



# Instruction Manual for Weather Proof PDM Kits

The Rear Terminal Minifuse and Relay (RTMR) unit is designed to provide efficient power distribution in a rugged compact form, suitable for applications in marine, construction, agriculture, heavy trucking, and specialty vehicle industries.

This manual is for these PDM kits:

PDMKIT-163T  
PDMKIT-164T  
PDMKIT-264T  
PDMKIT-364T

PDMKIT-404T  
PDMKIT-564T  
PDMKIT-664T



PDMKIT-264T



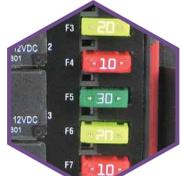
Sturdy weather proof cover.



Options for fuses, relays & breakers.



All component positions are labelled.



Relay options include SPST or SPDT relays



Rust resistant stainless steel studs.



Silicone cover for stud protection.



Threaded insert for flush panel or bracket mounting.



# TABLE OF CONTENTS

## PAGE GENERAL INFORMATION

3	Introduction
4	Kit Contents
5	Important Information
6	Assembly Instructions
7	Fuse Selection
7	Relay Layout Options

## INTERNAL FUSE / RELAY BUSS

8	Internal Bussing Explained
9 - 10	Internal Buss Diagrams

## WIRING EXAMPLES

11	Sample Fuse Circuit
12	Sample Fuse / Relay Circuit (Negative Switching)
13	Sample Fuse / Relay Circuit (Positive Switching)
14	Flasher Relay Circuits

## SPECIFICATIONS

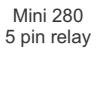
15	General Specifications
15	Dimensions

## ADDITIONAL PRODUCTS

16	Fuses, Circuit Breakers, Mini Blade Devices
17	Micro Relays, Flasher Relays, Hazard Light Switch
18 - 19	External Fuse Protection
20	Terminal Tools
21	Terminals & Seals
22	Panel Cut-Out Schematic

# INTRODUCTION

This instruction manual covers the following PDM kits:

<p><b>PDMKIT-163T</b></p> <p>RTRM Block (15305-1) with shallow Cover                  20 x Mini fuses                  10 fuses bussed on the left side                  10 fuses bussed on the right side</p>		 <p>Mini fuse</p>
<p><b>PDMKIT-164T</b></p> <p>RTMR Block (15305-1) with tall cover                  20 x Mini fuses / circuit breakers                  10 fuses/breakers bussed on the left side                  10 fuses/breakers bussed on the right side</p>	<p>PDMKIT-164T</p>	 <p>Mini circuit breaker</p>
<p><b>PDMKIT-264T</b></p> <p>RTMR Block (15305-2) with tall cover                  5 x Micro 280 relays                  10 x Mini fuses / circuit breakers                  All fuses bussed on the left side                  All relays bussed on the right side to coil pin 86</p>		 <p>Micro 280 5 pin relay</p>
<p><b>PDMKIT-364T</b></p> <p>RTMR Block (15305-3) with tall cover                  3 x Mini 280 relays or 3 x Micro 280 relays                  10 x Mini fuses / circuit breakers                  All fuses bussed on the left side                  All relays bussed on the right side to coil pin 86</p>	<p>PDMKIT-264T</p>	 <p>Mini 280 5 pin relay</p>
<p><b>PDMKIT-404T</b></p> <p>RTMR Block (15305-4) with tall cover                  3 x Mini 280 relays or 5 x Micro 280 relays                  10 x Mini fuses / circuit breakers                  No bussing, all component terminals cabled individually</p>		 <p>Mini 280 5 pin relay</p>
<p><b>PDMKIT-564T</b></p> <p>RTMR Block (15305-5) with tall cover                  3 x Mini 280 relays or 5 x Micro 280 relays                  10 x Mini fuses / circuit breakers                  All fuses bussed on the left side                  No bussing for relays</p>	<p>PDMKIT-364T</p>	 <p>Stud connects to internal buss</p>
<p><b>PDMKIT-664T</b></p> <p>RTMR Block (15305-6) with tall cover                  3 x Mini 280 relays or 5 x Micro 280 relays                  10 x Mini fuses / circuit breakers                  No bussing for fuses                  All relays bussed to coil pin 86</p>	 <p>Stud cover fitted</p>	<p>Stud connects to internal buss</p>

# KIT CONTENTS

The following parts are included in the PDM kit. Fuses and relays must be purchased separately. Whilst a selection of terminals and seals are included in the kit, they can also be purchased separately should more be required.



RTMR block  
(fuse block shown,  
varies by kit)  
Qty: 1



Covers  
(varies by kit)  
Qty: 1

	R1	F1
		F2
F11	R2	F3
F12		F4
F13	R3	F5
F14		F6
F15	R4	F7
F16		F8
F17	R5	F9
F18		F10
F19		
F20		F10

Inner lid label  
(varies by kit)  
Qty: 1



Medium Size  
Mounting  
Bracket  
Qty: 1



Bolt & Washer  
Qty: 4 of each



Stud Cover  
Qty: 2



Terminal (0.8 - 1.0mm<sup>2</sup>)  
AWG #18 - #16  
**Stamped '17'**  
Fuse Kit Qty: 5  
Fuse/Relay Kit Qty: 10



Terminal (1.0 - 2.0mm<sup>2</sup>)  
AWG #16 - #14  
**Stamped '15'**  
Fuse Kit Qty: 20  
Fuse/Relay Kit Qty: 35



Terminal (2.0 - 3.0mm<sup>2</sup>)  
AWG #14 - #12  
**Stamped '13'**  
Fuse Kit Qty: 5  
Fuse/Relay Kit Qty: 10



Green Cable Seal  
2.03 - 2.85mm dia. cable  
Fuse Kit Qty: 5  
Fuse/Relay Kit Qty: 10



Grey Cable Seal  
2.81 - 3.49mm dia. cable  
Fuse Kit Qty: 20  
Fuse/Relay Kit Qty: 35



Blue Cable Seal  
3.45 - 4.3mm dia. cable  
Fuse Kit Qty: 5  
Fuse/Relay Kit Qty: 10



Green Cavity Plug  
Fuse Kit Qty: 10  
Fuse/Relay Kit Qty: 20

# IMPORTANT INFORMATION

Bussmann RTMR blocks are rugged, compact and provide a high level of ingress protection. To ensure the product performs as designed, please install and use the block in accordance with the following requirements.

