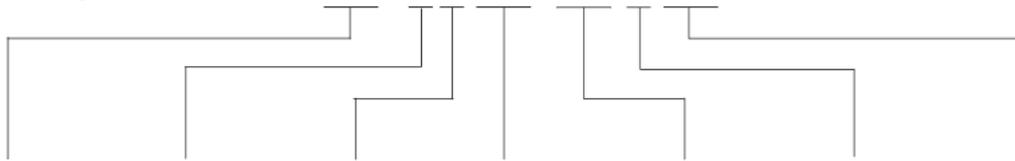


# SHV Series Reed Relays



- 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: **SHV00-1A85-78X0K**



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

See page 3 for explanation

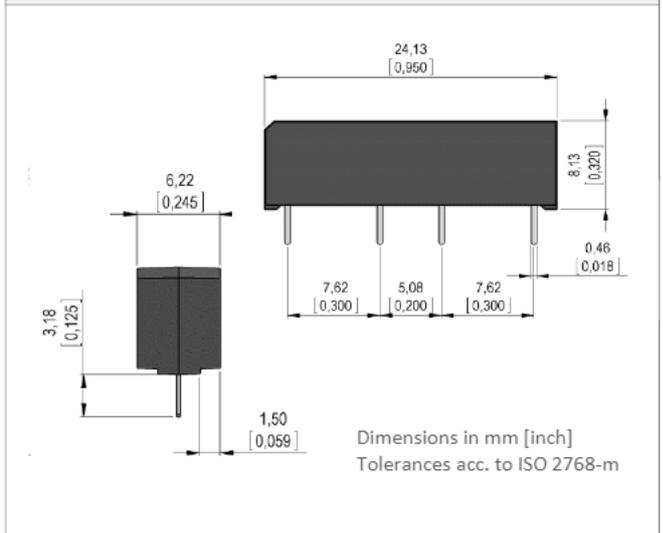
Contact Data (at 20°C)	Switch Model	Unit
	85 (A-Dry)	
<b>Contact Material</b>	Rhodium	
<b>Rated Power (max.)</b> Any DC combination of V&A not to exceed max rated power	100	W
<b>Switching Voltage (max.)</b> DC or peak AC	1,000	V
<b>Switching Current (max.)</b> DC or peak AC	1.0	A
<b>Carry Current (max.)</b> DC or peak AC	2.5	A
<b>Contact Resistance (max.)</b> @ 0.5V & 10mA, Measured with 40% Pull-In Overdrive	150	mOhm
<b>Breakdown Voltage (min.)</b> (depending on configuration) According to IEC 60255-27	2 / 3 / 4	kVDC
<b>Operating Time (max.)</b> Including Bounce, Measured with 40% Pull-In Overdrive	1.1	ms
<b>Release Time (max.)</b> Measured without Coil Suppression	0.1	ms
<b>Insulation Resistance (min. / typ.)</b> Rh<45%, 100V Test Voltage	10 <sup>10</sup> / 10 <sup>12</sup>	Ohm
<b>Capacitance (typ.)</b> @ 10kHz across Open Switch	0.5	pF

Coil Data (at 20°C)		Coil Voltage (VDC)		Coil Resistance (Ohm)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Coil Power (mW)
Contact Form	Switch Model	Nominal	Maximal	Typical (± 10 %)	Maximal	Minimal	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	16	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 (at 20°C)		Unit
<b>Dielectric Strength Coil/Contact (min.)</b> According to EN60255-5	4	kVDC
<b>Insulation Resistance Coil/Contact (min./typ.)</b> Rh<45%, 200V Test Voltage	10 <sup>11</sup> / 10 <sup>12</sup>	Ohm
<b>Capacitance Coil/Contact (typ.)</b> @ 10 kHz	1.2	pF
<b>Shock Resistance (max.)</b> 1/2 sine wave duration 11ms	50	g
<b>Vibration Resistance (max.)</b> 10 – 2,000 Hz	20	g
<b>Operating Temperature (max.)</b> Surrounding of the relay's housing	-40 to 105	°C
<b>Storage Temperature (max.)</b> Surrounding of the relay's housing	-40 to 125	°C
<b>Soldering Temperature (max.)</b> 5 seconds max.	260	°C
<b>Washability</b> Aqueous rinsing suitable. Proper drying necessary	Fully Sealed	

