Single-in-Line Reed Relays

for stacking on 0.15 x 0.4 inches pitch giving SUPERB PACKING DENSITY

New 3 Volt Version

FEATURES

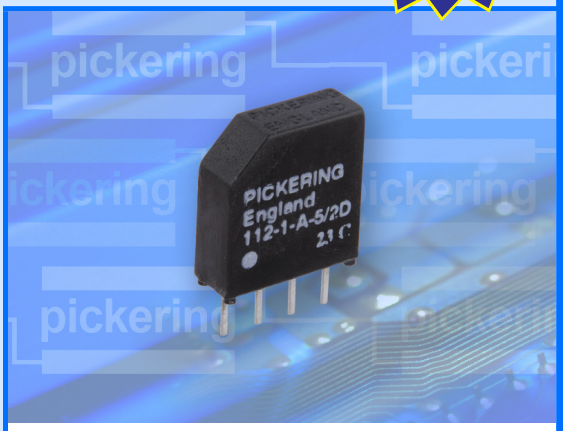
- *SoftCenter*™ construction (see reverse)
- Highest quality instrumentation grade switches
- Ideal for high density card based systems and Automatic Test Equipment
- Plastic package with internal mu-metal magnetic screen
- They take up the minimum of board area, conserving board space
- Insulation resistance greater than 10^{12} ohms
- 3, 5 and 12 Volt coils are standard, with or without internal diode
- 5 Volt coils of 500 ohms may be driven directly from TTL logic
- 100% tested for dynamic contact resistance

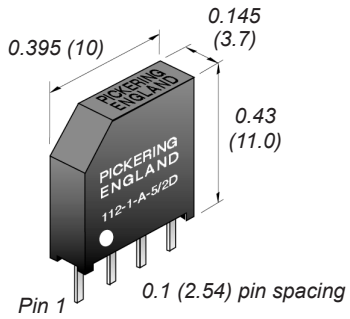
The Pickering Series 112 is a range of magnetically screened single-in-line reed relays that require a board area of only 0.15 inches (3.8mm.) by 0.4 inches (10mm.) while retaining the 10 Watts, 0.5 Amps rating associated with larger relays. This small footprint is achieved by mounting the reed switch diagonally within the package.

These relays require around one third the board area of the more usual 0.2 x 0.8 inch devices and the height of only 0.43 inches (11mm.) is suitable for high density card based systems such as VME, VXI, Compact PCI, and PXI. The high quality, sputtered ruthenium switch contacts also makes them ideal for Automatic Test Equipment.

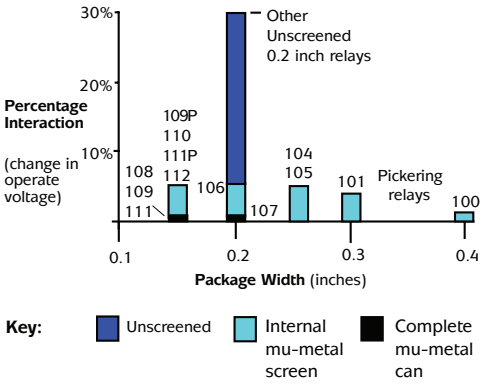
The Series 112 is encapsulated in a plastic package using a very high resistivity resin to achieve an insulation resistance greater than 10^{12} ohms. The relay has an internal mumetal screen which totally eliminates the risk of magnetic interaction problems. An unscreened device mounted on this pitch would have an interaction figure of around 40 percent. Relays of this size without magnetic screening would therefore be totally unsuitable for applications where dense packing is required. Pickering Series 112 have a typical interaction figure of 5 percent.

3, 5 and 12 Volt coils are standard, with the option of an internal diode. 5 Volt coils have a resistance of 500 ohms and may be driven directly from TTL logic.





