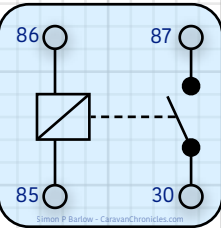


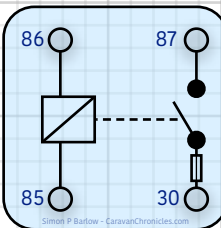
ISO Standard 12 Volt Relays



Make & Break (NO or NC types)

Relay coil - terminals 85 and 86

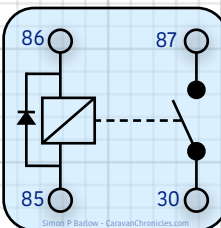
NO (Normally Open) or NC (Normally Closed) terminals 30 & 87
Contacts normally rated at 30 Amps continuous. 40 Amp versions available



Make & Break with Fuse (NO)

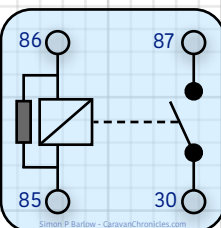
Relay coil - terminals 85 and 86

A blade or ceramic fuse in a carrier mounted into the fuse relay body between terminal 30 and the relay contact.



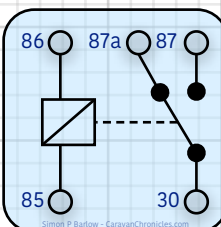
Make & Break (NO or NC)

Diode connected across the relay coil to protect sensitive electronics from reverse EMF when relay is de-energised. +VE side of energising circuit must be connected to terminal 86



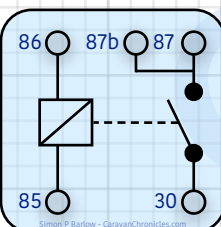
Make & Break (NO or NC)

High value resistor connected across the relay coil to protect sensitive electronics from reverse EMF when relay is de-energised. +VE side of energising circuit can be connected to either side of coil



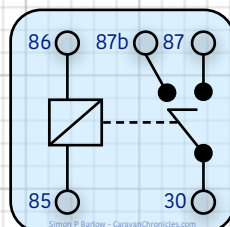
Change Over

Terminals 87a and 30 normally connected when relay is de-energised. Energising the relay disconnects terminal 30 from 87a and connects it to terminal 87. Relay is usually classed as Break Before Make so 87a and 87 are never connected simultaneously



Make & Break Dual Output

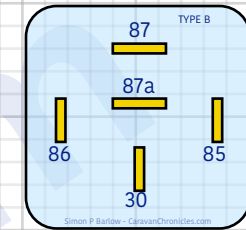
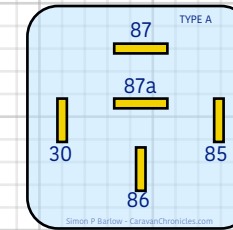
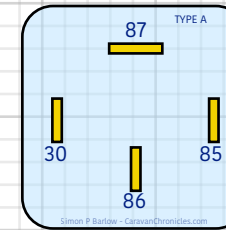
Terminals 87b and 87 are internally interconnected providing two outputs



Make & Break Dual Contact

Terminal 30 connects to terminals 87b and 87 at the same time. 87b and 87 are internally isolated from each other.

ISO Standard 12 Volt Relay Terminal Layout

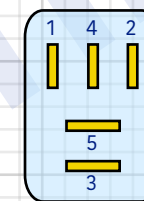


TYPE A

TYPE B

There are TWO pin configurations for ISO standard relays, TYPE A and TYPE B. The only difference is the location of terminals 86 and 30. This means if replacing a relay in a plug in base they are NOT INTERCHANGEABLE

ISO Mini (Micro) 12 Volt Relay Terminal Layout



Terminal Pin Number and Size

- 1 - 4.8mm - Coil (equiv to 86)
- 2 - 4.8mm - Coil (equiv to 85)
- 3 - 6.3mm - Common (equiv to 30)
- 4 - 4.8mm - Normally Closed (not present on 4 pin relays)
- 5 - 6.3mm - Normally Open (equiv to 87)

Notes:

Relays can look the same, however good quality relays should have the circuit diagram printed on the side.

Operating Voltage will usually be marked on the relay. Most are available in 6, 12 and 24 volt versions.

Current Rating for the main contacts will be marked on the side. Typically from 25 to 40 Amps. It can be shown as a dual rating - 30/40A in which case the NC circuit is 30 Amps and the NO circuit is 40 Amps.

Coil Current Draw is normally in the range of 150 to 200mA

Terminal Size on ISO Standard relays is normally 6.3mm

Title Tech Sheet 001 - 12 Volt Relays

Drawn Simon Barlow

Date 11/11/2018

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