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Standex DETECT Electronics

INNOVATE / CONSULT / ENGINEER / DELIVER

DATA SHEET

SIL Series Reed Relays



Key Features and Benefits:

- Compact SIL package for high-density PCB layouts
- Instrumentation-grade reed switching for reliable signal control
- Flexible options with multiple contact forms, coil voltages, diode, and magnetic shielding
- IEC 61810 tested and UL listed, ensuring consistent performance in demanding environments

Key Markets and Applications:

- Test & Measurement, Industrial Control, Security & Safety Systems
- Functional test equipment, PCB signal switching, Alarm and sensor circuits

Contact and Switching Characteristics :

Contact Data	Switch Model			Unit
	1A72	1C90	1B90	
Contact Material	Rh	Rh	Rh	
Rated Power (max.) Any DC combo of V&A not to exceed max. rated power	10	10	10	W
Switching Voltage (max.) DC or peak AC (Limited by FLRY-B Cable)	200	175	100	V
Switching Current (max.) DC or peak AC	0.5	0.5	0.2	A
Carry Current (max.) DC or peak AC	1.25	1.0	0.5	A
Contact Resistance (max.) @ 0.5V & 10mA, Measured with 40% Pull-In Overdrive	150	150	150	mOhm
Breakdown Voltage (min.) According to EN60255-27	0.25	0.2	0.15	kVDC
Operating Time (max.) Incl. Bounce; Measured with w/ 40% Pull-In Overdrive	0.7	0.7	2.0	ms
Release Time (max.) Measured without Coil Suppression	0.05	1.5	2.0	ms
Insulation Resistance (typ.) Rh<45%, 100V Test Voltage	10^{10}	10^{9}	10^{9}	Ohm
Capacitance (typ.) @ 10kHz across open Switch	0.3	1.5	1.5	pF

Part Number Configuration:

Ordering Code Structure:

SIL 00 – 0X 00 – 00 X

SERIES 1 2 3 4 5

CONFIGURATION OPTIONS:

1 NOMINAL VOLTAGE **[03, 05, 12, 24]**
2 CONTACT FORM **[1A, 1B, 1C]**
3 SWITCH MODEL **[72, 90]**
4 PINOUT **[71, 51]**
5 VERSION **[L, M, D, Q and HR]**

OPTIONS GLOSSARY:

L	Standard - Internal Magnetic Shield Only
D	Diode + Internal Magnetic Shield
M	External Magnetic Shield
Q	Diode with External Magnetic Shield
HR	High Resistance Coil

Contact Form Glossary :

Form A
NO = Normally Open Contacts
SPST = Single Pole Single Throw

Form B
NC = Normally Closed Contacts
SPST = Single Pole Single Throw

Form C
Changeover
SPDT = Single Pole Double Throw

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General Relay Characteristics:

(@ 20°C)

Relay Data	Condition	Value	Unit
Dielectric Strength Coil/Contact (min.)	According to EN60255-27	1.5	kVDC
Insulation Resistance Coil/Contact (min./typ.)	Rh<45%, 200V Test Voltage	10^{11}	Ohm
Capacitance Coil/Contact (typ.)	@10 kHz	1.2	pF
Shock Resistance (max.)	1/2 sine wave, 6md, 3-axis	50	g
Vibration Resistance (max.)	10 – 2,000 Hz	20	g
Operating Temperature (max.)	Surrounding of the relay's housing	-20 to 85	°C
Storage Temperature (max.)	Surrounding of the relay's housing	-35 to 90	°C
Soldering Temperature (max.)	5 sec. max.	260	°C
Washability Aqueous rinse suitable	Proper drying necessary	Fully Sealed	
UL listed component		NRNT2.E156887 / NRNT8.E156887	
RoHS / REACH		Yes	
Weight		2.4	g
Packaging		Tube per 25 pcs.	

