Mini-SIL Reed Relays

for stacking on 0.2 inches pitch

New 3 Volt Version

FEATURES

- *SoftCenter*™ construction (see opposite)
- Highest quality instrumentation grade switches
- Encapsulated in patented mu-metal can
- Insulation resistance greater than 10^{12} ohms for Form A devices
- Dry and mercury wetted switches available
- Wide range of switch configurations - 1 Form A, 1 Form B, 2 Form A, 1 Form C, and 2 Form C, see adjacent column
- For R.F. or high speed digital applications, 50 ohms coaxial devices are available in the same package style, see Series 102M
- 3, 5, 12 and 24 volt coils are standard, with or without internal diode
- 100% tested for dynamic contact resistance

The Series 107 Mini-SIL range of reed relays are intended for stacking on 0.2 inches (5.08mm) pitch. Their small size, superb contact resistance stability and ultra high insulation resistance, make these relays an ideal choice for high quality instrumentation.

The mu-metal case ensures virtually total magnetic screening, see explanation below.

Both dry and mercury wetted switches are available in a wide range of configurations, see adjacent column.

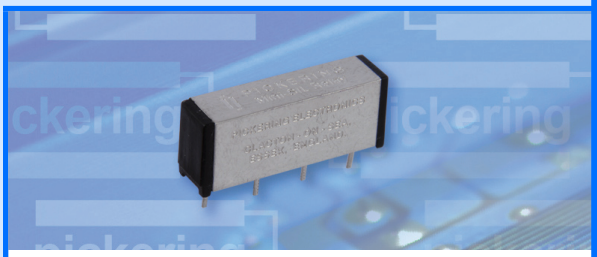
If even greater packing density is required, smaller devices are available in other Pickering SIL ranges (except for two pole changeover types).

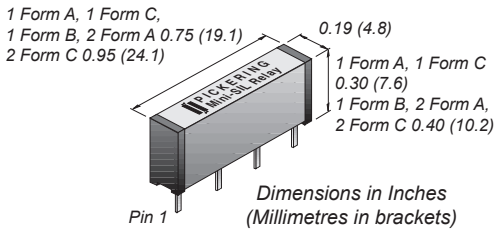
Magnetic Interaction - An explanation

Magnetic interaction between relays is normally expressed as a percentage increase in the voltage required to operate the relay, due to the extraneous fields from adjacent relay coils.

An unscreened SIL relay of this size would have an interaction figure of around 30 percent, i.e. the voltage required to operate it will increase by this amount when relays alongside are operated also. It may prove impossible to use such a relay at its nominal coil voltage in high density applications.

A Pickering Series 107 reed relay has an interaction figure of approximately 1 percent.





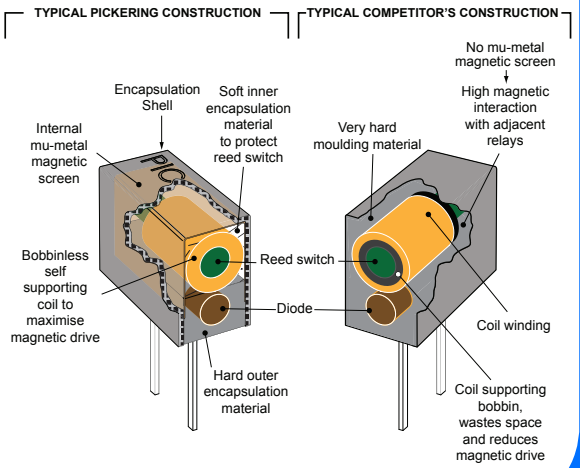
Switch Ratings - Dry Switches

- 1 Form A (energize to make), 10 watts at 200V
- 1 Form A (energize to make), 10 watts at 500V
- 1 Form B (energize to break), 10 watts at 200V
- 1 Form C (change-over), 3 watts at 200V
- 2 Form A (energize to make), 10 watts at 200V
- 2 Form C (change-over), 3 watts at 200V

Switch Ratings - Mercury Wetted Switches

- 1 Form A (energize to make), 50 watts at 500V
- 1 Form A (Position insensitive), 30 watts at 350V
- 2 Form A (energize to make), 50 watts at 500V

Pickering SoftCenter™ Construction



www.pickeringrelay.com

Dry Reed - Series 107 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	Special Features
1	A or B	10 Watts	0.5 Amp.	1.2 Amp.	200	General purpose
2	A	10 Watts	0.5 Amp.	1.2 Amp.	200	Low level
3	C	3 Watts	0.25 Amp.	1.2 Amp.	200	Change over
4	A	10 Watts	0.5 Amp.	1.2 Amp.	300	500V Stand Off

Switch no.2 is particularly good for switching low currents and/or voltages. It is the ideal switch for Automatic Test Equipment where cold switching techniques are often used. Where higher power levels are involved, switch no.1 is a more suitable choice.

