

DESCRIPTION

Single-In-Line Reed Relays reduce the required space to a minimum. The SIL series is available as both voltage and current driven (line sense) Reed Relays. Requiring only half the PCB area of the DIP or DIL series, the SIL relays offer all the advantages of Reed Technology. The SIL series is approved according to EN60950 and offers sufficient distance in air and creepage paths.



CHARACTERISTICS

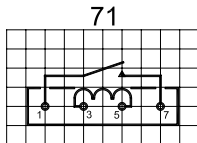
- Approved according to EN60950
- High resistance coils of up to 2000 Ω at 12 VDC
- Line sense relay with pull-in current = 15 mA
- Breakdown voltage coil / contact of up to 4.25 kVDC

FEATURES

- **NEW** Breakdown voltage of 4200 VDC
- Magnetic shield available
- High resistance version
- Other coil resistances available
- Form B available

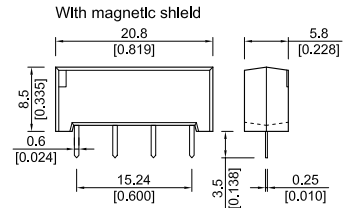
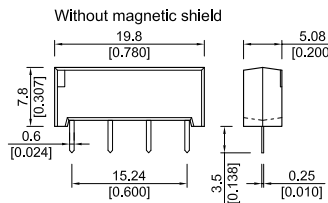
PIN OUT

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



DIMENSIONS

All dimensions in mm [inches]



ORDER INFORMATION

Part Number Example

SIL12 - 1A72 - 71L

12 is the nominal voltage
1A is the contact form
72 is the switch model
L is the option

OPTIONS

- L** = No option
- M** = With magnetic shield
- D** = With diode and no magnetic shield
- Q** = With diode and with magnetic shield

RELAY SERIES	NOMINAL VOLTAGE	CONTACT FORM	SWITCH MODEL	PIN OUT	OPTIONS	HIGH RESISTANCE VERSION
SIL	XX -	1X	XX -	71	X	XX
OPTIONS	05, 12, 15, 24*	A **	31, 72, 75, 84		L, M, D, Q	
	05, 12	1A	81		L, M	HR
SIL-CL -	NA	1A	81 -	71	M	NA

* Other coil resistances available. Please consult factory.

** Form B available.

Single-In-Line
Reed Relays

RELAY DATA

All data at 20 °C	Switch Model → Contact Form →	Switch 31 Form A			Switch 72 Form A			Switch 75 Form A			
Contact Ratings	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max's			50			20			10	W
Switching Voltage	DC or peak AC			1000			200			1000	V
Switching Current	DC or peak AC			2.0			1.0			0.5	A
Carry Current	DC or peak AC			3.0			1.25			1.0	A
Static Contact Resistance	w/ 0.5V & 50mA			80			150			200	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			150			200			200	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 ¹⁰ 10 ¹²	10 ¹³		10 ¹² 10 ¹²	10 ¹³		10 ¹⁰ 10 ¹²	10 ¹³		Ω
Breakdown Voltage	Across contacts Contact to coil	1500 4200			320 4200			1000* 4200			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			1.2			0.5			0.5	ms
Reset Time	Measured w/ no coil suppression			1.0			0.1			0.1	ms
Capacitance	Across contacts Contact to coil		0.4 2.0			0.2 2.0			0.4 2.0		pF
Life Expectancies											
Switching 5 Volts@ 10mA	DC only & <10 pF stray cap.		500			1000			500		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			50			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20			20	g
Ambient Temperature	10 °C/ minute max. allowable	-20		70	-20		70	-20		70	°C
Storage Temperature	10 °C/ minute max. allowable	-35		95	-35		95	-35		95	°C
Soldering Temperature	5 sec dwell			260			260			260	°C
* For higher voltage requirements please consult factory.											

RELAY DATA

All data at 20 °C	Switch Model --> Contact Form -->	Switch 81 Form A			Switch 8 Form A			
Contact Ratings	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			5			10	W
Switching Voltage	DC or peak AC			90			400	V
Switching Current	DC or peak AC			0.5			0.5	A
Carry Current	DC or peak AC			1.0			1.0	A
Static Contact Resistance	w/ 0.5V & 50mA			200			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200			200	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 ⁹ 10 ¹²	10 ¹³		10 ¹¹ 10 ¹²	10 ¹³		Ω
Breakdown Voltage	Across contacts Contact to coil	100 4200			700 4200			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			0.5			2.0	ms
Reset Time	Measured w/ no coil suppression			0.1			0.1	ms
Capacitance	Across contacts Contact to coil		0.4 2.0			0.7 2.0		pF
Life Expectancies								
Switching 5 Volts@ 10mA	DC only & <10 pF stray cap.		100			200		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			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10 °C/ minute max. allowable	-20		70	-20		70	°C
Storage Temperature	10 °C/ minute max. allowable	-35		95	-35		95	°C
Soldering Temperature	5 sec dwell			260			260	°C

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COIL DATA

CONTACT FORM	SWITCH MODEL	COIL VOLTAGE		COIL RESISTANCE			PULL-IN VOLTAGE		DROP-OUT VOLTAGE		NOMINAL COIL POWER
All data at 20 °C *		VDC		Ω			VDC		VDC		mW
		Nom.	Max.	Min.	Typ.	Max.	Min.	Max.	Min.	Max.	Typ.
1A	31	5	7.5	72	80	88	0.76	3.5	0.75	3.4	310
		12	16	290	320	350	1.9	8.4	1.8	8.3	450
		24	30	1170	1300	1430	3.7	16.8	3.6	16.7	440
	72 75 8	5	7.5	450 (180)**	500 (200)	550 (220)	0.76	3.5	0.75	3.4	50 (125)
		12	16	900	1000	1100	1.9	8.4	1.8	8.3	145
		15	7.5	1800	2000	2200	2.3	10.5	2.2	10.4	110
		24	30	1800	2000	2200	3.7	16.8	3.6	16.7	290
	81	5 HR	7.5	900	1000	1100	0.76	3.5	.75	3.4	25
		12 HR	16	1800	2000	2200	1.9	8.4	1.8	8.3	70
* The pull-in / drop-out voltages and coil resistance will change at the rate of 0.4% per °C.							**Data in () are valid for switch model 31, 75, and 84				

SIL-CL LINE SENSE RELAY COIL DATA

CONTACT FORM	SWITCH MODEL	COIL RESISTANCE			PULL-IN CURRENT		DROP-OUT CURRENT		INDUCTANCE AT 1 kHz		
All data at 20 °C *		Ω			mA		mA		mH		
		Min.	Typ.	Max.	Min.	Max.	Min.	Max.	Min.	Typ.	Max.
1A	81	13.5	15	18	5.1	15	5	14.9	2.76	3.45	4.14
* The pull-in / drop-out currents and coil resistance will change at the rate of 0.4% per °C.											