3	26	5.83	150A	117.0A	180A	153.0A	195A	173.6A
2	33	6.54	175A	136.5A	210A	178.5A	225A	200.3A
- 1	42	7.35	210A	163.8A	245A	208.3A	265A	235.9A
0	53	8.25	245A	191.1A	285A	242.3A	305A	271.5A
00	67	9.26	285A	222.3A	330A	280.5A	355A	316.0A
000	85	10.40	330A	257.4A	385A	327.3A	410A	364.9A
0000	107	11.68	385A	300.3A	445A	378.3A	475A	422.8A

# **INGRESS PROTECTION (IP) RATING**

The Ingress Protection rating is a two-digit number used to rate the degree of protection provided against the intrusion of solid objects (including body parts like hands and fingers), dust, accidental contact and water in mechanical casings and with electrical enclosures. The first digit represents protection against ingress of solid foreign objects. The second digit represents protection against harmful ingress of water. The higher each rating, the more protection is offered as shown in tables below.

Val	ue Protection from SOLIDS
x	No protection.
1	Protected against solid objects over 50mm e.g. hands, large tools etc.
2	Protected against solid objects over 12.5mm e.g. fingers, tools etc.
3	Protected against solid objects over 2.5mm e.g. screwdriver, thick wires etc.
4	Protected against solid objects over 1.0mm e.g. thin wires, screws etc.
5	Dust Protected. Limited protection against dust ingress (no harmful deposit).
6	Dust Tight. Totally protected against dust ingress.



Valu	e Protection from WATER
X	No protection
1	Protected against vertically falling drops of water. Should have no harmful effect.
2	Protected against vertically dripping water at any angle of up to 15° from the vertical. Should have no harmful effect.
3	Protected against water spray at any angle up to $60^\circ$ from the vertical. Should have no harmful effect.
4	Protected against water splashing against the enclosure from any direction. Should have no harmful effect.
4K	Splashed water, at high pressure, only for road vehicles.
5	Protected against low pressure water jets from any direction. Should have no harmful effect.
6	Protected against high pressure water jets from any direction. Should have no harmful effect.
6K	Powerful water jets, at high pressure (flooding), only for road vehciles
7	Protected against harmful effects of 30 min. immersion in water at depth of 15cm (top of device) to 1 M (bottom of device).
8	Protected against continuous immersion in water at a depth and conditions specified by the manufacturer.

For pressure / steam jet cleaning, only for road vehicles.





The following table lists a range of standard Imperial bolts including the number of threads per inch according to each of the different standards. Metric bolts are also listed based on closest matching diameter. Metric bolts are not equivalent to Imperial bolts. To ensure proper fit, a bolt must be threaded into a nut of the same type. ie UNC 1/4" bolt with a UNC 1/4" nut. However, if you wanted to bolt down a product that is specified with an M8 hole size, you could use either an M8 bolt or a 5/16" bolt, as they both require a hole size approximately 8mm in diameter.

	II.	1PERIA	L BOL	.TS	METRIC BOLTS			
Size (IMP.)	Size (MM)	BSW (TPI)	BSF (TPI)	UNC (TPI)	UNF (TPI)	Size (MM)	Metric Coarse (Thread Pitch)	
#6	3.5	-	- 1	32	40	M3.5	0.6	0.35
#8	4.2	-	-	32	36	M4	0.7	0.5
3/16"	4.8	24	32	24	32	M5	0.8	-
#10	4.83	-	-	24	32	-	-	-
#12	5.5	-	-	24	28	-	-	-
1/4"	6.4	20	26	20	28	M6	1.0	-
5/16"	7.9	18	22	18	24	M8	1.25	1
3/8"	9.5	16	20	16	24	MI0	1.5	1.25
7/16"	-11	14	18	14	20	-	-	-
1/2"	13	12	16	13	20	MI2	1.75	1.5
9/16"	14	12	16	12	18	MI4	2.0	1.5
5/8"	16	11	14	11	18	MI6	2.0	1.5
3/4"	19	10	12	10	16	M20	2.5	2.0
7/8"	22	9	П	9	14	M22	2.5	2.0
I"	25	8	10	8	12	M24	3.0	2.0
1-1/8"	29	7	9	7	12	M30	3.5	3.0
I-I/4"	32	7	9	7	12	M33	3.5	3.0

Pitch Major
Dia.

→

### Abbreviations:

IMP. = Imperial.MM = Millimeter.

BSW = British Standard Whitworth.BSF = British Standard Fine.

TPI = Number of threads per inch.

