

Line Sensing Reed Relays with Magnetic Shield



CHARACTERISTICS

- Line Sense Relay
- Approved according to EN60950
- Magnetic shield
- UL approved under E 156887 (M)
- Small size
- Washable

DESCRIPTION

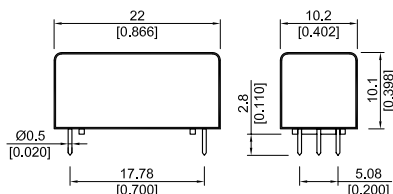
The NP-CL Reed Relays are used for line sensing in many modems, fax machines, PBX systems and other telecommunication systems. The 1 coil version is approved according to EN60950 and offers sufficient distance in air and creepage paths.

APPLICATIONS

- Line systems in phones and faxes
- Telecommunications

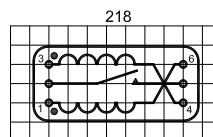
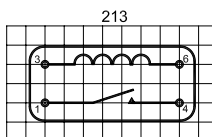
DIMENSIONS

All dimensions in mm [inches]



PIN OUT

View from top of component
2.54mm [0.10"] pitch grid



• Points of the same polarity

ORDER INFORMATION

RELAY SERIES	CONTACT FORM	SWITCH MODEL	COIL RESISTANCE	PIN OUT
NP-CL -	1A	81 -	X -	XXX
OPTIONS			9	213
			4 / 4	218

Part Number Example

NP-CL - 1A81 - 9 - 213

9 is the coil resistance
213 is the pin out

RELAY DATA

All data at 20 °C	Switch Model → Contact Form →	Switch 81 Form A			
Contact Ratings	Conditions	Min.	Typ.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			5	W
Switching Voltage	DC or peak AC			90	V
Switching Current	DC or peak AC			0.5	A
Carry Current	DC or peak AC			1.0	A
Static Contact Resistance	w/ 0.5V & 50mA			200	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 ⁹ 10 ⁹			Ω
Breakdown Voltage	Across contacts Contact to coil	100 1000			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			0.5	ms
Release Time	Measured w/ no coil suppression			0.1	ms
Capacitance	Across contacts Contact to coil		0.4 2.5		pF
Life Expectancies					
Switching 5 Volts@ 10mA	DC only & <10 pF stray cap.		100		10 ⁶ Cycles
For other load requirements please see our life test section located on page 151.					
Environmental Data					
Shock Resistance	1/2 sine wave duration 11ms			30	g
Vibration Resistance	From 10 - 2000 Hz			10	g
Ambient Temperature	10 °C/ minute max. allowable	-20		70	°C
Storage Temperature	10 °C/ minute max. allowable	-25		85	°C
Soldering Temperature	5 sec. dwell			260	°C

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COIL DATA

CONTACT FORM	SWITCH MODEL	PIN OUT	COIL RESISTANCE			PULL-IN CURRENT		DROP-OUT CURRENT		INDUCTANCE AT 1kHz at ONE COIL (* at BOTH COILS)		
All data at 20 °C **			Ω			mA		mA		mH		
			Min.	Typ.	Max.	Min.	Max.	Min.	Max.	Min.	Typ.	Max.
1A	81	213	8.1	9	9.9	5.1	15	5	14	2.72	3.4	4.08
		218***	3.6 3.6	4/4	4.4 4.4	5.1	15	5	14	0.64 2.56 *	0.8 3.2*	0.96 3.84*

** The pull-in / drop-out currents and coil resistance will change at the rate of 0.4% per °C.
*** Values presented are for coils in series aiding.