



Solid State

Solid State relays are suitable across all applications where reliability is paramount.

Unlike conventional relays, Solid State relays use electronics in place of traditional contacts, allowing them to be multi-voltage and eliminating failures associated with mechanical components. This guarantees extremely quick switching times and outstanding service life.

Manufactured with standard housing and terminal configurations ensures compatibility with standard mini relay accessories.



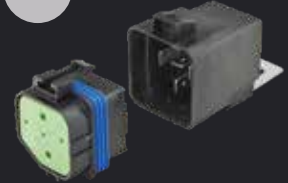
Standard Coil Relay

Weatherproof Relays

Weatherproof relays seal to IP67. This protection rating is achieved by utilising a shrouded relay housing with an accompanying sealed connector. Offered individually or in kit form in normally-open or change-over configuration.



IP67



Timer Relays – Fixed & Adjustable



Timer relays are microprocessor controlled change-over relay units incorporating a time delay. Depending on the model, the time delay can trigger in either a "delay on" or "delay off" configuration.

User adjustable models are available ex-stock. 'Made to order' factory preset units available by special order. (Minimum order quantities apply.)





Relays & Solenoids

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Relays & Solenoids

Micro

PM1424R



- All models resistor protected.
- Full range of accessories available.
- Broad operating temperature.



PB1412RMC

Protection :
Contacts :
Body :
Ingress Protection :
Operating Temperature :

Resistor
 Silver Alloy
 Polymer
 IP54
 -40°C to 125°C

IP54



PM2512R

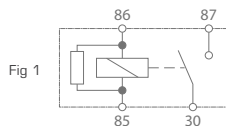


Fig 1 4 Terminal – Normally Open (N/O)

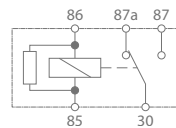
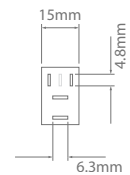
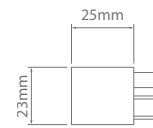


Fig 2 5 Terminal – Change Over (C/O)



Micro

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Fig
PM1412R	12	20	N/O	4	1
PM1424R	24	10	N/O	4	1
PM2512R	12	10/20	C/O	5	2
PM2524R	24	5/10	C/O	5	2



47002, 47002/100

47102/10



47003



47103/10



42282-2

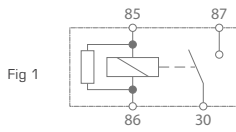


281197-2

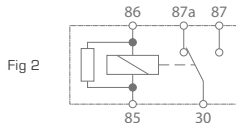
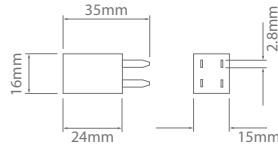
Micro – Accessories

Part No.	Description	Cable Size (mm ²)	Pack Qty
47002	Micro relay base. Interlocking base with mounting bracket	—	1
47002/100	Micro relay base. Interlocking base with mounting bracket	—	100
47102/10	Micro relay base kit. Interlocking base with mounting bracket Kit contains: 10 x Bases (47002), 20 x AMP™ Terminals (42282-2), 30 x AMP™ Terminals (281197-2)	1 – 2.5	10
47003	Micro relay base	—	1
47103/10	Micro relay base kit Kit contains: 10 x Bases (47003), 20 x AMP™ Terminals (42282-2), 30 x AMP™ Terminals (281197-2)	1 – 2.5	10
42282-2	AMP™ Terminal – 6.3mm	1 – 2.5	100
281197-2	AMP™ Terminal – 4.8mm	1 – 2.5	100

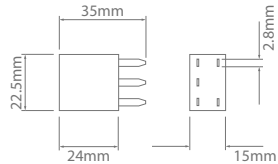
Relays & Solenoids



4 Terminal – Normally Open (N/O)



5 Terminal – Change Over (C/O)



Micro – 280 Series

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Fig
PB1412RMC	12	20	N/O	4	1
PB1424RMC	24	10	N/O	4	1
PB2512RMC NEW	12	20	C/O	5	2
PB2524RMC NEW	24	10	C/O	5	2

Mini Electrical Centre

Mini Electrical Centres are a compact, convenient tool for safely housing a combination of relays, fuses and circuit breakers.