**Input Studs:** Some blocks feature one or more input studs which connect to the internal buss. Each stud has a maximum power rating of 80A. It is recommended that cables be a minimum gauge of #10 AWG and fitted with external fuse protection (see pages 18-19). Stud caps should be fitted after cables have been installed.

**Terminal Rating:** 30A max per terminal.  
**Terminal Wire Size:** #22 - #12 AWG / 0.35mm<sup>2</sup> - 3mm<sup>2</sup>.

**Ingress Protection Rating:** IP66-IEC 60529.  
 To achieve this rating you must fit cable seals to all cables and cavity plugs must be inserted into all empty cavities at the rear of the block. Cover must also be correctly fitted to the unit. Ensure when mounting the unit, all cables exiting the rear of the unit are not bent too tightly to ensure the cable seals will provide the correct seal.

**Temperature Rating:** -40°C to +125°C (RTMR block only).

**CAUTION! Please disconnect the battery before installing the fuse block.**



Please refer to page 8 for an explanation of studs & internal bus.

**Recommended External Fuse Protection**  
 Please refer to page 18.



# ASSEMBLY INSTRUCTIONS

## Circuit Wiring Information:

Each kit includes a selection of terminals and cable seals to suit different wire sizes.

To achieve the IP protection rating, each cable must be fitted with a cable seal as per these steps;

1. Strip approx. 5mm of insulation from the end of the cable.
2. Insert stripped end of cable through the cable seal.
3. Crimp the terminal onto exposed wire and the cable seal.

**Note:** the maximum rating of any single output circuit is 30A.



Terminal assembled with cable seal

## Inserting the Terminals:

Once the terminal has been crimped onto a cable, insert the terminal into the cavity. Note: the terminal will only lock into the panel when it is oriented correctly during insertion. Once the terminal is locked in place, it will be difficult to remove the cable from the panel. A terminal extraction tool may be required.

## Using the Cavity Plugs:

Cavity plugs are provided with the kit for the purpose of sealing any unused cavities at the rear of the block. This is required to achieve the IP protection rating. Additional packs of cavity plugs can be sourced from your local Prolec distributor.

## Selecting Plug-in Components:

This panel is designed for ISO 280 style components that feature 2.8mm blade terminals on 8.1mm centerline spacing. Prolec sell a wide range of fuses, circuit breakers, micro relays & flashers to suit;



Minifuse



Mini bladed breakers  
(auto / modified / manual reset)



Micro Relay  
(4 pin - N/O)



Micro Relay  
(5 pin - SPDT)



## Attaching RTMR block to the bracket:

Each PDM kit contains 4 x bolts and lock washers to screw the bracket onto the block.

1. Position the block so that it is under the 4 mounting holes on the bracket.
2. Screw each bolt and lock washer into the threaded insert on the panel. Refer to diagram (left). Note: the threaded inserts may be a tight fit when screwing in the bolt for the first time.

# FUSE SELECTION



## Selecting the Correct Fuse / Circuit Breaker Ampere Ratings:

If you are replacing an existing fuse panel, you can use the same fuse ratings as before. If you are adding new accessories, you should consult the specifications provided with the accessory for further information.

The following is a list of fuse ampere ratings used for common accessories:

### 5A Fuse

- Licence plate light
- Interior light

### 10A Fuse

- Reverse switch/lights
- Radio
- Daytime running lights
- Turn signals

### 15A Fuse

- Cigarette lighter
- Wipers
- Fuel pump
- Hazard Flasher

### 20A Fuse

- Power windows
- Dual horn
- Sunroof
- Fresh air blower

### 30A Fuse

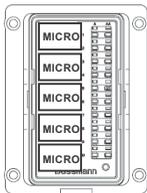
- Trailer socket

**Warning:** The above fuse ratings are provided as a guideline only. It is strongly recommended to consult the specifications supplied with the accessory when selecting a fuse rating to protect the device. Using the wrong fuse may result in damage to the device, cabling or cause a fire.

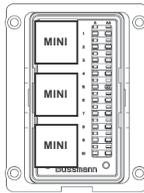
# RELAY LAYOUT OPTIONS

Relays & Flashers can be installed in the following kits as illustrated.

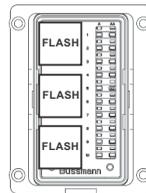
PDMKIT-264T  
PDMKIT-404T  
PDMKIT-564T  
PDMKIT-664T



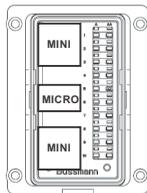
PDMKIT-364T  
PDMKIT-404T  
PDMKIT-564T  
PDMKIT-664T



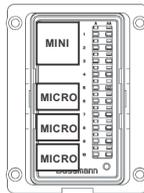
PDMKIT-404T  
PDMKIT-564T



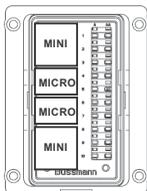
PDMKIT-364T  
PDMKIT-404T  
PDMKIT-564T  
PDMKIT-664T



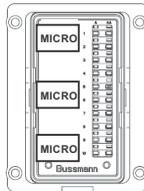
PDMKIT-404T  
PDMKIT-564T  
PDMKIT-664T



PDMKIT-404T  
PDMKIT-564T



PDMKIT-264T  
PDMKIT-364T  
PDMKIT-404T  
PDMKIT-564T  
PDMKIT-664T

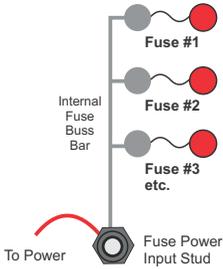


# INTERNAL BUSSING EXPLAINED

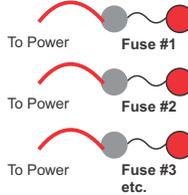
## Fuse Bussed RTMR Units

The following kits feature an internal fuse bus; PDMKIT-163T, 164T, 264T, 364T & 564T. The internal fuse bus feeds power to all 10 fuses from an input stud on the underside of the block. This reduces the number of terminals, cable seals, cavity plugs and wiring required to assemble the unit. It is also a great time saver. The only disadvantage of using a common power bus is that you cannot power individual fuses from alternate power sources eg. 5 fuses powered directly from battery and 5 fuses powered from ignition power.

