High Voltage SIL reed relays

for up to 3 kilovolts

New 3 Volt Version

FEATURES

- *SoftCenter*™ construction (see below)
- Highest quality instrumentation grade switches
- Small size
- Internal mu-metal magnetic screen
- One or two switches in a single package
- Form A (energize to make) or Form B (energize to break) configurations
- Dry and mercury wetted switches available
- 3, 5, 12 and 24 Volt coils are standard, with or without internal diode
- 100% tested for dynamic contact resistance

The Series 104 is a range of Single-In-Line reed relays intended for voltages that are beyond the capabilities of conventional SIL reed relays.

They are ideal for such applications as transformer or cable testing or any other automatic test equipment where high voltages are involved.

Where mains voltages are switched, for example to control and isolate S.C.R. or triac gates, they are an ideal choice.

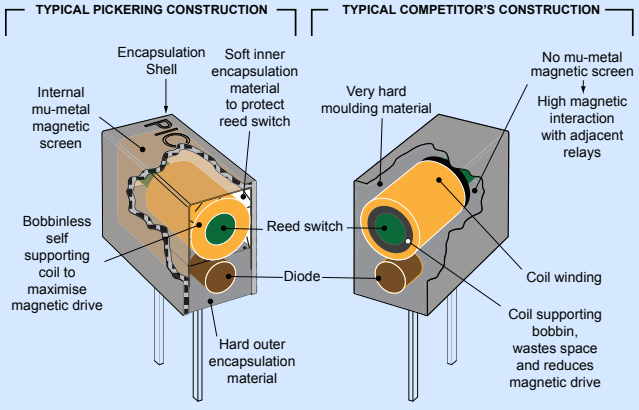
One or two Form A (energize to make) or one Form B (energize to break) configurations are available.

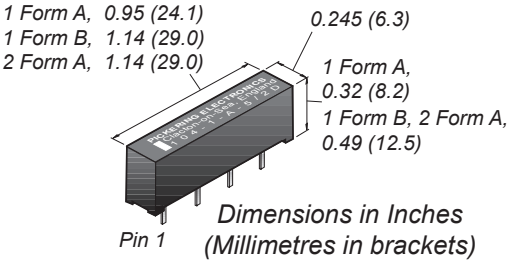
The range features an internal mu-metal screen to eliminate problems that would otherwise be experienced due to magnetic interaction when they are closely stacked.

Three types of dry switches are available, capable of standing-off 1, 1.5 or 3kV d.c. The 3kV version has an increased clearance between the switch and coil pins to accomodate the higher voltage. Even higher voltage ratings are available to special order, please contact our sales office for further information.

Mercury wetted devices are also available for applications where bounce free switching is required. These are rated at 1500 volts d.c. stand-off, 500 volts d.c. switching at up to 50 watts.

Pickering SoftCenter™ Construction





Dimensions in Inches (Millimetres in brackets)

Switch Ratings - Dry switches

- **1 or 2 Form A (energize to make)**
  1000 Volts d.c. stand-off
  500 Volts d.c. switching at 10 Watts
- **1 or 2 Form A (energize to make)**
  1500 Volts d.c. stand-off
  1000 Volts d.c. switching at 10 Watts
- **1 Form A (energize to make)**
  3000 Volts d.c. stand-off
  1000 Volts d.c. switching at 25 Watts
- **1 Form B (energize to break)**
  1000 Volts d.c. stand-off
  500 Volts d.c. switching at 10 Watts
- **1 Form B (energize to break)**
  1500 Volts d.c. stand-off
  1000 Volts d.c. switching at 10 Watts

Switch Ratings - Mercury switches

- **1 or 2 Form A (energize to make)**
  1500 Volts d.c. stand-off
  500 Volts d.c. switching at 50 Watts

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Dry Reed Series 104 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. stand-off volts
1	A or B	10 Watts	0.50 Amp.	1.0 Amp.	500	1000
2	A or B	10 Watts	0.50 Amp.	1.0 Amp.	1000	1500
3	A	25 Watts	1.00 Amp.	1.5 Amp.	1000	3000