- Designed to accept up to 2 IONNIC Micro 280 Series Relays, 4 mini blade fuses/circuit breakers or a combination of both relay & fuses/circuit breakers.
- Compact size.
- Easy mounting.
- Eliminates excess wiring.
- High quality Packard™ terminals.
- Clear polycarbonate cover provides protection & easy visual inspection.
- Environmentally sealed – IP66.



FH09 shown with various relays, fuses fitted.



FH09



P-12077411/100



P-15324982/100



P-12129493/100



P-15324980/100



P-12010300/100

Micro – 280 Series – Accessories

Part No.	Description	Colour	Cable Size (mm ²)	Pack Qty
FH09	Mini Electrical Centre kit Kit contains: 1 x Base & Cover (FH002), 8 x Terminals (12077411), 8 x Terminal Seals (15324982)	—	0.8 – 1	1
P-12077411/100	Terminal – 2.8mm	—	0.8 – 1	100
P-15324982/100	Terminal Seal	Green	0.8 – 1	100
P-12129493/100	Terminal – 2.8mm	—	1 – 2	100
P-15324980/100	Terminal Seal	Grey	1 – 2	100
P-12010300/100	Blanking Seal	Green	—	100

Terminal and Seals are products of Packard™.



Relays & Solenoids

Solid State



- Solid state reliability.
- Multi-voltage.
- Fast switching speed.
- Silent operation.
- No moving parts.
- Replacement to mechanical relays.
- SY4086 high current model.

12V
24V

Voltage : 12-24V
 Contacts : Brass
 Body : Polymer
 Ingress Protection : PE Series IP5K4



No Moving Parts, No Contacts

Solid State Relays

Solid state relays have no moving parts, eliminating failures normally associated with conventional mechanical switching relays.

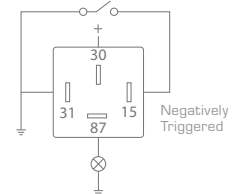
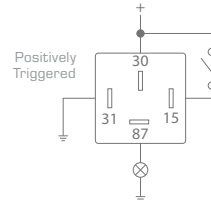
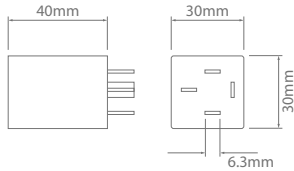
Rated up to 100A solid state relays provide faster switching time, improved reliability and the convenience of 12-24V operation.



PE Series



IP5K4



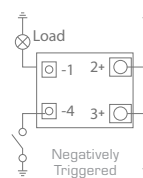
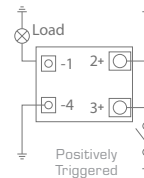
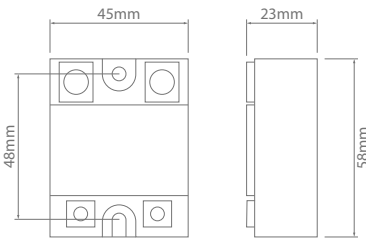
NEW

SY4086



LED indicator

ROHS



Solid State

Part No.	Voltage	Switching	Current Rating (A)		Supply Current (mA)	
			Continuous	Max. Switching	Off State	On State
PE14-10P	12-24	Positive	10	35	0.5	5
PE14-25P	12-24	Positive	25	100	0.5	5
PE14-10N	12-24	Negative	10	35	0.5	5
PE14-25N	12-24	Negative	25	100	0.5	5
SY4086 NEW	12-24	Positive/Negative	100	260	0.1	28

For accessories see page 139.

Relays & Solenoids

Mini

- Weatherproof Mini relays are environmentally sealed – IP67.
- Most models resistor protected.
- Full range of accessories available, found on page 139.
- Models available with mounting bracket.