Dry Relay - Coil data and type numbers

Device type	Type Number	Coil voltage	Coil resistance	Max. contact resistance (initial)
1 Form A (energize to make) General Purpose Switch No. 1	107-1-A-5/1D 107-1-A-12/1D 107-1-A-24/1D	5 12 24	500 1000 3000	0.15 Ohms 0.15 Ohms 0.15 Ohms
1 Form A (energize to make) Low Level Switch No. 2	107-1-A-3/2D 107-1-A-5/2D 107-1-A-12/2D 107-1-A-24/2D	3 5 12 24	500 500 1000 3000	0.12 Ohms 0.12 Ohms 0.12 Ohms 0.12 Ohms
1 Form A (energize to make) High Voltage Switch No. 4	107-1-A-5/4D 107-1-A-12/4D 107-1-A-24/4D	5 12 24	500 1000 3000	0.15 Ohms 0.15 Ohms 0.15 Ohms
1 Form C (change-over) Switch No. 3	107-1-C-5/3D 107-1-C-12/3D 107-1-C-24/3D	5 12 24	500 1000 3000	0.2 Ohms 0.2 Ohms 0.2 Ohms
1 Form B (energize to break) General Purpose Switch No. 1	107-1-B-5/1D 107-1-B-12/1D 107-1-B-24/1D	5 12 24	1000 3000 3000	0.15 Ohms 0.15 Ohms 0.15 Ohms
2 Form A (energize to make) General Purpose Switch No. 1	107-2-A-5/1D 107-2-A-12/1D 107-2-A-24/1D	5 12 24	500 1000 3000	0.17 Ohms 0.17 Ohms 0.17 Ohms
2 Form A (energize to make) Low Level Switch No. 2	107-2-A-5/2D 107-2-A-12/2D 107-2-A-24/2D	5 12 24	500 1000 3000	0.15 Ohms 0.15 Ohms 0.15 Ohms
2 Form C (change-over) Switch No. 3	107-2-C-5/3D 107-2-C-12/3D 107-2-C-24/3D	5 12 24	375 1000 2700	0.22 Ohms 0.22 Ohms 0.22 Ohms

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.

Mercury Reed - Series 107 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	Special Features
6	A	50 Watts	2 Amp.	3 Amp.	500	Standard Mercury
8	A	30 Watts	0.75 Amp.	2 Amp.	350	Position Insensitive

Mercury Relay - Coil data and type numbers

Device type	Type Number	Coil voltage	Coil resistance	Max. contact resistance (initial)
1 Form A (energize to make) Switch No. 6	107-1-A-5/6D 107-1-A-12/6D 107-1-A-24/6D	5 12 24	140 500 1500	0.075 Ohms 0.075 Ohms 0.075 Ohms
1 Form A (energize to make) Position Insensitive Switch No. 8	107-1-A-5/8D 107-1-A-12/8D 107-1-A-24/8D	5 12 24	140 500 1500	0.100 Ohms 0.100 Ohms 0.100 Ohms
2 Form A (energize to make) Switch No. 6	107-2-A-5/6D 107-2-A-12/6D 107-2-A-24/6D	5 12 24	100 375 1000	0.100 Ohms 0.100 Ohms 0.100 Ohms

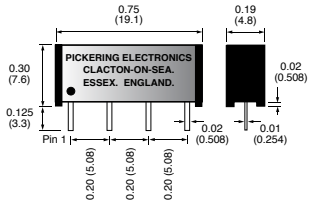
When an internal diode is required, the suffix D is added to the part number as shown in the table. If a diode is not required, the D suffix should be omitted.

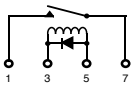
Pickering Electronics Limited
Stephenson Road
Clacton-on-Sea
CO15 4NL
England
email: sales@pickeringrelay.com
Tel. (UK) 01255 428141
(International) +44 1255 428141
Fax. (UK) 01255 475058
(International) +44 1255 475058

ISO9001
Manufacture of Reed Relays
FM 29036

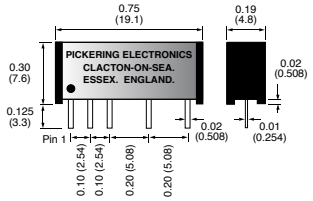
Pin configuration and dimensional data

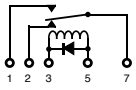
Dimensions in Inches (Millimetres in brackets).



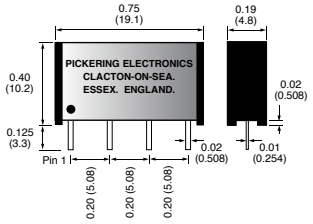


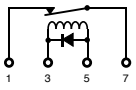
1 Form A (Energize to make)



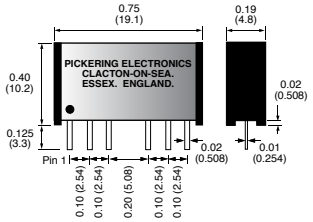


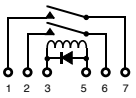
1 Form C (Changeover)



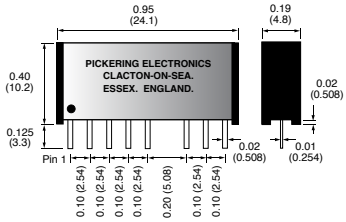


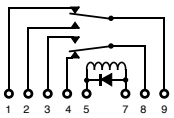
1 Form B (Energize to break)





2 Form A (Energize to make)





2 Form C (Changeover)

Mercury Relays

UP

With the exception of the position insensitive type, mercury relays should be mounted vertically with pin 1 uppermost.

Order Code

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

107 - 1 - A - 5 / 2 D

- *Series*
- *Number of reeds*
- *Switch form*
- *Coil voltage*
- *Switch number (See table adjacent)*
- *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

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