

## V-SIL Reed Relays

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



### FEATURES

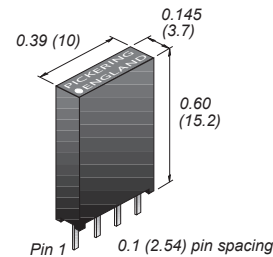
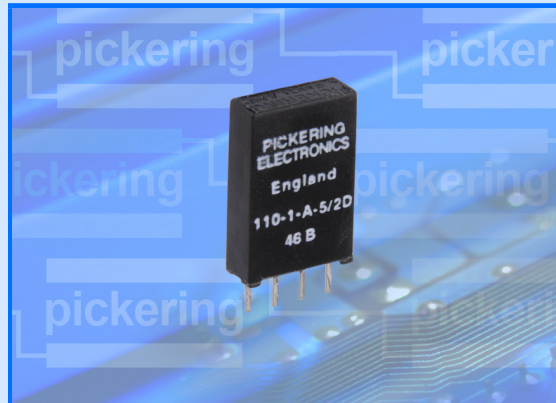
- SoftCenter™ construction (see reverse)
- Highest quality instrumentation grade switches
- Plastic package with internal mu-metal magnetic screen
- They take up the minimum of board area, conserving board space
- Insulation resistance greater than  $10^{12}$  ohms
- 3, 5 and 12 Volt coils are standard, 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 110 V-SIL (vertical single-in-line) is a range of magnetically screened single-in-line reed relays that stack on 0.15 inches by 0.4 inches pitch. The switches in this range are mounted vertically within the package, this allows the use of the same switch types as would normally be found in relays requiring a very much larger board area. In this way, a 10 Watt switch power rating is achieved. Two types of Form A (energize to make) switches are available, a general purpose version and a type suitable for low level or "cold" switching applications.

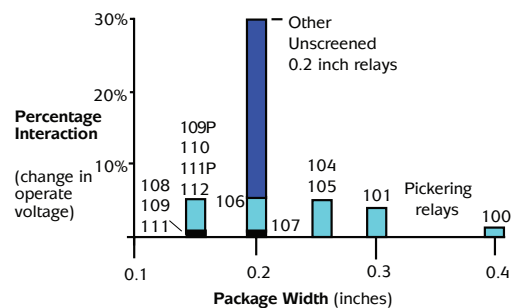
These relays require around one third the board area of the more usual 0.2 x 0.8 inch devices. These are your idea choice for high density applications such as A.T.E. switching matrices or where very little board area is available. If a lower profile device is required, look at the Series 111, which has an identical pin-out but a height of only 0.26 inches.

The Series 110 is encapsulated in a plastic package using a very high resistivity resin. 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 110 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)



Key: ■ Unscreened ■ Internal mu-metal screen ■ Complete mu-metal can

www.pickeringrelay.com

### Series 110 switch ratings

The contact ratings for each switch type are shown below:

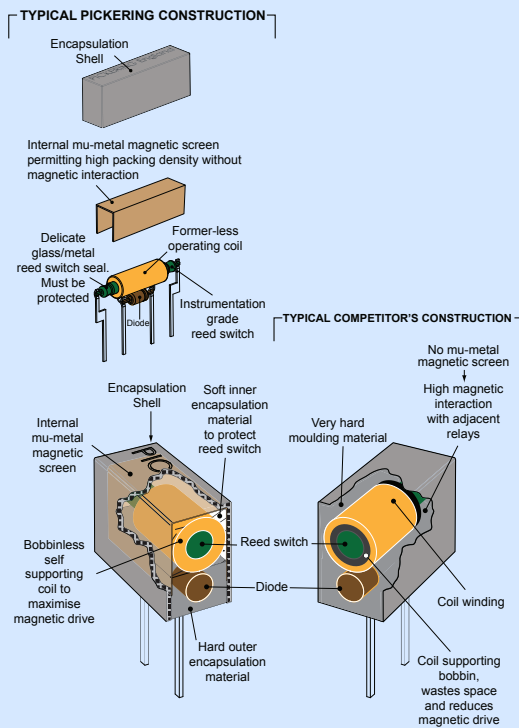
Sw. No	Switch form	Power rating	Max. switch current	Max. carry current	Max. switching volts	Max. contact resistance (initial)
1	A	10 Watts	0.5 Amp.	1.2 Amp.	200	0.15 Ohms
2	A	10 Watts	0.5 Amp.	1.2 Amp.	200	0.15 Ohms

### Coil data and type numbers

Switch type	Coil voltage	Coil resistance	Type Number
1 Form A	5	500 Ohms	110-1-A-5/1D
Switch No.1	12	1000 Ohms	110-1-A-12/1D
1 Form A	3	250 ohms	110-1-A-3/2D
Switch No.2	5	500 Ohms	110-1-A-5/2D
	12	1000 Ohms	110-1-A-12/2D

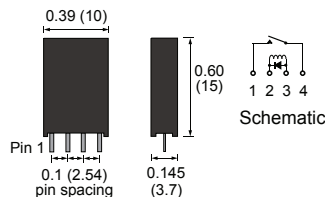
When an internal diode is required, the suffix D is added to the part number as shown in the table. If a diode is not required, the D suffix should be omitted.

### 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, 110 and 111 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.



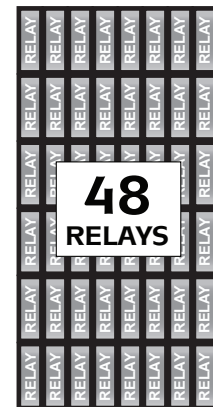
Using standard  
**0.2 x 0.8 inch relays**  
 in this PCB area you can fit  
**18 Relays**



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**



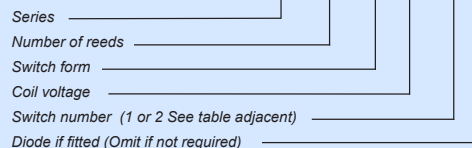
Using PICKERING  
**Series 110 or 111 relays**  
 in this PCB area you can fit  
**48 Relays**

**If Packing Density Is Your Problem,  
 Use Pickering Series 110 or 111**

### Order Code

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

**110 - 1 - A - 5 / 2 D**



### 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**