Contacts : Silver Alloy
 Body : Polymer
 Operating Temperature : -40°C to 125°C

IP54

RoHS Compliant



P1424R

P1524R



P2512R



P3512R

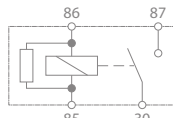
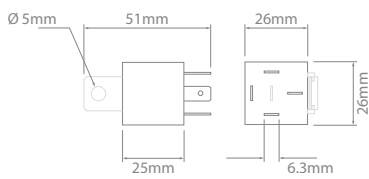


Fig 1

4 Terminal – Normally Open (N/O)

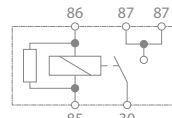


Fig 2

5 Terminal – Normally Open (N/O)

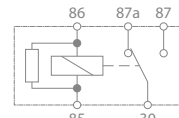


Fig 3

5 Terminal – Change Over (C/O)

Mini – General

Part No.	Pack Qty – 200	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket	Fig
P1424R	P1424R/200	24	40	N/O	4	Removable	1
P1512R	P1512R/200	12	40	N/O	5	Removable	2
P1524R	P1524R/200	24	20	N/O	5	Fixed	2
P2512R	P2512R/200	12	40/30	C/O	5	Removable	3
P2524R	P2524R/200	24	40/30	C/O	5	Removable	3
P3512R	—	12	40/30	C/O	5	—	3

For accessories see page 139.



Relays & Solenoids



P1512RWP



P1512RWP-KIT

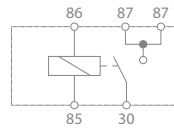
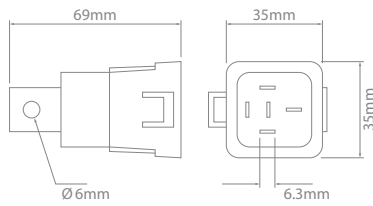


Fig 1
5 Terminal - Normally Open (N/O)

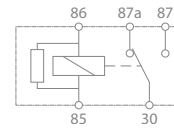


Fig 2
5 Terminal - Change Over (C/O)

Mini - Weatherproof

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket	Fig
P1512RWP	12	40	N/O	5	Removable	1
P1524RWP	24	30	N/O	5	Removable	1
P2512RWP	12	40/30	C/O	5	Removable	2
P2524RWP	24	20/15	C/O	5	Removable	2
P1512RWP-KIT	12V N/O Weatherproof Relay Kit			Kits contain: 1 x Mini Weatherproof Relay 1 x Base Connector (12065685) 1 x Sealing Blank (114017) 2 x Terminals 1-2mm ² (12066614L) 3 x Terminals 2-3mm ² (12033997L)		
P1524RWP-KIT	24V N/O Weatherproof Relay Kit					
P2512RWP-KIT	12V C/O Weatherproof Relay Kit					
P2524RWP-KIT	24V C/O Weatherproof Relay Kit					



P-12065685



P-12066614/100

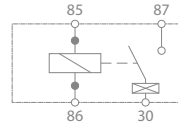
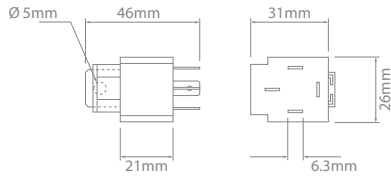


P-12033997/100

Mini - Weatherproof - Accessories

Part No.	Description	Cable Size (mm ²)	Pack Qty
P-12065685	Relay base connector	—	—
P-12066614/100	Packard™ Terminal with pull to seat locking tab - 6.3mm	1 - 2	100
P-12033997/100	Packard™ Terminal with pull to seat locking tab - 6.3mm	3.0	100

Relays & Solenoids



4 Terminal – Normally Open (N/O)



P141230



P142415

Mini – Fused

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket
P141230	12	30	N/O	4	Removable
P142415	24	15	N/O	4	Removable

For accessories see page 139.

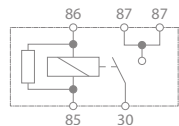
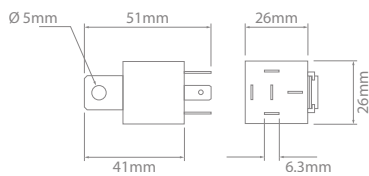


Fig 1

5 Terminal – Normally Open (N/O)

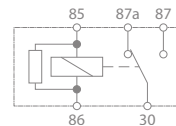


Fig 2

5 Terminal – Change Over (C/O)

PB2512R



PB2524R

Mini – PB Series

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket	Fig
PB1512R	12	30	N/O	5	Removable	1
PB1524R	24	10	N/O	5	Removable	1
PB2512R	12	50/30	C/O	5	Removable	2
PB2524R	24	20/15	C/O	5	Removable	2

For accessories see page 139.