Dimensions in Inches
(Millimetres in brackets)



Series 112 switch ratings

The contact ratings for each switch type are shown below:

Sw. No	Switch form	Power rating	Max. switch current	Max. carry current	Max. switching volts	Max. contact resistance (initial)
2	A	10 Watts	0.5 Amp.	0.5 Amp.	200	0.12 Ohms

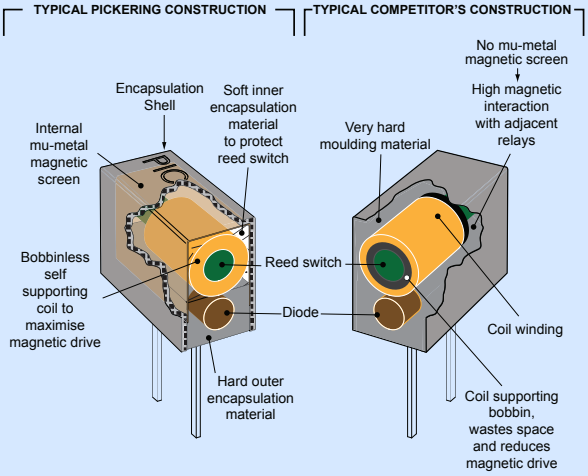
Switch number 2 is suitable for low level or "cold" switching applications. It is also a good general purpose "hot" switch as long as the maximum switching current specification is observed. There is no Switch number 1 available in this range at present.

Coil data and type numbers

Switch type	Coil voltage	Coil resistance	Type Number
Sw. No.2	3	250 Ohms	112-1-A-3/2D
	5	500 Ohms	112-1-A-5/2D
	12	750 Ohms	112-1-A-12/2D

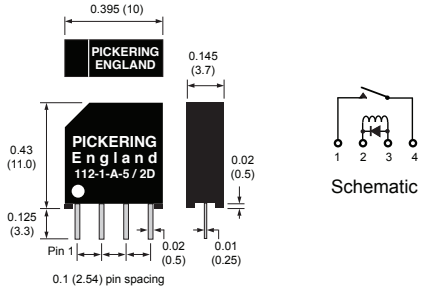
When an internal diode is required, the suffix D is added to the part number as shown in the table. If a diode is not required, the D suffix should be omitted.

Pickering SoftCenter™ Construction



Pin configuration and dimensional data

Dimensions in Inches (Millimetres in brackets).



Pickering Electronics Limited
Stephenson Road
Clacton-on-Sea
CO15 4NL
England
email: sales@pickeringrelay.com
Tel. (UK) 01255 428141
(International) +44 1255 428141
Fax. (UK) 01255 475058
(International) +44 1255 475058

ISO9001
Manufacture of Reed Relays
FM 29036

The Following actual size example illustrates the relative packing densities of standard 0.2 x 0.8 inch SIL relays compared with Pickering Series 108, 109, and 112 reed relays when packed into an area of 1.2 x 2.4 inches.

Important: Pickering SIL relays feature mu-metal magnetic screens, unscreened relays are unsuitable for dense packing in this way.

Using standard
0.2 x 0.8 inch relays
in this PCB area you can fit
18 Relays

Using PICKERING
Series 108 relays
in this PCB area you can fit
24 Relays

Using PICKERING
Series 109 relays
in this PCB area you can fit
32 Relays

Using PICKERING
Series 112 relays
in this PCB area you can fit
48 Relays

If Packing Density Is Your Problem, Use Pickering Series 112

Order Code

The following example indicates data required to process your order promptly:

112 - 1 - A - 5 / 2 D

- *Series*
- *Number of reeds*
- *Switch form*
- *Coil voltage*
- *Switch number (Only Type 2 available)*
- *Diode if fitted (Omit if not required)*

Help !!!

If you need any technical advice or help in any way, please telephone our Technical Sales Department. There is a limit to how much data we can put on a sales leaflet and we will always be pleased to discuss Pickering reed relays with you.

Please ask us for a FREE evaluation sample