UNC = Unified National Coarse.
UNF = Unified National Fine.
TPI = Number of threads per inch.

# CALCULATING WATTS, AMPS & DC VOLTAGE

It is simple to calculate either DC Volts, Watts or Amps provided you know the other 2 values. Just use the appropriate formula as shown below;

Unknown Va	lue	Known values	Example	Answer
Watts	=	Amps x Volts	2A x I2Vdc	= 24W
Amps	=	Watts / Volts	24W / 12Vdc	= 2A
DC Volts	=	Watts / Amps	24W / 2A	= 12Vdc

# **IGNITION PROTECTION**



An electrical device that has been certified Ignition Protected is suitable for use in marine engine compartments and fuel tank spaces. There are generally two test standards accepted by the Marine Industry – SAE J1171, External Ignition Protection of Marine Electrical Devices and UL1500, Ignition- Protection Test for Marine Products. The requirements and test procedures for the two standards are similar. Essentially, three test results will allow a device to be certified IGNITION-PROTECTED.

- 1. The device or component is constructed so that a defined flammable hydrocarbon mixture surrounding the device will not ignite if a normal electrical arc, spark or heat source ignites the mixture inside the device.
- 2. Under the conditions of item 1, the device or component has insufficient energy to ignite the mixture inside the device.
- 3. Under the conditions of item I, the source of ignition is hermetically sealed from the surrounding mixture.

  An Ignition- Protected device is not necessarily Explosion-Proof. Explosion-Proof devices are as applied to U.S. Coast Guard inspected vessels or as defined by the National Electric Code.



# **PACKAGING OPTIONS & DISPLAYS**

# PROLEG

### **Retail Clamshell - Single Cavity**







### Counter Displays Modular Multi Peg



### **Assortment Trade Kit**



**DIY Boxed Kit** 



## **Retail Clamshell Packaging Index**

The packaging index below lists the product types and pack quantities that are available in clamshell packaging. To order these products in blister packaging just add the SP or AP suffix to the part number. ie. To order a 5pc 'Spare Pack' of a 10A Minifuses (on page 15), use the part number: MIN010SP. ie. To order a 5pc 'Assortment Pack' of Minifuses (on page 15), use the part number: MIN000AP.