Relays & Solenoids

Timer



- Programmable time periods.
- Compact design.
- 10A switching current on most units.

Protection : Resistor
Body : Polymer

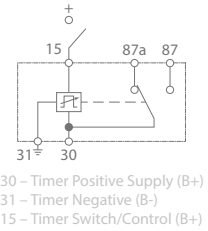
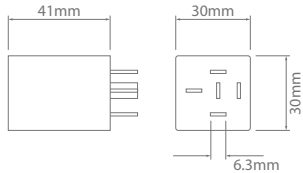
Adjustable Timer

Delay Type

0: OFF	- 0.5sec	- 10 sec
1: OFF	- 5 sec	- 60 sec
2: OFF	- 30 sec	- 10 min
3: OFF	- 5 min	- 60 min
4: OFF	- 30 min	- 6 hrs
5: ON	- 30 min	- 6 hrs
6: ON	- 5 min	- 60 min
7: ON	- 30 sec	- 10 min
8: ON	- 5 sec	- 60 sec
9: ON	- 0.5sec	- 10 sec

Delay ON

Delay OFF



5 Terminal – Change Over (C/O)

Timer – Adjustable

Part No.	Function	Voltage	Current Rating (A)	Time Delay
PT40-205	Delayed turn OFF or Delayed turn ON	12	10	0.5 sec to 6 hrs
PT40-405	Delayed turn OFF or Delayed turn ON	24	10	0.5 sec to 6 hrs

For accessories see page 139.

Relays & Solenoids

Multifunction TIMO1

Red LED indicates when relay is energised.

Increase Time

Decrease Time

Switch

1: OFF = Delay ON	ON = Instant ON – Delay OFF
2: OFF = Once only	ON = Cycle ON-OFF-ON-etc
3: OFF = Seconds	ON = Minutes
4: OFF = 1-30 Time	ON = 2-60 Time
5: OFF = 24V	ON = 12V

Delay On/Off

Increase Time

Decrease Time

Switch 1: Specifies when timer activates.

Switch 2: ON: Minutes OFF: Seconds

TIMO5

TIMO6

72mm

42mm

6.3mm

15mm

72mm

15mm

12V
24V

6 Terminal – Change Over (C/O)

TIMO1

43mm

30mm

6.3mm

2Yrs

12V
24V

5 Terminal – Change Over (C/O)

TIMO5, TIMO6

Timer – Multifunction

Part No.	Function	Voltage	Max. Current Rating (A)	Time Delay
TIMO1	Multi	12–24	3 @ 12V	1 sec to 60 min
TIMO5	Delayed turn OFF	12–24	10 @ 12V	1 sec to 60 min
TIMO6	Delayed turn ON	12–24	10 @ 12V	1 sec to 60 min

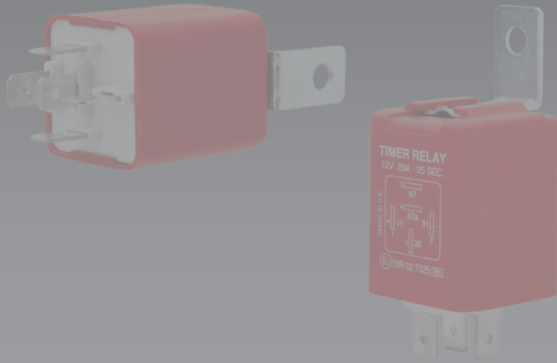
Protected microprocessor timer control circuit.

TIMO1: Incorporates timer reset terminal.



Relays & Solenoids

Timer – Factory Preset

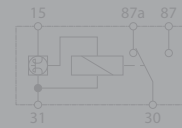
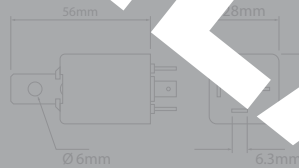


- User defined factory preset time.
- Flexible time periods.
- Compact design.
- Clean contacts.
- Removable mounting bracket.
- Non-stocked item – lead times & MOQs apply.

Non-stocked item – lead times & MOQs apply.