### RTMR with internal Fuse Bus



### RTMR without internal Fuse Bus

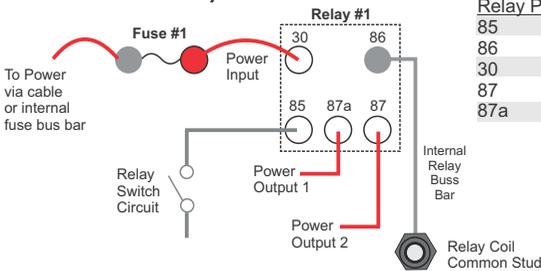


As you can see in these illustrations, the RTMR unit with no internal fuse bus requires an input power cable for every fuse, whereas the RTMR unit with an internal fuse bus only requires 1 power input cable.

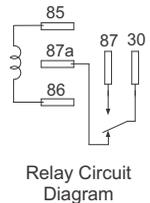
## Relay Bussed RTMR Units

The following kits feature an internal relay bus; PDMKIT-264T, 364T & 664T. The internal relay bus provides a common power or common ground circuit to relay coil pin 86. There is a common misconception that relay pin 30 (power input) is connected to the relay bus. This is NOT the case. Power to relay pin 30 should be supplied from a fuse to ensure that the accessory is fuse protected. as shown below, relay pin 30 should be connected to a fuse on the RTMR using a jumper cable.

### RTMR with internal Relay Bus



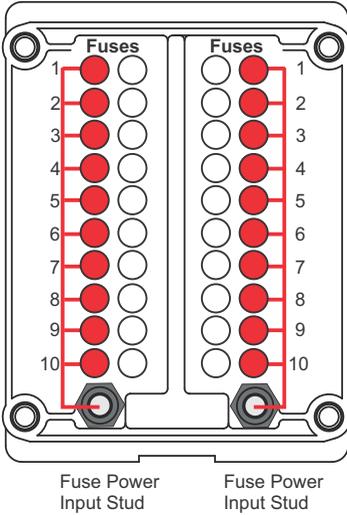
Relay Pin	Description
85	Relay coil power
86	Relay coil power
30	Power input
87	Power output N/O
87a	Power output N/C



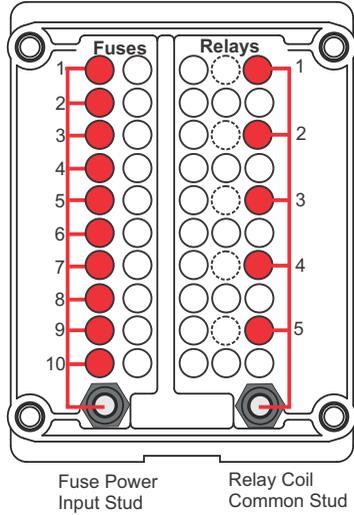
As you can see in the above illustration, relay coil pin 86 is connected to the internal relay bus bar. Relay common pin 30 is connected to a fuse on the RTMR block using a jumper cable. Depending on how you wish to switch the relays, the relay coil stud can be connected to either positive or ground. However, if the relay is diode protected, it can only be wired in one configuration that will be determined by the polarity of the diode.

# INTERNAL BUSS DIAGRAMS

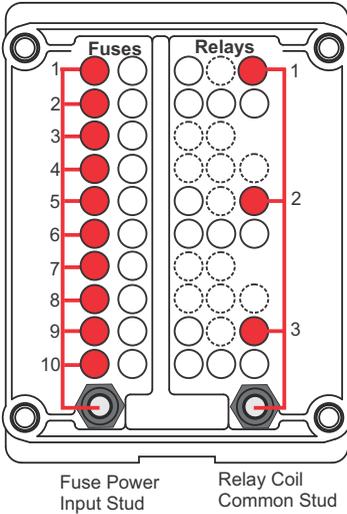
**PDMKIT-163T & PDMKIT-164T**



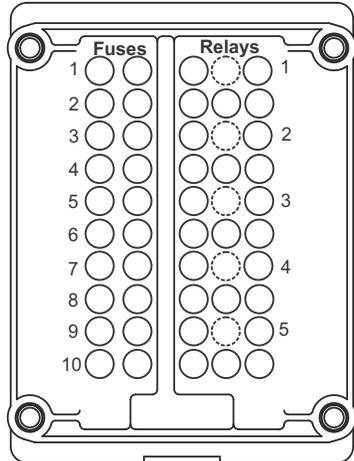
**PDMKIT-264T**



**PDMKIT-364T**



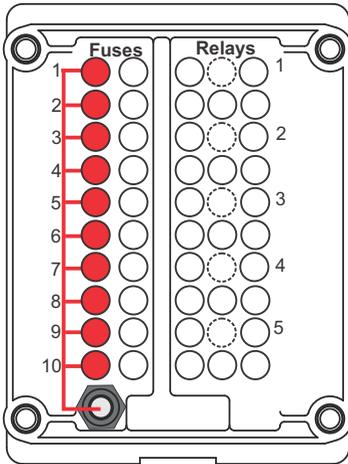
**PDMKIT-404T**



Please refer to next page for more information

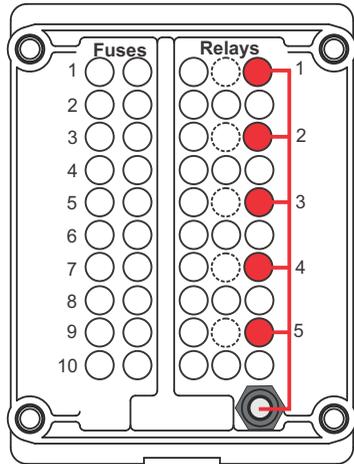
# INTERNAL BUSS DIAGRAMS (CONT'D)

PDMKIT-564T



Fuse Power  
Input Stud

PDMKIT-664T



Relay Coil  
Common Stud

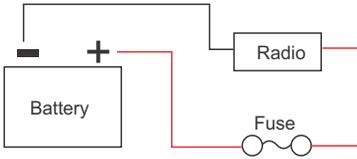
Part Number	Nbr of Cavities	Max Nbr of Terminals
PDMKIT-163T	20	20
PDMKIT-164T	20	20
PDMKIT-264T	35	30
PDMKIT-364T	35	22
PDMKIT-404T	50	45
PDMKIT-564T	40	35
PDMKIT-664T	45	40

- No Cavity, bussed connection
- Cavity to fit a terminal
- Empty cavity (no terminal)

### Important Note:

To achieve the ingress protection rating (IP66-IEC 60529), you must fit cable seals to all cables and cavity plugs must be inserted into all empty cavities at the rear of the block. Cover must also be correctly fitted to unit. Ensure when mounting the unit that all cables exiting the rear of the unit are not bent too tightly to ensure the cable seals will provide the correct seal.

