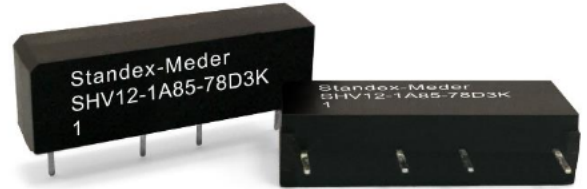


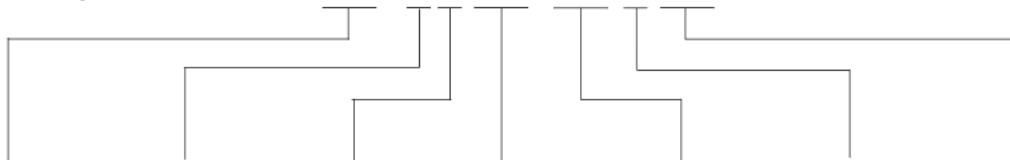
SHV Series Reed Relays

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



- 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) | |
| 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 | 1,000 | 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.) (depending on configuration) According to IEC 60255-27 | 2 / 3 / 4 | kVDC |
| Operating Time (max.) Including Bounce, Measured with 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 |

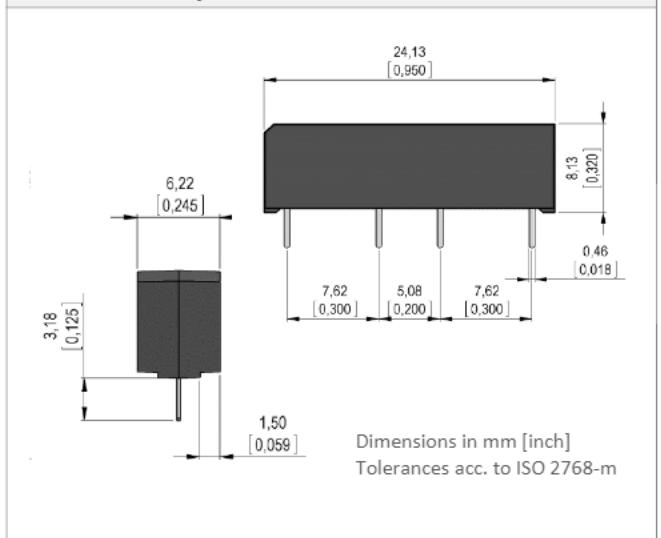
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| Coil Data (at 20°C) | | Coil Voltage (VDC) | | Coil Resistance (Ohm) | Pull-In Voltage (VDC) | Drop-Out Voltage (VDC) | Coil Power (mW) |
|---------------------|--------------|--------------------|---------|-----------------------|-----------------------|------------------------|-----------------|
| 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 |
|---|-------------------------------------|------|
| Dielectric Strength Coil/Contact (min.) According to EN60255-5 | 4 | kVDC |
| Insulation Resistance Coil/Contact (min./typ.) Rh<45%, 200V Test Voltage | 10 ¹¹ / 10 ¹² | Ohm |
| Capacitance Coil/Contact (typ.) @ 10 kHz | 1.2 | pF |
| Shock Resistance (max.) 1/2 sine wave duration 11ms | 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 seconds max. | 260 | °C |
| Washability Aqueous rinsing suitable. Proper drying necessary | Fully Sealed | |

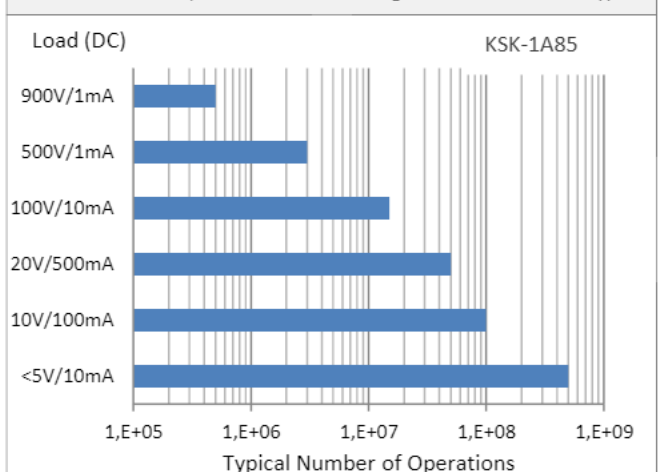
SHV Reed Relay Dimensions

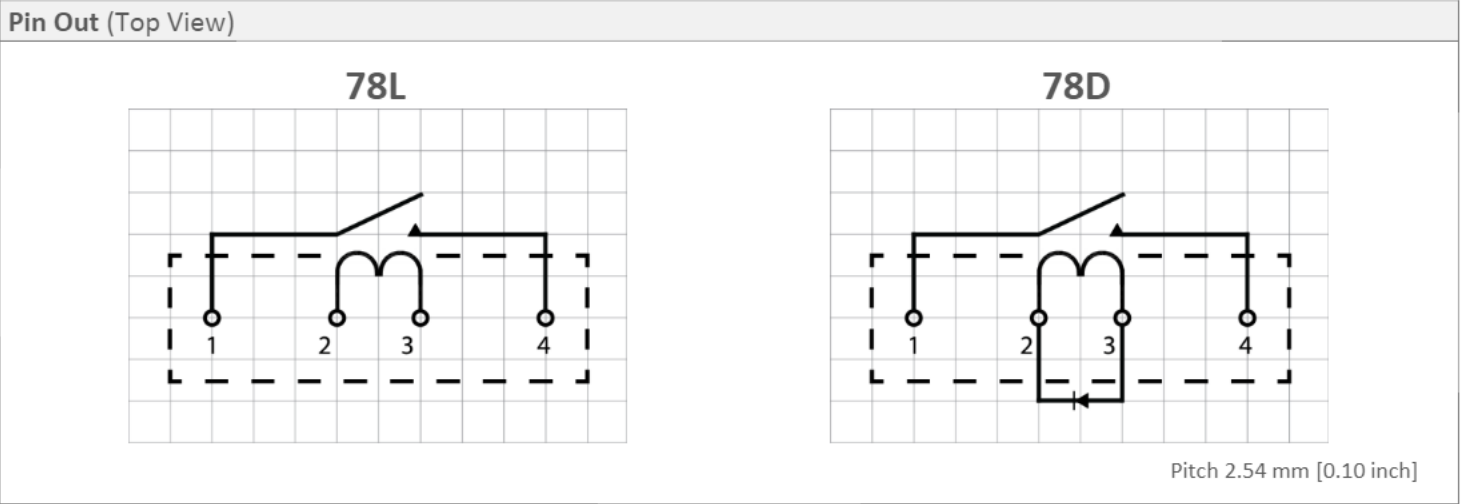


Handing & Assembly Instructions

- 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 | |
|---|--|
| 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 | |

| 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 | |



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| 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 | |

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.