Protection : Resistor
 Current Rating : 20A @ 12V, 10A @ 24V
 Contacts : Copper-Zinc Alloy
 Body : Nylon PA6.6
 Ingress Protection : IP5K4
 Operating Temperature : -40°C to 80°C
 Approvals : CE, RoHS



30 – Timer Positive Input (B+)
 31 – Timer Negative (B-)
 15 – Timer Switch/Control (B+)

5 Terminal – Change Over (C/O)

Ordering System

The fixed range of Timer Relays are programmed at the point of manufacture hence are a non-stocked item – **lead times & MOQs apply.**

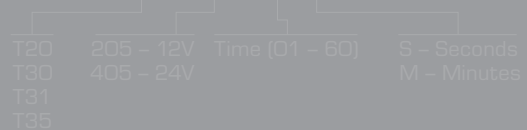
When ordering specify:

- Type
- Voltage
- Time
- Seconds or Minutes

Minimum order quantity of 50 pieces.

Part Number

T20-205-37 S



T20

Delay ON
 With constant positive feed to terminal 15



T30

Delay OFF
 With constant positive feed to terminal 15



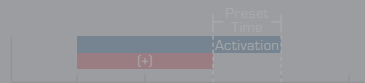
T31

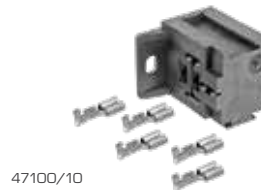
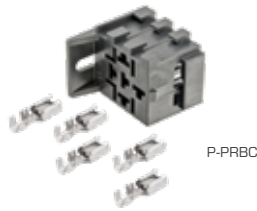
Delay OFF
 With positive trigger to terminal 15



T35

Delay OFF
 With loss of positive to terminal 15





Solid State, Mini & Timer – Accessories

Part No.	Description	Cable Size (mm ²)	Pack Qty
P-PRBC	Mini relay base kit. Interlocking base with mounting bracket Kit contains: 1 x Packard™ Base (12033871), 5 x Packard™ Terminals (12015870)	1 – 2	1
47000	Mini relay base. Interlocking base with mounting bracket	—	1
47000/100	Mini relay base. Interlocking base with mounting bracket	—	100
47100/10	Mini relay base kit. Interlocking base with mounting bracket Kit contains: 10 x Bases (47000), 50 x AMP™ Terminals (42282-2)	1 – 2.5	10
47001	Mini relay base	—	1
47101/10	Mini relay base kit Kit contains: 10 x Bases (47001), 50 x AMP™ Terminals (42282-2)	1 – 2.5	10
47004	Mini relay base. For mounting to PC boards	—	—
42282-2	AMP™ Terminal – 6.3mm	1 – 2.5	100



Relays & Solenoids

High Current

P141275HD



P141270



PB1412RHD



PR12V200

- High current power relays.
- Models available up to 200A.
- Various mounting styles.
- Most models resistor protected.

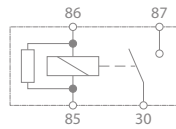
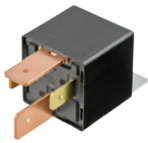
Contacts :

Body :

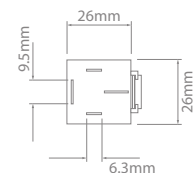
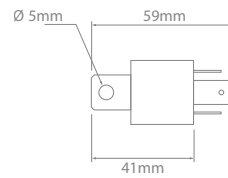
Mount :

Operating Temperature :

Silver Alloy
Polymer
Stainless Steel
-40°C to 85°C

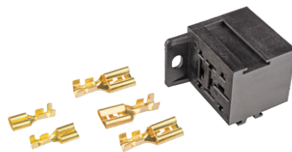


4 Terminal – Normally Open (N/O)



High Current – Mini – PB Series

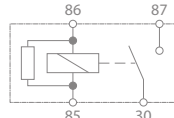
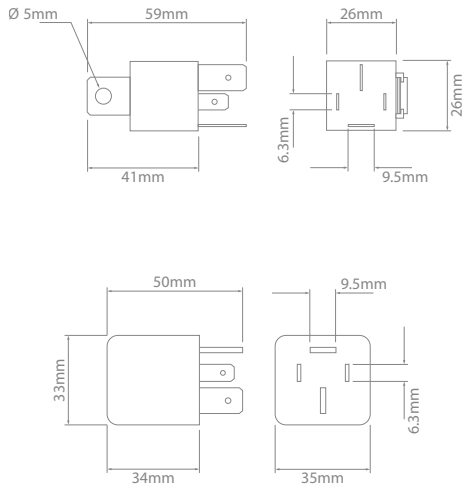
Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket
PB1412RHD	12	70	N/O	4	Removable
PB1424RHD	24	25	N/O	4	Removable