# SAMPLE FUSE CIRCUIT



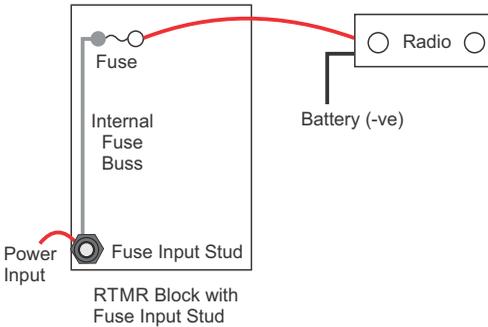
## Sample Circuit:

In this example, we will be using the RTMR block to power a radio as per this circuit diagram.

### Example 1. Using an RTMR block that features an input stud:

This example shows how to use an RTMR block that has an input stud for 10 fuses.

The input stud provides power from a single cable to all fuses on the same side which saves wiring.



## Steps.

1. Connect power from the battery (+ve) to the fuse input stud on the block.
2. Connect a cable from an unused fuse position on the block to the radio power input cable (+ve).
3. Connect the radio (-ve) cable to the battery (-ve).
4. Insert the appropriate fuse into the block to complete the circuit. The fuse protects this circuit from overloads.

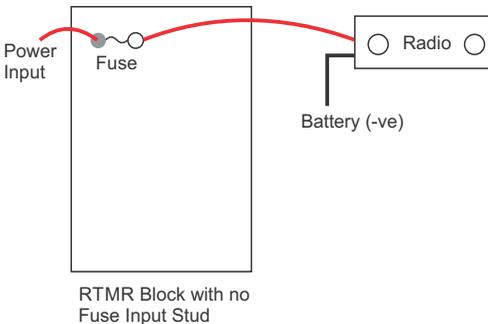
### Example 2. Using an RTMR block with NO input stud:

This example shows how to use an RTMR block which doesn't have an input stud for the fuses.

As there is no input stud, each fuse requires input power from a separate cable.

The advantage is that you can provide power from different sources to different fuses.

Fuses have no polarity so you can connect power to any side of the fuse.



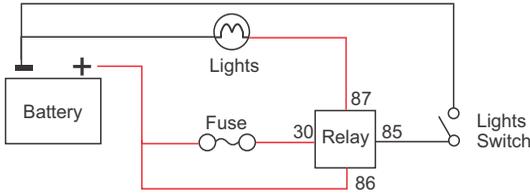
## Steps.

1. Connect power from the battery (+ve) to an empty fuse position on the block.
2. Connect a cable into the empty cavity directly beside the power input cable, then connect the other end of this new cable to the radio power input cable (+ve).
4. Connect the radio (-ve) cable to the battery (-ve).
5. Insert the appropriate fuse into the block to complete the circuit. The fuse protects this circuit from overloads.

# SAMPLE FUSE / RELAY CIRCUIT (NEGATIVE SWITCHING)

## Sample Circuit 1 (Negative Switching):

We will be using an RTMR fuse/relay block to power lights using a fuse and relay fitted in the block and a separate dash mounted light switch. In this example we have connected the dash mounted light switch to the negative battery terminal.



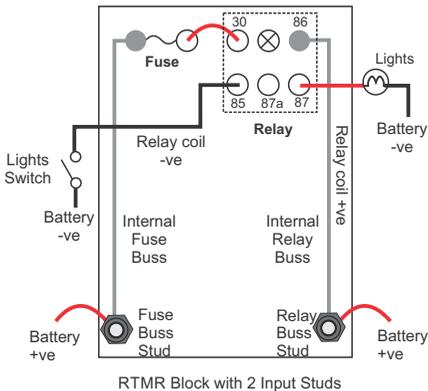
### Relay Connections:

- 30 - Lights +ve power input via fuse
- 87 - Lights +ve power output
- 86 - Relay +ve coil power
- 85 - Relay -ve coil power

### Wiring Example 1.

RTMR block with 2 input studs.

⊗ = Open hole, no connection.

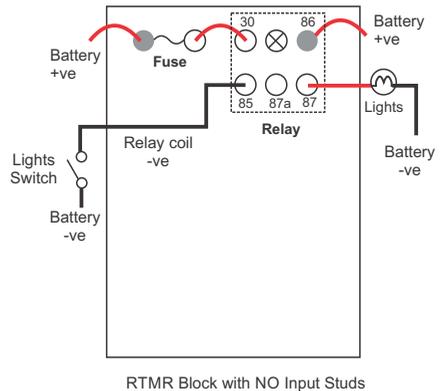


RTMR Block with 2 Input Studs

### Wiring Example 2.

RTMR block with NO input studs.

⊗ = Open hole, no connection.



RTMR Block with NO Input Studs

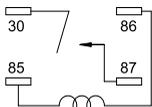
### Wiring Explanation.

In this simple example we are switching lights on/off using a dash mounted light switch. The circuit is fuse protected and power to the lights is switched by a normally open relay.

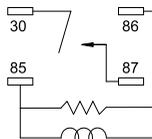
### How the Circuit Works.

When we switch the lights ON at the dash, power flows from relay coil (pin 86) to relay coil (pin 85) and out to GROUND via the lights switch on our dash. When the relay coil is energised it allows power to flow from the fuse (via a jumper cable) to relay pin 30 and out relay pin 87 to power the lights.

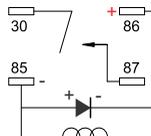
### Suitable Relays for this Circuit:



No Protection



Resistor Protection



Diode Protection  
Anode to pin 85

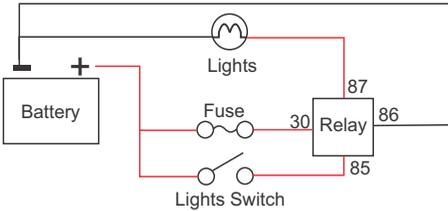
When energizing the coil of a relay, polarity of the coil does not matter unless the relay is diode protected.

