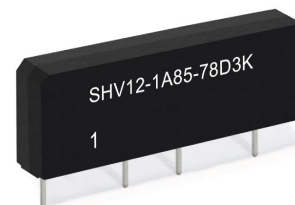


SHV Series Reed Relays

- **Features:** Small High Voltage Relay, Dielectric Strength up to 4 kVDC, Internal Magnetic Shield, UL-listed
- **Applications:** High Density Assembly, Portable Test and Medical Equipment, Cable and In-Circuit Tester
- **Markets:** Test & Measurement, ATE, Medical & Others



Part Description: SHV00-1A85-78X-0K

Nominal Voltage	Contact Quantity & Contact Form	Switch Model	Pin Out	Option	Breakdown Voltage
05, 12, 24	1A	85	78	L, D	2K, 3K, 4K

Customer Options	Switch Model	Unit
Contact Data (@ 20°C)	85 (A-Dry)	
Contact Material	Rhodium	
Rated Power (max.) Any DC combination of V&A not to exceed max. rated power	100	W
Switching Voltage (max.) DC or peak AC	1000	V
Switching Current (max.) DC or peak AC	1.0	A
Carry Current (max.) DC or peak AC	2.5	A
Contact Resistance (max.) @ 0.5V & 10mA, Measured with 40% Pull-In Overdrive	150	mOhm
Breakdown Voltage (min.) (upon request)* According to EN60255-27	3 - 4.5*	kVDC
Operating Time (max.) Including Bounce, Measured w/40% Pull-In Overdrive	1.1	ms
Release Time (max.) Measured without Coil Suppression	0.1	ms
Insulation Resistance (min./typ.) Rh<45%, 100V Test Voltage	10 ¹⁰ / 10 ¹²	Ohm
Capacitance (typ.) @ 10kHz across open Switch	0.5	pF

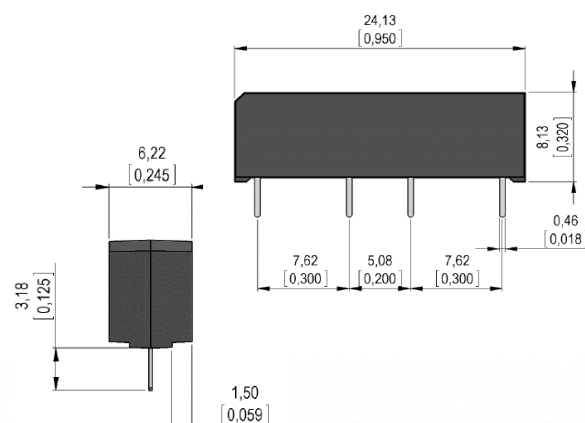
SHV Series Reed Relays

Coil Data (at 20°C)		Coil Voltage (VDC)		Coil Resistance (Ohm)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Coil Power (mW)	Coil Inductance (mH)
Contact Form	Switch Model	Nominal	Max.	Typical (± 10 %)	Max.	Min.	Nominal	Nominal
1A	85 (2K)	05	7.5	220	3.75	0.5	110	
		12	16	500	8.4	1.8	288	
	85 (3K)	05	7.5	180	3.75	0.5	139	
		12	16	500	8.4	1.8	288	
		24	30	2,000	16.4	3.6	288	
	85 (4K)	05	7.5	140	3.75	0.5	179	
		12	19	500	8.4	1.8	288	
		24	30	2,000	16.4	3.6	288	

The Pull-In, Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °C

Relay Data (@ 20°C)		Unit
Dielectric Strength Coil/Contact (min.) According to EN60255-27	4	kVDC
Insulation Resistance Coil/Contact (min/typ) 1/2 sine wave, 6md, 3-axis	10 ¹¹ /10 ¹²	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	-40 to 105	°C
Storage Temperature (max.) Surrounding of the relay's housing	-40 to 125	°C
Soldering Temperature (max.) 5 sec. max.	260	°C
Washability Aqueous rinse suitable. Proper drying necessary.	Fully Sealed	

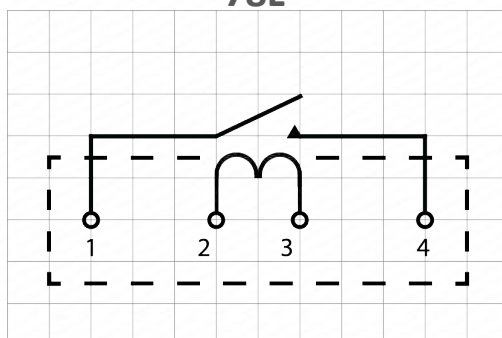
Dimensions (in mm [inch]) Tolerances acc. to ISO 2768-m



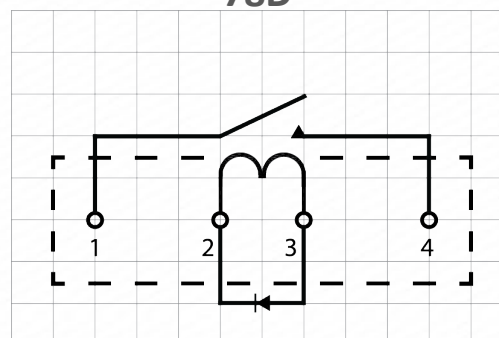
Pin-Out (Top View)

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

78L



78D



SHV Series Reed Relays

Handling & 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.
- External magnetic fields needs to be taken into consideration, including a too high packing density. This may influence the relays' electrical characteristics.
- Mechanical shock impacts e.g. dropping the relays may cause immediate or post-installation failure.
- Wave soldering: maximum 260°/5 seconds.
- Reflow soldering: Recommendations given by the soldering paste manufacturer need to be considered as well as the temperature limits of other components/processes.

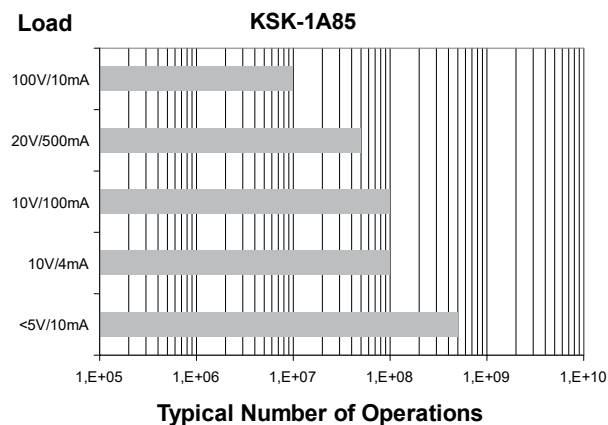
Glossary Option

L	Standard, with Magnetic Shield
D	with Diode, with Magnetic Shield
M	with Magnetic Shield, without Diode
Q	with Diode and Magnetic Shield
HR	High Resistance Coil
SHV Relays are available with "L" and "D" Option	

Breakdown Voltage Option

2K	2 kVDC across open contact
3K	3 kVDC across open contact
4K	4 kVDC across open contact
Test voltage measured according to IEC 60255-27	

Life Test Data (*Load increase reduces life expectancy of Reed Switches)



Glossary Contact Form

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
Form E	Latching unchanged until an opposite impulse is present
SHV Relays are available only in "Form A" configuration	

Please note: All technical specifications on this series datasheet refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

This series datasheet could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These change will be incorporated in future revisions.

For deviating values, most current specifications and products please contact your nearest sales office.