High Current – Mini & PB Series – Accessories

Part No.	Description	Kit contains:
47105/1	Relay base kit with mounting bracket	1 x Base 3 x AMP™ 9.5mm Terminals (280756-4) 2 x AMP™ 6.3mm Terminals (42282-2)

Relays & Solenoids



4 Terminal – Normally Open (N/O)

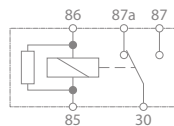
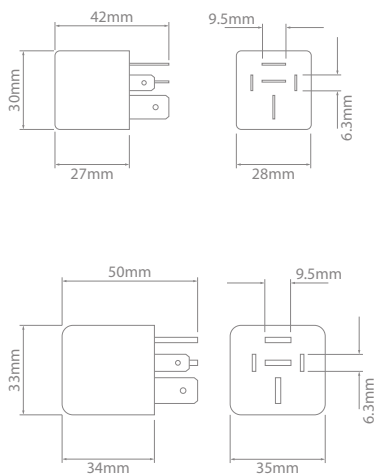


P141270

Fig 1



P142450



5 Terminal – Change Over (C/O)



P252450

Fig 2



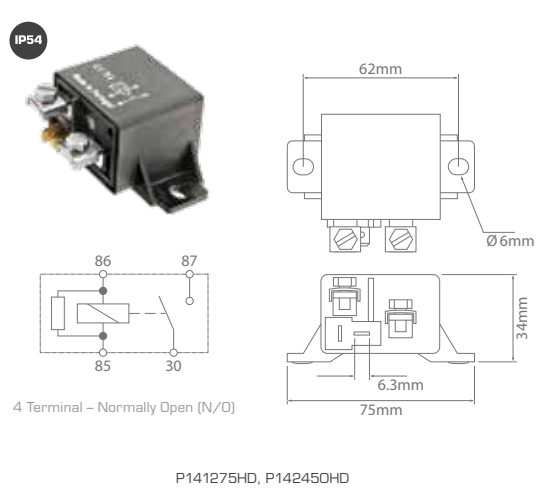
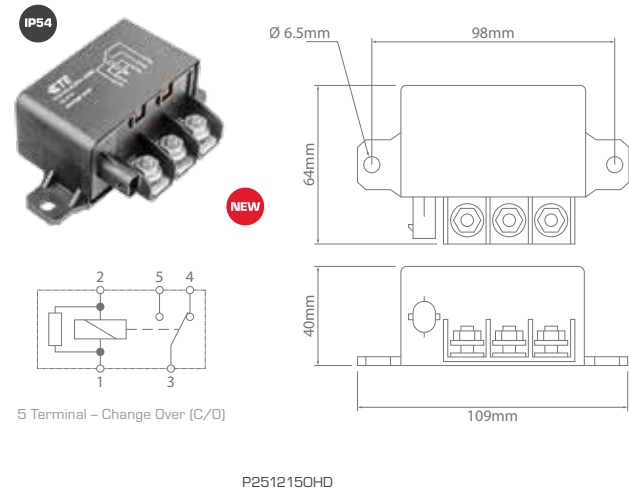
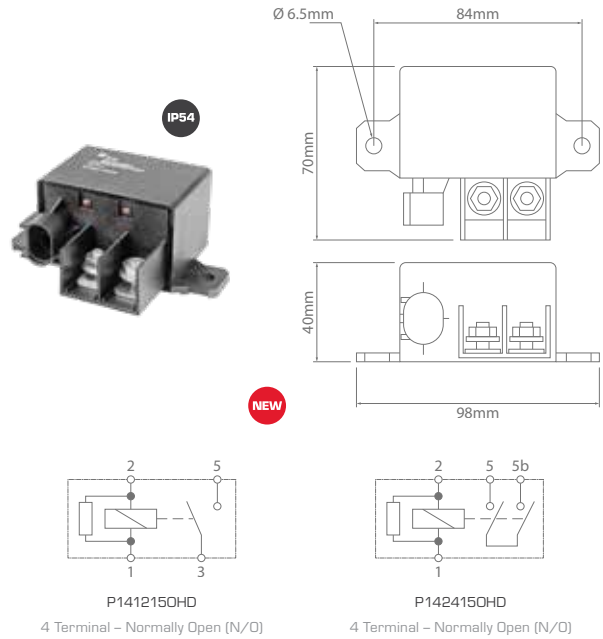
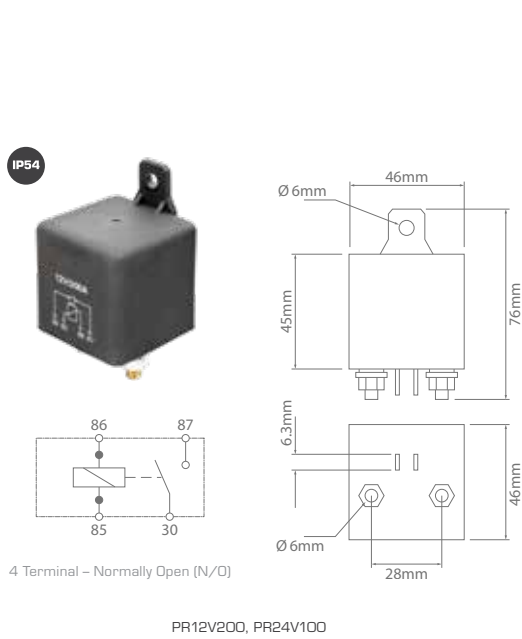
P251270