When a relay is diode protected, you must connect the positive voltage to the correct terminal of the relay coil as illustrated in the diagram.

# SAMPLE FUSE / RELAY CIRCUIT (POSITIVE SWITCHING)

## Sample Circuit 1 (Negative Switching):

We will be using an RTMR fuse/relay block to power lights using a fuse and relay fitted in the block and a separate dash mounted light switch. In this example we have connected the dash mounted light switch to the positive battery terminal.

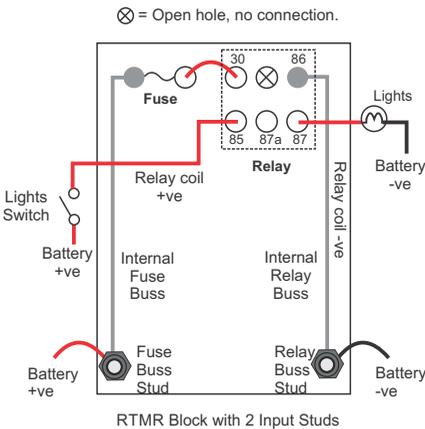


### Relay Connections:

- 30 - Lights +ve power input via fuse
- 87 - Lights +ve power output
- 86 - Relay -ve coil power
- 85 - Relay +ve coil power

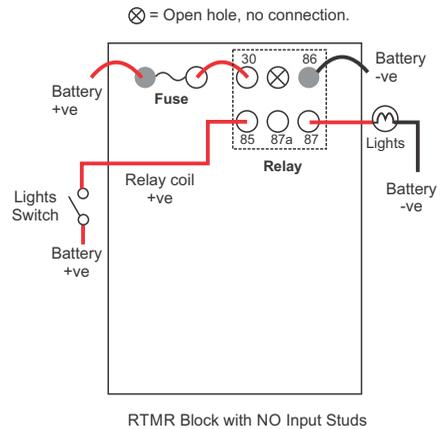
### Wiring Example 1.

RTMR block with 2 input studs.



### Wiring Example 2.

RTMR block with NO input studs.



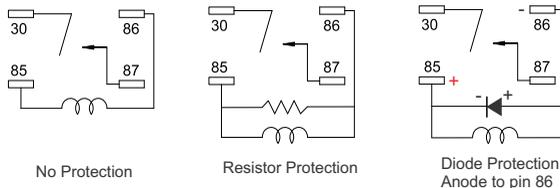
## Wiring Explanation.

In this simple example we are switching lights on/off using a dash mounted light switch. The circuit is fuse protected and power to the lights is switched by a normally open relay.

## How the Circuit Works.

When we switch the lights ON at the dash, power flows from the switch to relay coil (pin 85) and out relay coil (pin 86) to GROUND. When the relay coil is energised it allows power to flow from the fuse (via a jumper cable) to relay pin 30 and out relay pin 87 to power the lights.

## Suitable Relays for this Circuit:



When energizing the coil of a relay, polarity of the coil does not matter unless the relay is diode protected.

When a relay is diode protected, you must connect the positive voltage to the correct terminal of the relay coil as illustrated in the diagram.

# FLASHER RELAY CIRCUITS

## Using Flasher Relays in the RTMR.

Flasher relays are typically used to create the on/off flashing effect for turn signals and hazard lights. These relays can easily be installed in the RTMR. Only one flasher relay is required to create both a turn signal & hazard light circuit. There are however, a number of different ways a flasher relay can be wired. Regardless of the method you choose, it is recommended you do NOT use an RTMR that features internal relay bussing. The flasher relay can be installed in 2 different orientations, so please be mindful of this when designing your installation or replacing the relay.

## Choosing which RTMR to use for the flasher circuit.

It is recommended you use 2 fuses for your flasher circuit. The first fuse is used to protect the turn signal circuit (which powers the turn signal lights on one side of the vehicle). The second fuse is used to protect the hazard light circuit (which powers the turn signal lights on both sides of the vehicle simultaneously). In most modern vehicles, the hazard lights will operate even if the ignition is OFF, however the turn signals will only operate when the ignition is switched ON. To achieve this functionality, we recommend you use the PDMKIT-404T with no internal bussing. However if you do not need this exact functionality, then you can also use the PDMKIT564T with internal fuse bussing.

## Choosing which flasher to use.

Only flashers that feature ISO280 terminals can be used in the RTMR. We offer a range of flashers to suit the RTMR. When selecting the flasher, you need to consider the following;

1. Is the flasher powering LED turn signal lamps or conventional lamps?
2. Do you prefer a flasher with 3 or 4 terminals?
3. How many lamps will the flasher be operating?

### Flasher Relays (LED lamps)



**NO-762-LED**

Scan this  
QR Code  
for more  
information



QR Code: 9023

### Flasher Relays (conventional lamps)



**NO.761**

Scan this  
QR Code  
for more  
information



QR Code: 9024

Note: These flasher relays have a similar component footprint to a Mini Relay (26.4mm x 26.4mm).

## Selecting a Hazard Lights Switch.

Selecting a suitable hazard light switch is important, particularly if you wish to power the flasher circuit using 2 different fuses as recommended. The following switch can be wired to 2 different fuses and is suitable for use with both 3 and 4 terminal flashers.



**Hazard Lights  
Switch**

Scan this  
QR Code  
for more  
information



QR Code: 9029

# GENERAL SPECIFICATIONS & DIMENSIONS

**Components:** Accepts Mini fuses, Mini bladed circuit breakers, Mini 280 relays & Micro 280 relays and 280 Flashers. All components must have 2.8mm blades on 8.1mm centerline spacing.

