

DIAC PROTECTION FOR RELAYS

HIGH VOLTAGE SPIKES - NO LONGER A PROBLEM!

Pro Quip has pioneered the development of the DIAC as the latest advance in relay protection, and is now able to provide a wide range of DIAC protected relay applications.

The electrical power demands in a modern vehicle is very high, and it is impractical to use heavy gauge wire direct from the battery to all appliances. Relays allow light gauge wire to be used in most of the loom, but the necessary heavy gauge wire from a relay close to the appliance.

It is essential that some equipment in modern motor vehicles, for example the on-board computer, be protected from electrical spikes. Protection is required because an inductive or high voltage spike is created, which is capable of rupturing or puncturing components like field effect transistors, when the relay is turned off. Unfortunately, most manufacturers do not see fit to build protection into their hi-tech units, so it is necessary to include the protection in the relays in the vehicle circuitry.

The diode has been accepted as the best method of relay protection up until the introduction of the DIAC. The main problem when installing diode protected relays, is to be sure that the current is flowing through the diode in the right direction. The diode will blow immediately if the current flows in the wrong direction, leaving the hi-tech component without protection. There is no indication that the protection has been compromised, or the relay will have a dead short through the diode blowing to a shorted state.

A DIAC will totally quench a high voltage spike in either direction whenever the voltage reaches the preset breakover voltage. It could be said to act in a similar manner to two back-to-back diodes, as the direction of the current or spike is immaterial. If the appropriate DIAC protected relay is plugged into any circuit, the safety of the hi-tech equipment is assured and no specialised technical knowledge or testing equipment is required. In a 12V system the DIAC is set to short out at between 28-30 volts. A higher voltage DIAC is used in 24V relays.

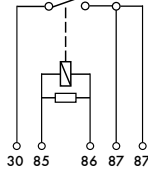
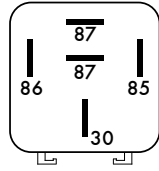
The DIAC protected relay removes the worry from auto electricians not understanding the implication of the polarity requirements of a diode.

PRO QUIP therefore recommends that auto electricians should standardise using the DIAC protected relays. They will significantly reduce issues, and each relay is supplied with an optional steel bracket for convenience.



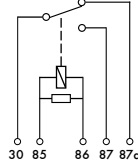
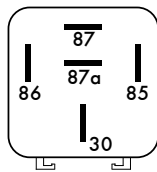
DIAC PROTECTED RELAYS

5 PIN NORMALLY OPEN MINI DIAC RELAYS



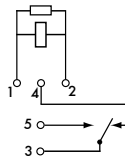
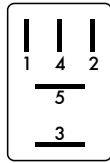
STOCK CODE	DESCRIPTION	TYPE	DIAC	WIRING DIAGRAM
6615B	P1512X	12V, 40A	Diac	1 FORM A (2 x #87)
6621B	P1512X(With Moulded Bracket)	12V, 40A	Diac	1 FORM A (2 x #87)
6616B	P1524X	24V, 30A	Diac	1 FORM A (2 x #87)

5 PIN CHANGEOVER MINI DIAC RELAYS



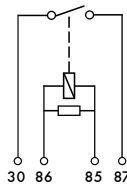
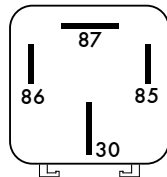
6617B	P2512X	12V, 30/20A	Diac	1 FORM C
6618B	P2524X	24V, 30/15A	Diac	1 FORM C

5 PIN CHANGEOVER MICRO DIAC RELAYS



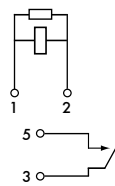
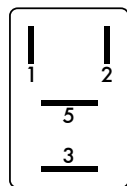
6626B	PM2512X	12V, 20/15A	Diac	1 FORM C
6629B	PM2524X	24V, 10/5A	Diac	1 FORM C

4 PIN HIGH CAPACITY NORMALLY OPEN MINI DIAC RELAYS



6646B	P141270X	12V, 70A	Diac	1 FORM A (30/87=9.5mm (AMERICAN))
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4 PIN NORMALLY OPEN MICRO DIAC RELAYS



6625B	PM1412X	12V, 20A	Diac	1 FORM A
6628B	PM1424X	24V, 15A	Diac	1 FORM A

BECAUSE AT PRO QUIP, QUALITY MATTERS

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