High Current – Mini

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket	Fig
P141270	12	70	N/O	4	Removable	1
P142450	24	50	N/O	4	—	1
P251270	12	70/60	C/O	5	—	2
P252450	24	60/50	C/O	5	—	2



Relays & Solenoids



High Current

Part No.	Voltage	Current Rating (A)	Contact Type	Terminals	Mounting Bracket	Connector Kit
PR12V200	12	200	N/O	4	Fixed	
PR24V100	24	100	N/O	4	Fixed	
P1412150HD NEW	12	130	N/O	4	Fixed	50126
P1424150HD NEW	24	130	N/O	4	Fixed	50126
P2512150HD NEW	12	130	C/O	5	Fixed	1670916-KIT
P141275HD	12	75	N/O	4	Fixed	
P142450HD	24	50	N/O	4	Fixed	





50126



1670916-KIT

High Current – Accessories

Part No.	Description	Suits
50126 	Connector Kit	P141215OHD, P142415OHD
1670916-KIT 	Connector Kit	P251215OHD



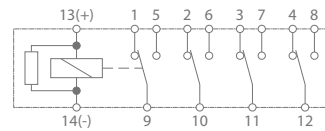
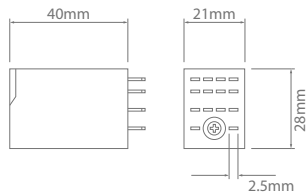
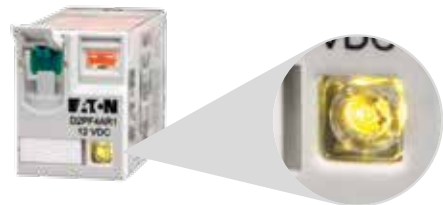
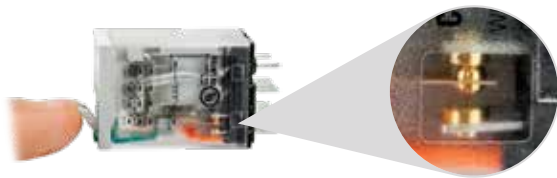
Relays & Solenoids

Specials



- Flag indicator shows relay status in manual or powered condition.
- Bipolar LED status lamp allows for reverse polarity applications – ideal in low light conditions.
- Colour-coded push button with lock-up door – allows for manual operation of relay without the need for coil power.
- White polymer ID tag for labelling in multi relay circuits.