**Mounting:** Threaded inserts # 10-32 as standard, (M5 optional).

**Panel Mounting SS Hardware:** Screw # MT1032PPHS.  
Washer # SW316S.

**Block & Cover:** Black thermoplastic featuring tether & silicone seal.

**Internal Buss:** Tin-plated copper (bussed versions only).

**Input Studs:** M6 stud nickel plated brass (bussed versions only).

**Input Stud Rating:** 80A max.

**Output Terminal Rating:** 30A max per terminal.

**Wire Size:** # 22 - # 12 AWG / 0.35mm<sup>2</sup> - 3mm<sup>2</sup>.

**Cover Options:** Replacement covers also available.

Shallow cover with Gore vent (Mini fuses only)

# B151-7168-1-J

Deep cover (Mini fuses / breakers / 280 relays)

# B151-7168-2-J

**Ingress Protection Rating:** IP66-IEC 60529.

Valid when properly installed with cover, cable seals and cavity plugs.

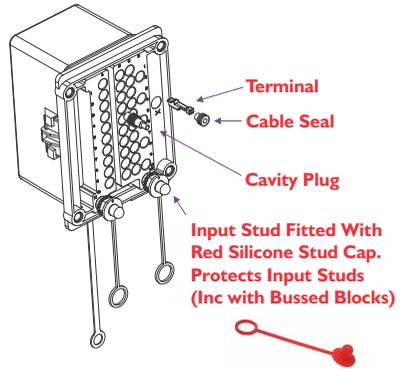
**Cavity Plugs:** Required to fill all unused output cavities for ingress protection.

**Cable Seals:** Please check the overall diameter of your cable before ordering cable seals.

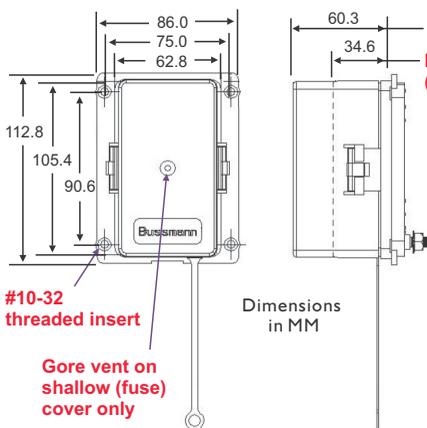
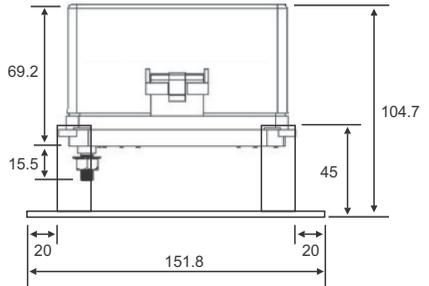
**Temperature Rating:** -40°C to +125°C (PDM only)

**Ordering:** Block is supplied with tethered cover. Bussed versions also include one nut and silicone stud cap for each buss 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 or relays.

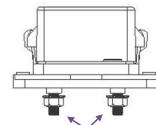


Medium Bracket Fitted To The RTMR

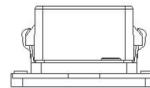


Relay / CB Cover (Deep)

Fuse Cover (Shallow)



Input studs on bussed versions only.



Non-bussed version (have no input studs).

Panel Cut-Out Schematic

Please refer to page 22.

# FUSES, CIRCUIT BREAKERS & MINI BLADE DEVICES

## Minifuse 32VDC

Part Number	Ampere Rating
MIN002	2A
MIN003	3A
MIN004	4A
MIN005	5A
MIN07.5	7.5A
MIN010	10A
MIN015	15A
MIN020	20A
MIN025	25A
MIN030	30A



## Minifuse 32VDC (LED Indicating)

Part Number	Ampere Rating
MIND003-32V	3A
MIND005-32V	5A
MIND07.5-32V	7.5A
MIND010-32V	10A
MIND015-32V	15A
MIND020-32V	20A
MIND025-32V	25A
MIND030-32V	30A



## Minifuse 32VDC Assortment

Part Number	Description
MINI-KIT2	35 Piece Minifuse Assortment Pack

Kit Contains	Quantity
MIN005	5pcs
MIN07.5	5pcs
MIN010	5pcs
MIN015	5pcs
MIN020	5pcs
MIN025	5pcs
MIN030	5pcs



## LED Ind. Minifuse 32VDC Assortment

Part Number	Description
MIND-KIT2	16pc LED Ind. Minifuse Assortment Pack

Kit Contains	Quantity
MIND003-32V	2pcs
MIND005-32V	2pcs
MIND07.5-32V	2pcs
MIND010-32V	2pcs
MIND015-32V	2pcs
MIND020-32V	2pcs
MIND025-32V	2pcs
MIND030-32V	2pcs
FP-7AM	1pc



## Circuit Breaker (Automatic Reset)

14VDC Automatic TI		Ampere Rating
Part Number		
21105-00		5A
21175-00		7.5A
21110-00		10A
21115-00		15A
21120-00		20A
21125-00		25A
21130-00		30A



## Circuit Breaker (Modified Reset)

14VDC Modified TII		Ampere Rating
Part Number		
21205-00		5A
21275-00		7.5A
21210-00		10A
21215-00		15A
21220-00		20A
21225-00		25A
21230-00		30A



## Circuit Breaker (Manual Reset)

28VDC Manual TIII		Ampere Rating
Part Number		
23305-00		5A
23305-00		7.5A
23375-00		10A
23310-00		15A
23315-00		20A
23320-00		25A
23325-00		30A
23330-00		



## Mini Blade Devices

Part Number	Product
22901-I.5	Transorb
22902-68	Resistor



## Fuse Puller / Tester

Part Number	Extracts & Tests Various Fuse Types
FT-3	Low Profile Mini, Mini, Auto & Maxi



Fuse Puller  
Fuse Inserter

Fuse Test  
Pins



Search these part numbers on our website for datasheets.

# MICRO RELAYS, FLASHER RELAYS & HAZARD LIGHT SWITCH

## Micro Relays (ISO 280)

Part Number	Description	Contact ratings for resistive load	Amp Rating	Protection
3011ACR112	12V Normally Open 4 pin (SPST)		35A (14VDC)	½W 680Ω resistor
3011CCR112	12V Change Over 5 pin (SPDT)		NO:35A / NC:20A (14VDC)	½W 680Ω resistor
3011ACR124	24V Normally Open 4 pin (SPST)		15A (28VDC)	½W 2700Ω resistor
3011CCR124	24V Change Over 5 pin (SPDT)		NO:15A / NC:10A (28VDC)	½W 2700Ω resistor



Search these part numbers on our website for data sheets.