Available Configurations and Key Electrical Parameters:

(@ 20°C)

Series	Ordering Code	Contact Form	Switch Model	Pinout Option	Available Versions	Breakdown Voltage	Nominal Coil Voltage	Coil Resistance	Coil Power	Pull-In Voltage	Drop-Out Voltage
					(X)	[VDC min.]	[VDC typ.]	[Ω nom.]	[mW nom.]	[VDC max.]	[VDC min.]
SIL	SIL03-1A72-71(X)	1A	72	71	L, D, M, Q	250	03	500	18	2.1	0.45
	SIL05-1A72-71(X)						05	500	50	3.5	0.75
	SIL12-1A72-71(X)						12	1000	144	8.4	1.8
	SIL24-1A72-71(X)						24	2000	288	16.8	3.6
	SIL05-1A72-71(X)HR	1A HR	72	71	L, D, M, Q	250	05	1000	25	3.5	0.75
	SIL12-1A72-71(X)HR						12	2000	72	8.4	1.8
	SIL05-1A72-74(X)	1A	72	74	L, D, M, Q	200	05	500	50	3.5	0.75
	SIL12-1A72-74(X)						12	1000	144	8.4	1.8
	SIL05-1B90-71(X)	1B	90	71	L, D, M, Q	150	05	200	125	3.5	0.75
	SIL05-1C90-51(X)	1C		51	L, D, M, Q	200	05	200	125	3.5	0.75
SIM	SIM05-1A-71(X)	1A	High Voltage	71	L, D, M, Q	1500	05	200	125	3.5	0.75
	SIM12-1A-71(X)					2000	12	1000	144	8.4	1.8
	SIM24-1A-71(X)					2000	24	2000	288	16.8	3.6
	Check the separated datasheet for the High Voltage SIM Series: https://standexdetect.com/products/relays/reed-relays/sim										

Pull-in Voltage, Drop-out Voltage, and Coil Resistance change by approximately 0.4% per °C relative to their values at 20 °C.
Nominal Coil Resistance tolerance at 20 °C is ±10%
HR = High Resistance Coil
Maximum coil voltage: 7.5 VDC for 5 V coils, 16 VDC for 12 V coils, 30 VDC for 24 V coils.

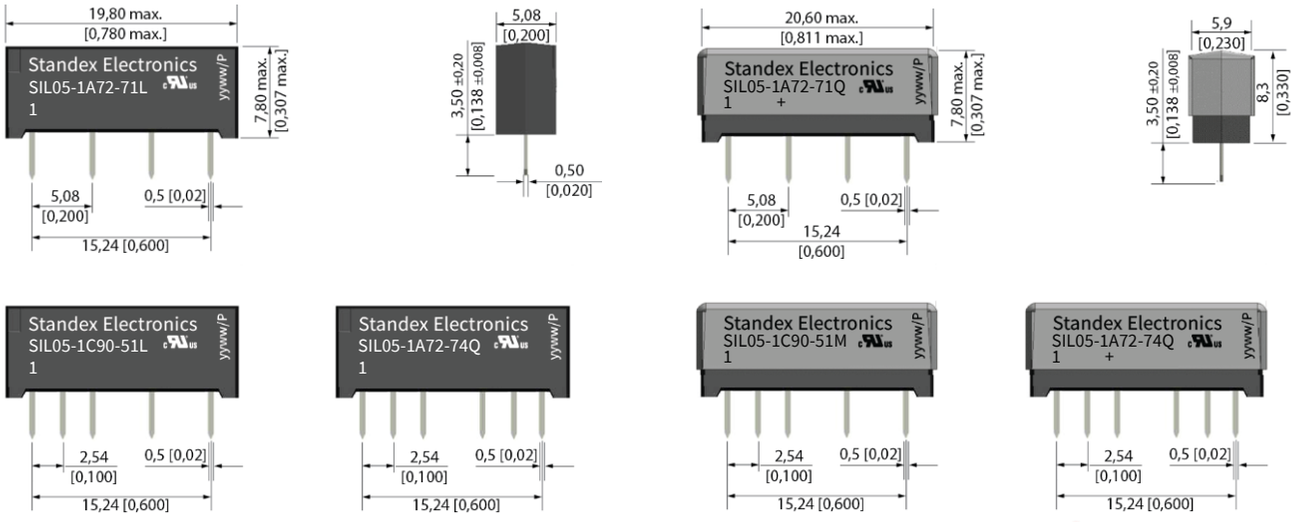
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Dimensions (mm):

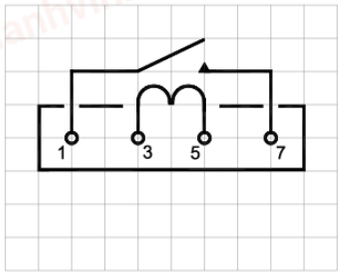
Tolerances acc. to DIN ISO 2768-m



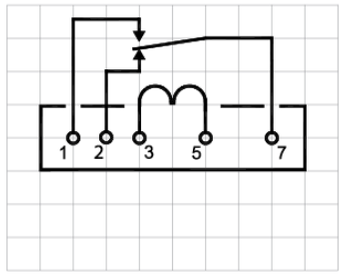
Pinout Options:

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

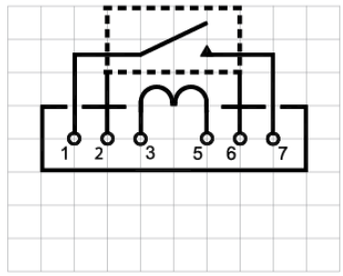
71L/71M Form 1A



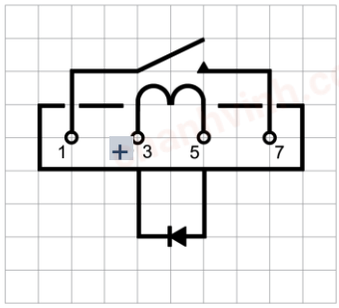
51L/51M Form 1C



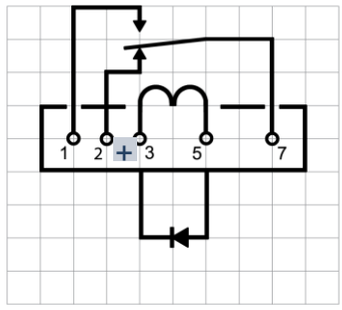
74L/74M Form 1A



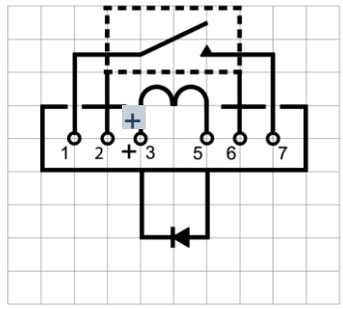
71D/71Q Form 1A



51D/51Q Form 1C



74D/74Q Form 1A



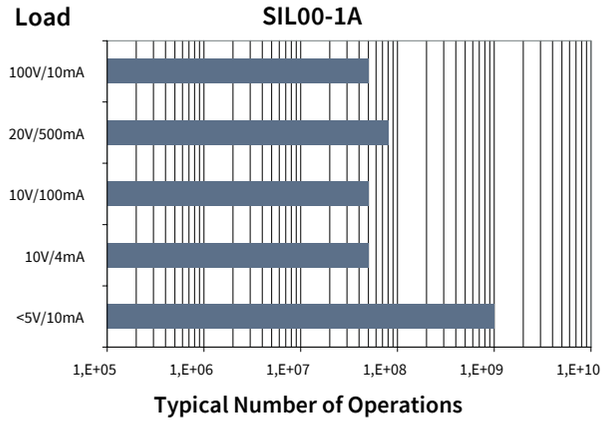
+ Diode option

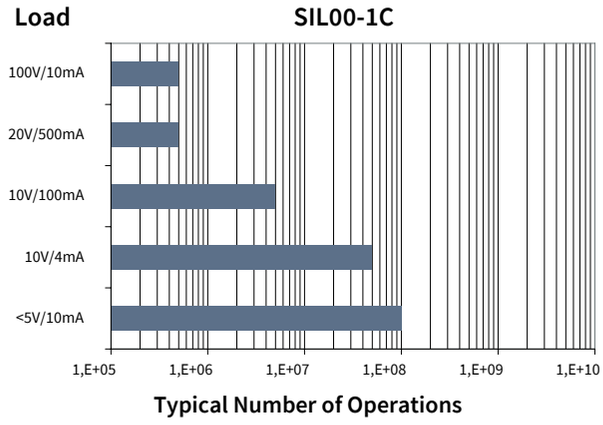
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Lifecycles:





Handling and Assembly Instructions:

- Switching inductive and/or capacitive loads create voltage and/or current peaks, which may damage the relay. Protective circuits need to be used - see our website.
- External magnetic fields and magnetic effects, due to adjacent relays in high density matrices that may influence the relays' electrical characteristics, must be taken into consideration.
- Mechanical shock impacts, ex. dropping the relays, may cause immediate or post-installation failure.
- Suppressing coil diode can have a negative influence on total number of switching cycles, especially by switching high voltage.
- Wave soldering: maximum 260°C / 5 seconds.
- Reflow soldering: This relay is not suitable for reflow soldering.

Disclaimer:
Specifications refer to the standard product range and are provided for general guidance only. Product details may change without notice as part of ongoing technical development.
While every effort is made to ensure accuracy, this document may contain typographical or technical errors.
For complete, current, and application-specific information, refer to the product datasheet or contact your local sales representative.