Product Type Series or Description	Spare Pack (SP) Pieces per Pack	Assortment Pack (AP) Pieces per Pack	Clamshell Type	Inner Box Packs per Box	Catalogue Page Number	
SFE Cartridge Fuse	5	10	Mini	10	10	
AGC Cartridge Fuse	5	5	Mini	10	10	
5AG Cartridge Fuse	2	_	Mini	10	12	
6AC / GBC Fuse	5	5	Mini	10	12	
Micro2, Micro3 & Mcase	_	16	Mini	10	35	
Micro2 Fuse	5	7	Mini	10	13	
Micro3 Fuse	5	4	Mini	10	13	
Low Profile Minifuse	5	5	Mini	10	14	
Minifuse	5	5	Mini	10	15	
Minifuse LED Indicating	2	5	Mini	10	15	
Autofuse	5	5	Mini	10	17	
Autofuse LED Indicating	2	5	Mini	10	17	
Maxifuse	Ī	_	Mini	10	18	
Maxifuse LED Indicating	i	_	Mini	10	18	
Fusible Links PAL		_	Mini	10	20-22	
Midi Fuse	i i	_	Mini	10	24	
Mega Fuse	i	_	Mini	10	25	
Battery Fuse	i i	_	Mini	10	28	
Lift Truck Fuse ANL	i	_	lunior	10	27	
Mini Blade Breaker	i i	_	Mini	10	48	
Auto Blade Breaker	i	_	Mini	10	49-51	
Shortstop Breaker	i	_	MiniB	10	52-53	
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FHM200	/3 83	LPM LPM-KIT	38	PDM33003ZXM	122	V	
FHM200K	83	LPM-KIT2	36	PDM61001ZXM	93	VIDI00I	174
FHU002L	77	LSCR	104	PDM71003ZXM	123	V2D1001	174
FHZ210	109	N. 4		PDMKIT101	119	V8D1001	174
FHZ310	109	M		PDMKIT-163T	129	VA9C002	174
FHZ410	109	MAHC0001	80	PDMKIT-164T	129	VA9C003	174
FLEC3000Z-0	145	MAX	18	PDMKIT-264T	130	VAAC	174
FLEC3000Z-0U	145	MAX58V	19	PDMKIT311	122	VCH01-K	174
FMG FP-2	100 44	MAXD MAXD-KIT	18	PDMKIT312 PDMKIT331	122	VHP01 VME01	175
FP-7AM	44	MAXI-KIT	39 39	PDMKIT-364T	121 132	VMM01	174 174
FP-A3	44	MAXP.	19	PDMKIT-404T	131	VMS01	174
FRH-A12-MB-A2	124	MCASE-KIT	40	PDMKIT424	124	VPS	174
FRH-A12-T	124	MCASEPS-KIT	40	PDMKIT-564T	131	VRT	174
FRH-A24	124	MCPS	20	PDMKIT611	93	VVPZC00-000	174
FRH-A24-C	124	MEG	25	PDMKIT-664T	131	X	
FRH-A-CPA	124	MEG70V	25	PDMKIT711 PDMKIT712	123	XTCK4	
FSC-AUTO FSCLA-KIT	85 85	MEGA-KIT2 MFHC	4 I 80	PDMKIT/12 PDMKITALSI	123 120	XICK4	116
FSCL-KIT	85 85	MFHCLR6	80	PDMKITASSI	120		
FSC-MINI	85	MFP12SC	90	PDM-R3ACI	125		
FT-3	44	MFP12SCGTP	90	PDM-S3AC1	126		
FUSE-CADDYI	43	MFP6SC	90	PDM-SCT	125		
FUSE-CADDY2	43	MFP6SCGTP	90	PDM-STI	126		
G		MICR000AP	35	PDM-TK	124		
		MICR2	13	PDM-TT1	125		
GB3000	154	MICR2+3-KIT	37	PDM-U3ACI PDM-UTI	127		
GBC	12	MICR2-KIT MICR2-KIT2	37	PDM-UTI POWCAL	127		
H		MICR3	36 13	PROBRK001	26 128		
HFA-R	70	MICROASST-KIT	37	PROBRK002	133		
HFB-R	71	MID32V	24	PROBRK003	134		
HHB-R	7 i	MID58VM6	24	PROBRK007K	92		
HHL	73	MIDFBB	82	PROBRK008K	128		
HHN	70	MIDI-KIT2	41	PROBRK017	62		
HHR	77	MIDIPRO-KIT	41	PROBRK018A	57		
HHRL	77	MIN MIN58V	15	PROPNLI4SI2WB	173		
	70	MIIN58V	16	PROPNL14V4WSB	175	1	
HRJ	, ,	MINID	1.5				
HRJ	, 0	MIND	15	PROPNL14V6WSB	175		
HRJ	, ,	MIND	15	PROPNL14V6WSB	175		



# **CATALOGUE SYMBOLS**



New Product



Military Standard / Grade



Information

PROLEG



**Updated Product** 



Ignition Protected



Video Content



Silver Plated



Do It Yourself



QR Code: 9999

OR Code Scan this for more information



**IP66** Ingress Protection IP chart see page 193

Electric Vehicle Application 500V, 800V, 850V, 1000V.

# INTERNATIONAL APPROVAL MARKINGS



AS (Australia) Australian Standard









(U) UL (Canada) Cus UL (Canada & USA)

KTL (Korea)

▲ TÜV (Germany)



UL (USA)

METI (Japan) IASO |ASO (Japan)

ROHS (China) RoHS ROHS (EU)

AEC Automotive Electronics

**42**5 UR (Canada)

// ISAE (Japan)

REACH (EU)

Council

UR (USA)

(S) SEMKO (Sweden)

(Pb) Lead Free HF Halogen Free

USCG US Coast Guard

SAE SAE (International)

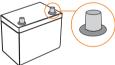
caus UR (Canada & USA)

CE (EU)

Pos. 17.5mm

# **AUTOMOTIVE BATTERY TERMINAL TYPES**





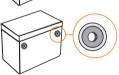


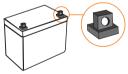
### SIDE TERMINAL Threaded Terminal

3/8"-16 Positive & Negative

**FLAG TERMINAL** 

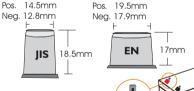
Nut and Bolt Fixing



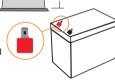


# Neg. 15.9mm Neg. 17.9mm SAE / IIS DIN 18mm 18mm

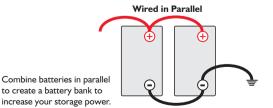
Pos. 19.5mm

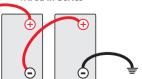


### **FASTON TERMINAL** Quick Connect Terminal FI 4.8mm, F2 6.35mm



# **BATTERY PAIRING**





Combine 2 x 12V batteries in series increases your voltage to 24V.

Wired in Series





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