## Flasher Relays (ISO 280)

Part Number	Terminals	Electrical Rating	Nbr. Bulbs / Type
NO-762-LED	2.8mm x 4	12.6A at 12.8VDC	2 to 6 / LED
NO.761	2.8mm x 3	12.6A at 12VDC	2 to 4 / Standard
NO.762	2.8mm x 4	12.6A at 12VDC	3 to 6 / Standard



Scan this QR Code for more information



QR Code: 9023



Scan this QR Code for more information



QR Code: 9024

Note: These flasher relays have a similar component footprint to a Mini Relay (26.4mm x 26.4mm).

## Hazard Lights Switch

Part Number	Description	Switching
J2A2UT0BA9C70100	Hazard Switch with Black Hard Nylon Actuator, Square Lens.	On / Off



Rear View

Scan this QR Code for more information



QR Code: 9029

# EXTERNAL FUSE PROTECTION

Protect your RTMR fuse block by adding a circuit breaker between the battery and the RTMR input stud.

## OPTION 1.

### Surface Mount Circuit Breakers

Manual Reset  
1/4" Studs



Manual Reset  
3/8" Studs



## OPTION 2.

### Panel Mount Circuit Breakers

Manual Reset  
(Push to Trip)



Rear View  
1/4" Studs



Manual (TIII)  
1/4" Stud  
Diagonal

Manual (TIII)  
3/8" Stud  
Diagonal

Part Number	Part Number	Ampere Rating
175-S0-025	175-S2-025	25A
175-S0-030	175-S2-030	30A
175-S0-035	175-S2-035	35A
175-S0-040	175-S2-040	40A
175-S0-050	175-S2-050	50A
175-S0-060	175-S2-060	60A
175-S0-070	175-S2-070	70A
175-S0-080	175-S2-080	80A
175-S0-090	175-S2-090	90A
175-S0-100	175-S2-100	100A
175-S0-110	175-S2-110	110A
175-S0-120	175-S2-120	120A
175-S0-135	175-S2-135	135A
175-S0-150	175-S2-150	150A
175-S0-175	175-S2-175	175A
175-S0-200	175-S2-200	200A
-	174-S2-225*	225A <b>NEW</b>
-	174-S2-250*	250A <b>NEW</b>
-	-	275A <b>NEW</b>
-	-	300A <b>NEW</b>

Manual (TIII)  
1/4" Studs

Manual (TIII)  
3/8" Studs

Part Number	Part Number	Ampere Rating
175-P0-025	175-P2-025	25A
175-P0-030	175-P2-030	30A
175-P0-035	175-P2-035	35A
175-P0-040	175-P2-040	40A
175-P0-050	175-P2-050	50A
175-P0-060	175-P2-060	60A
175-P0-070	175-P2-070	70A
175-P0-080	175-P2-080	80A
175-P0-090	175-P2-090	90A
175-P0-100	175-P2-100	100A
175-P0-110	175-P2-110	110A
175-P0-120	175-P2-120	120A
175-P0-135	175-P2-135	135A
175-P0-150	175-P2-150	150A
175-P0-175	175-P2-175	175A <b>NEW</b>
175-P0-200	175-P2-200	200A <b>NEW</b>
-	175-P2-225	225A <b>NEW</b>
-	174-P2-250*	250A <b>NEW</b>
-	-	275A <b>NEW</b>
-	-	300A <b>NEW</b>

Voltage Ratings (Surface & Panel Mount):  
48 VDC (25A-150A), 30VDC (175A-200A),  
14VDC (225A-250A).

Most ratings feature Push to Trip (PTT) which allows you to open the circuit by pressing the blue button on the circuit breaker.

\* No Push To Trip button, manual reset only.

### Panel Mount Circuit Breaker Accessories:



**NEW**

**Right Angle Mounting Bracket**  
Part Number: PROBRK017  
Material: Stainless Steel

**Gasket Accessory**  
Part Number: B156-7003-J  
Material: Black Santoprene.



Search these part numbers on our website for data sheets.

## EXTERNAL FUSE PROTECTION (CONT'D)

Protect your RTMR fuse block by adding a fuse between the battery and the RTMR input stud.

### OPTION 3.

#### Midfuse Fuse Block

Part Number	Description
MIDFBB	Midfuse block, 32V, 125A max
LMII-E-I-0	Midfuse block, 32V, 200A max stackable



# MIDFBB



# LMII-E-I-0

(Fuses are not included)

#### Midfuses

Part Number	Ampere Rating
MID023-32V	23A ^
MID030-32V	30A ^
MID040-32V	40A
MID050-32V	50A
MID060-32V	60A
MID070-32V	70A
MID080-32V	80A
MID100-32V	100A



Element Window Side



Solid Side

**Note:** When selecting a fuse, please remember that each RTMR input stud is rated at 80A max.

### OPTION 4.

#### Battery Fuse Bars (1 or 2 pole)

Part Number	Description	Stud	Cover
CFBAR1SP-KIT	Single pole kit	1/4"-20	Red
CFBAR1SP-KITB	Single pole kit	1/4"-20	Black
CFBAR1M8SPRK	Single pole kit	M8	Red
CFBAR1M8SPBK	Single pole kit	M8	Black
CFBAR2M8SPRK	Double pole kit	M8	Red
CFBAR2M8SPBK	Double pole kit	M8	Black

Bar Rating: 300A max at 58VDC (or less).

Note: All kits include S/S nuts & washers, cover.



CFBAR1 (Single Pole)



CFBAR2 (Double Pole)



Ring terminal fused protection to RTMR

#### Battery Fuses

Part Number	Ampere Rating
MRBF030	30A
MRBF040	40A
MRBF050	50A
MRBF060	60A
MRBF075	75A
MRBF080	80A
MRBF090	90A
MRBF100	100A

Rating: 58VDC or less.



**Note:** When selecting a fuse, please remember that each RTMR input stud is rated at 80A max.



Search these part numbers on our website for data sheets.

# TERMINAL TOOLS

## Terminal Crimp Tool

These tools are designed to crimp a terminal and cable seal onto a stripped end of an electrical cable.

Part Number	Description
CT-P78	Delphi Metri-Pack 280 & Tyco AMP MCP 2.8 terminals

Need help using this crimp tool?  
Scan the QR code to view instructions.



