

## 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

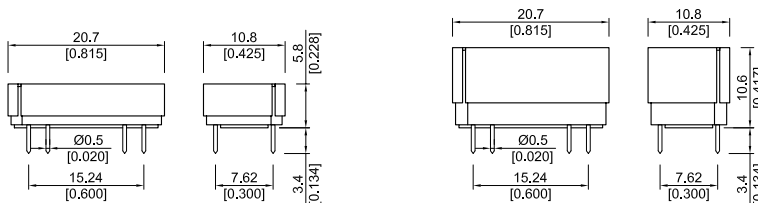
- Line Sense Relay
- Breakdown voltage coil-contact up to 4.25 kVDC / 3.0 kVRMS
- Approved according to EN60950
- Low profile version only 5.8 mm high
- UL approval

## FEATURES

- Pull-In current < 15 mA possible

## DIMENSIONS

All dimensions in mm [inches]



## ORDER INFORMATION

RELAY 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 18M only.  
\*\* Available only with 10 & 15  $\Omega$  coil resistance.

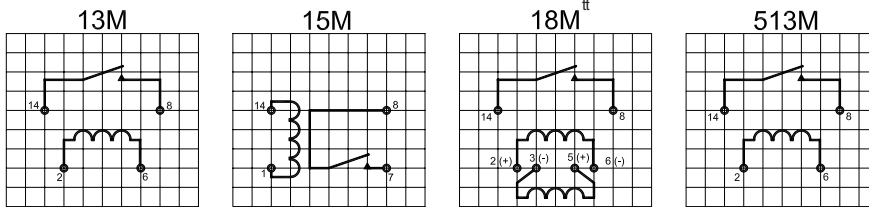
### Part Number Example

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 at 1 COIL (*at BOTH COILS)		
			Nom.	Typ.	Max.	Min.	Max.	Min.	Max.	Min.	Typ.	Max.
<b>All data at 20 °C †</b>			Ω			mA		mA		mH		
<b>Height 5.8 mm</b>												
<b>1A</b>	<b>81</b>	513 M	9	10	11	5.1	15	5	14.9	1.6	2.0	2.4
			14	15	17	5.1	15	5	14.9	2.88	3.6	4.32
<b>Height 10.6 mm</b>												
<b>1A</b>	<b>81</b>	13 M	8	9	10	5.1	15	5	14.9	2.56	3.2	3.92
		15 M	14	15	17	5.1	15	5	14.9	3.52	4.4	5.28
		18 M ‡	3.6	4	4.4	5.1	15	5	14.9	0.64 2.56*	0.8 3.2*	0.96 3.84*

† The pull-in / drop-out current 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			
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 <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 5 Volts@ 10mA	DC only & <10 pF stray cap.		100		10 <sup>6</sup> Cycles
For other load requirements please see our life test section located on page 151.					
<b>Environmental Data</b>					
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