Protection : Resistor
Contacts : Silver Alloy
Body : Polymer
Ingress Protection : IP40
Operating Temperature : -40°C to 55°C
Approvals : UL, CSA, CE, RoHS



14 Terminal – Change Over (C/O)

4 Pole Change Over

Part No.	Coil Voltage	Current Rating per Contact (A)	Contact Type	Terminals
P4512	12	4	C/O	14
P4524	24	4	C/O	14



Shown with P4512 mounted

Specials – Accessories

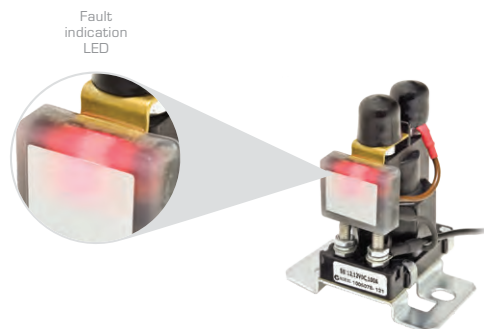
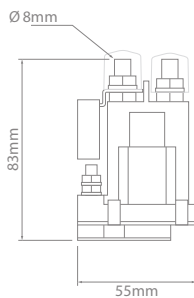
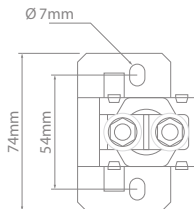
Part No.	Description	Current Rating (A)	Terminal	No. of Poles	Receptacle
47006	Relay base	7	M3 Screw	4	14 Blade

- Microprocessor-controlled battery isolator designed for use in multi battery applications.
- Cost-effective protection against a flat battery.
- Cooler operating temperature compared to standard solenoid.
- Silver alloy contacts for longer life.
- Power saving technology.
- Fault indication LED.
- Surge protected.
- 2 Year warranty.



2Yrs

Body : Polymer
 Contacts : Silver Alloy
 Operating Temperature : 0°C to 50°C



Smart Battery Isolator

Part No.	Voltage	Current Rating (A)		Off Volts	On Volts	Current Draw (A)
		Inrush	Continuous			
SBI-12	12	400	100	12.7	13.2	0.15
SBI-24	24	400	100	25.4	26.4	0.15



Relays & Solenoids

Solenoids

15-323



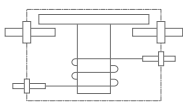
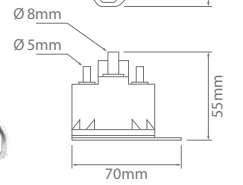
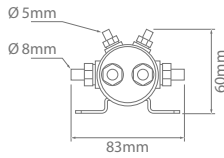
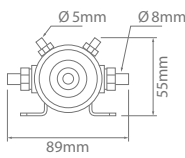
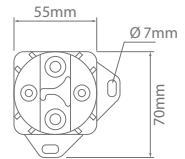
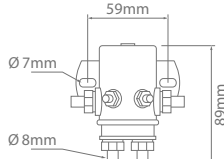
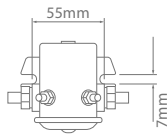
- Range of normally open & change over style contacts.
- Integrated mounting brackets.
- 12 & 24 volt models available.
- PVC dipped marine model available.



15-3F

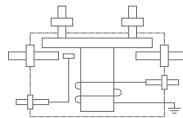


24063-08



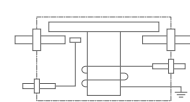
4 Terminal - Normally Open (N/O)

Fig 1



6 Terminal - Change Over (C/O)

Fig 2



4 Terminal - Normally Open Includes Auxiliary Output (N/O)

Fig 3

Solenoids

Part No.	Voltage	Current Rating (A)	Duty	Contact Type	Fig	Description
24063-08	24	65	Continuous	N/O	1	PVC dipped. ISO 8846 Marine
ST85	12	80	Continuous	N/O	1	
ST88	24	80	Continuous	N/O	1	
15-132	12	100	Continuous	N/O	1	
15-269	24	100	Continuous	N/O	1	
15-133	12	200	Continuous	N/O	1	
15-141	24	200	Continuous	N/O	1	
15-323	12	100/100	Continuous	C/O	2	
15-326	24	100/100	Continuous	C/O	2	
15-3F	12	200	Intermittent	N/O	3	