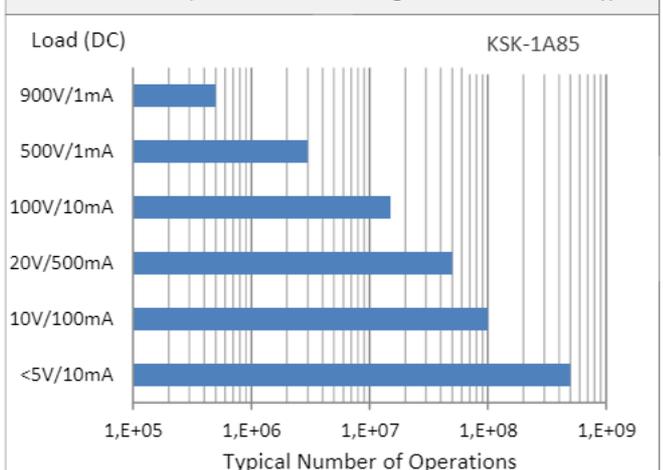
### SHV Reed Relay Dimensions

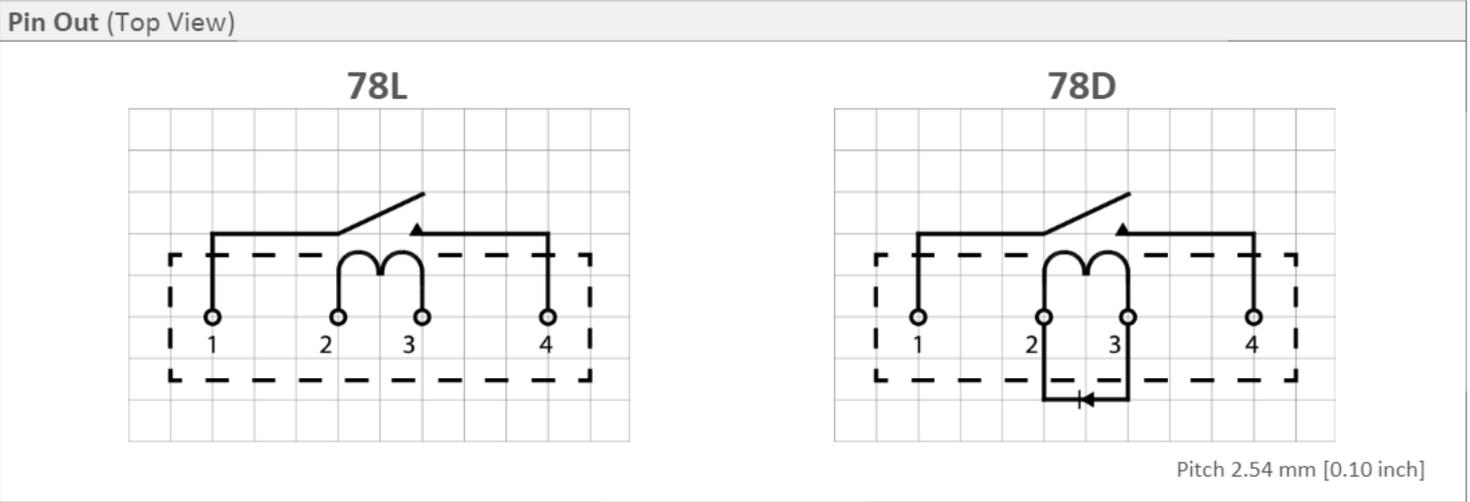


### Handing & Assembly Instructions

- 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, e.g. 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.

### Life Test Data (with resistive load, for general information only)





Glossary Contact Form	
<b>Form A</b>	NO = Normally Open Contacts SPST = Single Pole Single Throw
<b>Form B</b>	NC = Normally Closed Contacts SPST = Single Pole Single Throw
<b>Form C</b>	Changeover SPDT = Single Pole Double Throw
<b>Form E</b>	Latching unchanged until an opposite impulse is present
SHV Relays are available only in "Form A" configuration	

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



Breakdown Voltage Option	
<b>2K</b>	2 kVDC across open contact
<b>3K</b>	3 kVDC across open contact
<b>4K</b>	4 kVDC across open contact
Test voltage measured according to IEC 60255-27	

**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 changes will be incorporated in future revisions.

For deviating values, latest specifications and product details, please contact your nearest sales office.