Dry Relays - Data and type numbers

Device type	Type number	Coil (V)	Coil resistance (ohms)	Max. contact resistance (initial)
1 Form A (energize to make) Switch No.1 **1kV**	104-1-A-3/1D	3	220	0.15 Ohms
	104-1-A-5/1D	5	375	0.15 Ohms
	104-1-A-12/1D	12	1000	0.15 Ohms
	104-1-A-24/1D	24	3000	0.15 Ohms
1 Form A (energize to make) Switch No.2 **1.5kV**	104-1-A-3/2D	3	220	0.15 Ohms
	104-1-A-5/2D	5	375	0.15 Ohms
	104-1-A-12/2D	12	1000	0.15 Ohms
	104-1-A-24/2D	24	3000	0.15 Ohms
1 Form A (energize to make) Switch No.3 **3.0kV**	104-1-A-3/3D	3	100	0.15 Ohms
	104-1-A-5/3D	5	220	0.15 Ohms
	104-1-A-12/3D	12	500	0.15 Ohms
	104-1-A-24/3D	24	3000	0.15 Ohms
1 Form B (energize to break) Switch No.1 **1kV**	104-1-B-5/1D	5	750	0.20 Ohms
	104-1-B-12/1D	12	2000	0.20 Ohms
	104-1-B-24/1D	24	3000	0.20 Ohms
1 Form B (energize to break) Switch No.2 **1.5kV**	104-1-B-5/2D	5	750	0.20 Ohms
	104-1-B-12/2D	12	2000	0.20 Ohms
	104-1-B-24/2D	24	3000	0.20 Ohms
2 Form A (energize to make) Switch No.1 **1kV**	104-2-A-5/1D	5	250	0.20 Ohms
	104-2-A-12/1D	12	750	0.20 Ohms
	104-2-A-24/1D	24	2000	0.20 Ohms
2 Form A (energize to make) Switch No.2 **1.5kV**	104-2-A-5/2D	5	250	0.20 Ohms
	104-2-A-12/2D	12	750	0.20 Ohms
	104-2-A-24/2D	24	2000	0.20 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 104 switch ratings

The contact ratings for this switch type is shown below:

Sw. No	Switch form	Power rating	Max. switch current	Max. carry current	Max. switching volts	Max. stand-off volts
6	A	50 Watts	2.00 Amp.	3.00 Amp.	500	1500

Mercury Relays - Data and type numbers

Device type	Type number	Coil volts	Coil resistance (ohms)	Max. contact resistance (initial)
1 Form A (energize to make) Switch No. 6 1.5kV	104-1-A-5/6D	5	100	0.12 Ohms
	104-1-A-12/6D	12	500	0.12 Ohms
	104-1-A-24/6D	24	1500	0.12 Ohms
2 Form A (energize to make) Switch No. 6 1.5kV	104-2-A-5/6D	5	50	0.15 Ohms
	104-2-A-12/6D	12	275	0.15 Ohms
	104-2-A-24/6D	24	1000	0.15 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.

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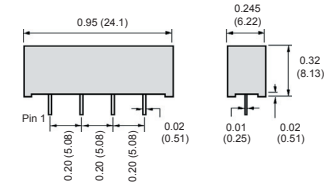
ISO9001
Manufacture of Reed Relays
FM 29036

Pin configuration and dimensional data

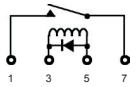
Dimensions in Inches (Millimetres in brackets).

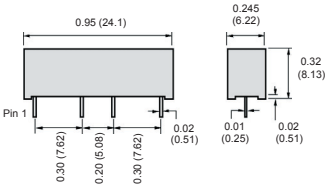
Important note: The 3kV version (switch number 3) has a different pin configuration to the lower voltages types. The increased spacing between the switch and coil pins is to accommodate the higher voltage stand-off.



1 Form A (Energize to make)

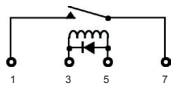
Switch No. 1 (1 kV stand-off)
Switch No. 2 (1.5 kV stand-off)
Switch No. 6 (Mercury Wetted)

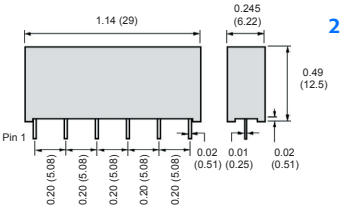




1 Form A (Energize to make)

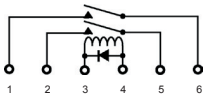
Switch No. 3 (3 kV stand-off)

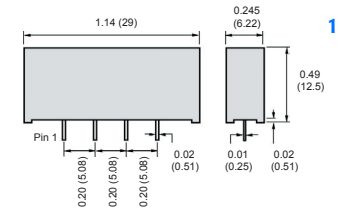




2 Form A (Energize to make)

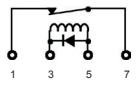
Switch No. 1 (1 kV stand-off)
Switch No. 2 (1.5 kV stand-off)
Switch No. 6 (Mercury Wetted)





1 Form B (Energize to break)

Switch No. 1 (1 kV stand-off)
Switch No. 2 (1.5 kV stand-off)



Mercury Relays

Mercury relays should be mounted vertically with pin 1 uppermost. Pin 1 is marked with a bar on the top face of the relay.

Order Code

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

104 - 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