

## Line Sensing Reed Relays



## DESCRIPTION

The DIL-CL series is used for line sensing in many modems, fax machines, private branch exchanges (PBX) and other telecommunication devices. It is superior to semiconductor solutions regarding flashover and impulse strength. The DIL-CL series is approved according to EN60950.

## CHARACTERISTICS

- Line Sense Relay
- Breakdown voltage coil-contact up to 4.25 kVDC / 3.0 kVRMS
- Approved according to EN60950
- Low profile version only 5.8 mm high
- UL approval

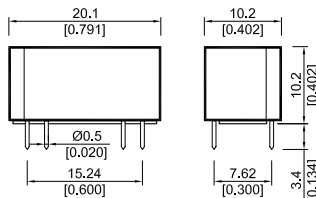
## FEATURES

- Pull-In current < 15 mA possible

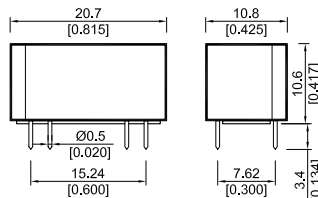
## DIMENSIONS

All dimensions in mm [inches]

Without magnetic shield



With magnetic shield



## ORDER INFORMATION

Series	Contact Form	Switch Model	Coil Resistance (in $\Omega$ )	Pin Out
DIL-CL -	1A	81 -	XX -	XXX
Options			9, 10, 15, 4/4*	13M, 15M, 18M, 513M**

\* Available with Pin-out M18 only.  
\*\* Available only with 10 & 15  $\Omega$  coil resistance.

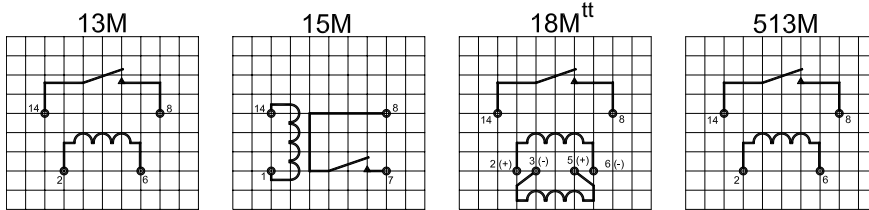
### Part Number Example

DIL - CL - 1A81 - 9 - 13M

**9** is the coil resistance in  $\Omega$   
**13M** is the pin out

**PIN OUT**

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



**COIL DATA**

Contact Form	Switch Model	Pin Out	Coil Resistance			Pull-in Current	Drop-out Current	Inductance at 1 kHz and 1 Coil (*at both Coils)		
			Nom.	Typ.	Max.			Min.	Typ.	Max.
<b>All Data at 20 °C †</b>			Ω				mA	mH		
						Max.	Min.	Min.	Typ.	Max.
<b>Height 5.8 mm</b>										
<b>1A</b>	<b>81</b>	513 M	9	10	11	15	5	1.6	2.0	2.4
			14	15	17	15	5	2.88	3.6	4.32
<b>Height 10.6 mm</b>										
<b>1A</b>	<b>81</b>	15 M	8	9	10	15	5	2.56	3.2	3.92
		13 M	14	15	17	15	5	3.52	4.4	5.28
		18 M <sup>tt</sup>	3.6	4	4.4	15	5	0.64 2.56*	0.8 3.2*	0.96 3.84*
† The pull-in, drop-out and coil resistance will change at the rate of 0.4 % per °C. * Values presented are for coils in series aiding.										

## Line Sensing Reed Relays

### RELAY DATA

All Data at 20° C	Switch Model --> Contact Form -->	Switch 81 Form A			Units
		Min.	Typ.	Max.	
<b>Contact Ratings</b>	<b>Conditions</b>				
Switching Power *	Any DC combination of V & A not 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/ 0.5 V & 50mA			200	mΩ
Dynamic Contact Resistance	w/ 0.5 V & 50mA , 1.5 ms after closure			200	mΩ
Insulation Resistance (100 Volts applied)	Across Contacts Contact to coil	10 <sup>9</sup> 10 <sup>10</sup>			Ω
Breakdown Voltage	Across Contacts Contact to coil	100 4.25 3.0			VDC kVDC kVRMS
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		0.2 4.0		pF
<b>Life Expectancies</b>					
Switching 5V & 10 mA	DC <10 pF stray cap.		100		10 <sup>6</sup> Cycles
For other load requirements, see the life test section on P. 152.					
<b>Environmental Data</b>					
Shock Resistance	1/2 Sine wave duration for 11 ms			30	g
Vibration Resistance	From 10 - 2000 Hz			10	g
Ambient Temperature	max. 10°C/ minute allowable	-20		70	°C
Storage Temperature	max. 10°C/ minute allowable	-25		85	°C
Soldering Temperature	5 sec. dwell			260	°C