Scan this  
QR Code  
for more  
information



QR Code: 8001

## Ratchet Terminal Crimp Tool

### 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.

Part Number	Description
CT-JA18B	Extracts Delphi Metri-Pack 280 terminals & other types

### Kit Includes

Quick change ratchet crimper tool (8.7") 220mm  
H6 Jaw set to suit: (#22 / 20-18AWG) 0.35 / 0.5-0.8mm<sup>2</sup>  
H7 Jaw set to suit: (#16-14 / 12AWG) 1.0-2.0 / 3.0mm<sup>2</sup>



CT-JA18B pictured  
with jaw set inserted

## Terminal Removal Tool

Part Number	Description
12094429	Extracts Delphi Metri-Pack 280 terminals & other types



Search these part numbers  
on our website for data sheets.

# TERMINALS & SEALS

Part Number	Description
TERMKIT001	120 piece Assortment Terminal, Seal and Plug Kit Metri-Pack Tangless Female Terminals



## Kit Contents:

### TERMINALS: TANGLESS

Female Sealed  
Tin Brass / Tin plated



Quantity	Part Number	Wire (AWG)	Wire (mm <sup>2</sup> )
10	12110847	#18 - #16	0.80 - 1.0
30	12129409	#16 - #14	1.0 - 2.0
10	12110845	#14 - #12	2.0 - 3.0

### CABLE SEALS:

Silicone



Quantity	Part Number	Cable Dia. (mm)	Colour
10	15324982	2.03 - 2.85	Green
30	15324980	2.81 - 3.49	Grey
10	15324981	3.45 - 4.3	Blue

### CAVITY PLUG:

Silicone

Quantity Part Number Colour

20 12010300 Green



# PACKS OF TERMINALS, CABLE SEALS & CAVITY PLUGS

## Delphi Metri-Pack 280 Accessories

### TERMINALS: TANGLESS

Female sealed  
Tin Brass / Tin plated



Part Number	Wire (AWG)	Wire (mm <sup>2</sup> )
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

### CABLE SEALS:

Silicone



Part Number	Cable Dia. (mm)	Colour
15324983	1.70 - 1.29	Dark Red
15324982	2.85 - 2.03	Green
15324980	3.49 - 2.81	Grey
15324981	4.30 - 3.45	Blue

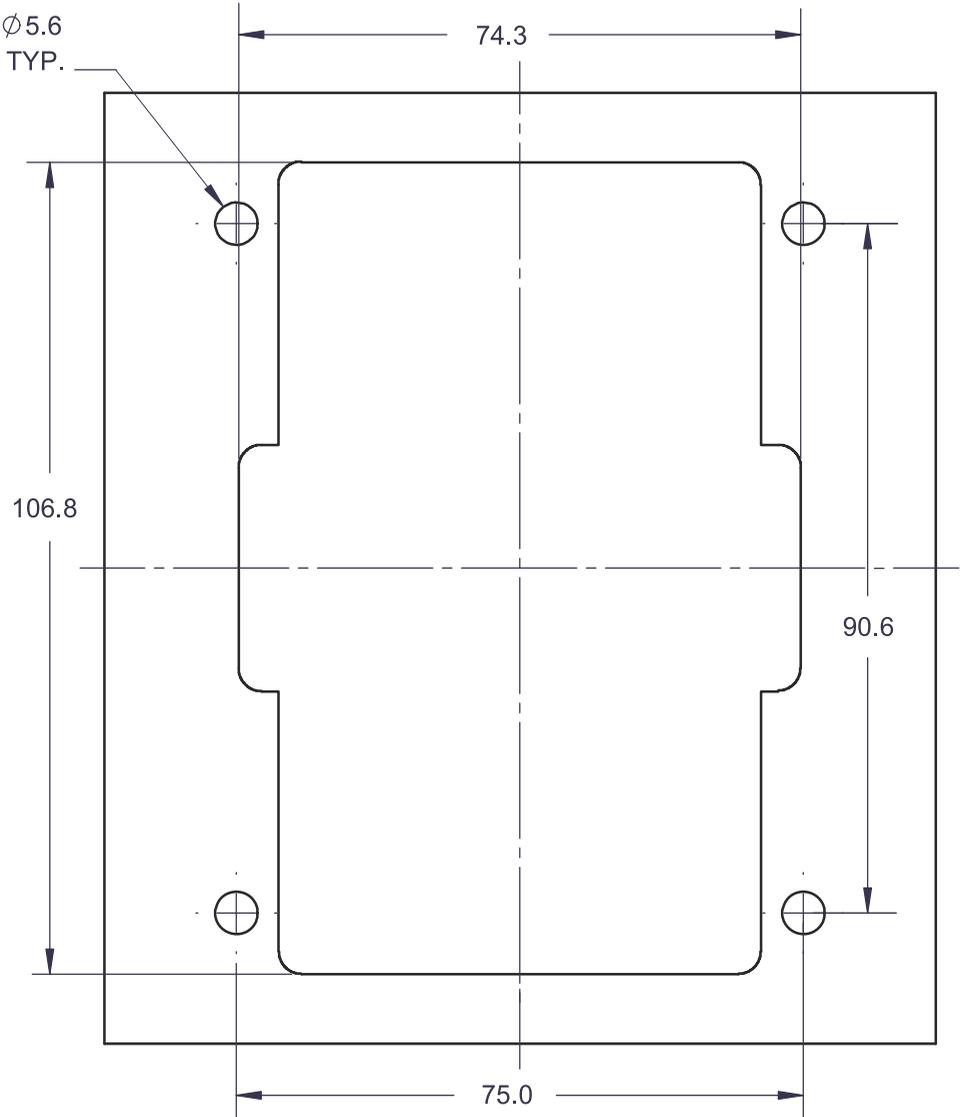
CAVITY PLUG: Part Number Colour

Silicone 12010300 Green



# PANEL CUT-OUT SCHEMATIC

Bussmann RTMR blocks can be mounted directly to a panel thereby eliminating the need for a bracket. Use the following template to cut a hole in the panel and fit the RTMR from behind the panel. The 4 fixing bolts are inserted to the front of the panel and screw into the threaded inserts of the RTMR to keep it in place. The cover can still be used as normal.



**Recommended Panel Cut-Out (Scale 1:1)**