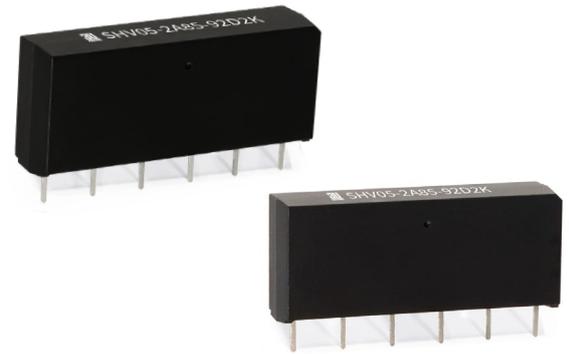


# SHV-2A Series Reed Relays



## Key Features and Benefits:

- ☑ Dual HV contacts (Form 2A), increases channel density and reduces relay count in test matrices
- ☑ Ultra-high insulation resistance (>10 TΩ), minimizes leakage errors in high-voltage measurements
- ☑ Low parasitic effects, enables faster signal settling and improved measurement throughput
- ☑ Compact SIL package, supports high-density ATE architectures
- ☑ IEC 61810 qualified, ensuring consistent performance in demanding environments



## Key Markets and Applications:

- ☑ ATE Markets: Semiconductor test, Power electronics, EV / ESS, Mil -Aero, Medical test systems
- ☑ Applications: Power semiconductors, cable & harness testing, inverters, battery packs, power converters

## Contact and Switching Characteristics:

Contact Data	Switch Model	Unit
	85	
<b>Contact Material</b>	Rh	
<b>Rated Power (max.)</b> Any DC combo of V&A not to exceed max. rated power	100	W
<b>Switching Voltage (max.)</b> DC or peak AC (Limited by FLRY-B Cable)	1000	V
<b>Switching Current (max.)</b> DC or peak AC	1	A
<b>Carry Current (max.)</b> DC or peak AC	2.8	A
<b>Contact Resistance (max.)</b> @ 0.5V & 10mA, Measured with 40% Pull-In Overdrive	150	mOhm
<b>Breakdown Voltage (min.)</b> According to EN60255-27	2	kVDC
<b>Operating Time (max.)</b> Incl. Bounce; Measured with w/ 40% Pull-In Overdrive	1.1	ms
<b>Release Time (max.)</b> Measured without Coil Suppression	0.5	ms
<b>Insulation Resistance (typ.)</b> Rh<45%, 100V Test Voltage	10 <sup>12</sup>	Ohm
<b>Capacitance (typ.)</b> @ 10kHz across open Switch	0.5	pF

## Part Number Configuration:



### Ordering Code Structure:

**SHV** 05 - 2A 85 - 92 X XK

SERIES 1 2 3 4 5 6

### CONFIGURATION OPTIONS:

- 1 NOMINAL VOLTAGE [05]
- 2 CONTACT FORM + QTY [2A]
- 3 SWITCH MODEL [85]
- 4 PINOUT [92]
- 5 VERSION [L, D]
- 6 DIELECTRIC STRENGTH [2K]

### 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



# SHV-2A Series Reed Relays

## SERIES DATA SHEET

### General Relay Characteristics:

Relay Data (@ 20°C)	Value	Unit
<b>Dielectric Strength Coil/Contact (min.)</b> According to EN60255-27	2	kVDC
<b>Insulation Resistance Coil/Contact (min./typ.)</b> Rh<45%, 1000V Test Voltage	10	TOhm
<b>Capacitance Coil/Contact (typ.)</b> @10 kHz	2	pF
<b>Shock Resistance (max.)</b> 1/2 sine wave, 6md, 3-axis	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 sec. max.	260	°C
<b>Washability Aqueous rinse suitable</b> Proper drying necessary	Fully Sealed	

### Available Configurations and Key Electrical Parameters:

Series	Contact Form	Part Number	Kickback Diode	Breakdown Voltage	Coil Type	Coil Power [mW nom.]	Coil Resistance [Ohm nom.]	Pull-In [VDC max.]	Drop-Out [VDC min.]	Mounting	Magnetic Shielding
SHV	2A	SHV05-2A85-92L2K	NO	2 kVDC	5V	111	225	3.75	0.5	THT	YES Internal
		SHV05-2A85-92D2K	YES								

The Pull-In, Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °K relative to room temperature

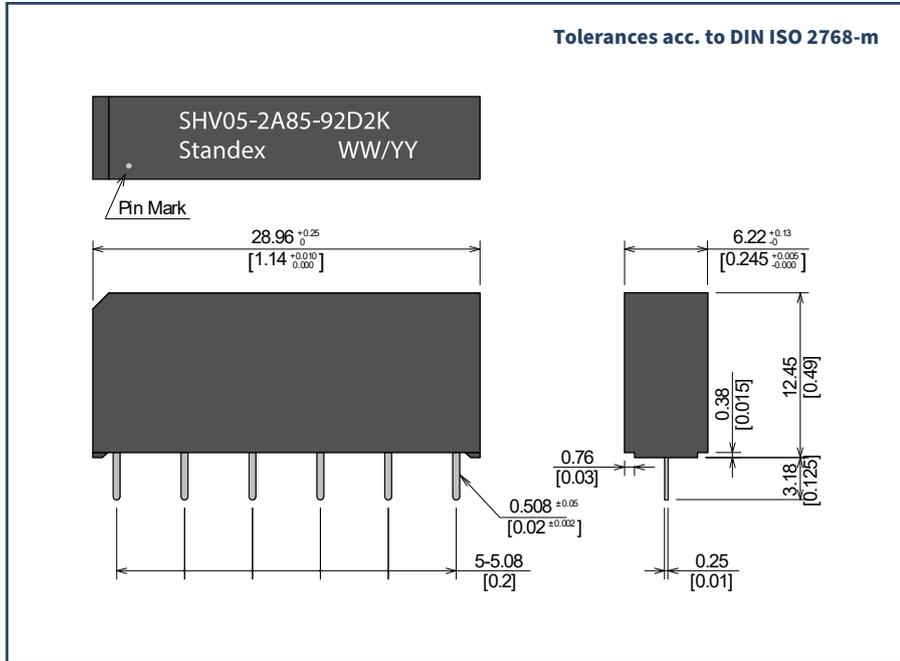
#### Disclaimer:

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.

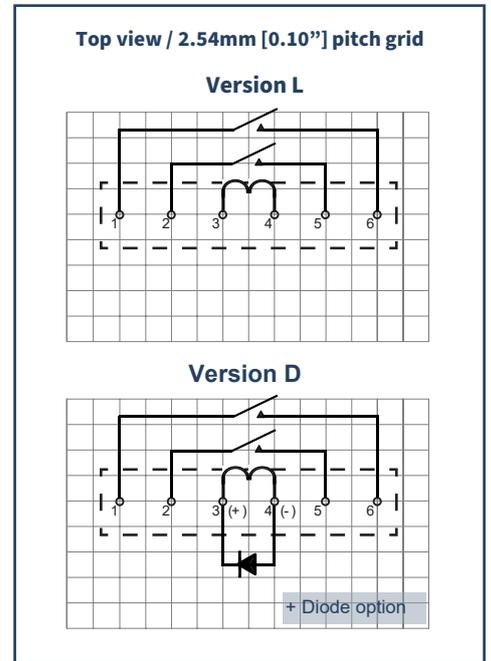
# SHV-2A Series Reed Relays

## SERIES DATA SHEET

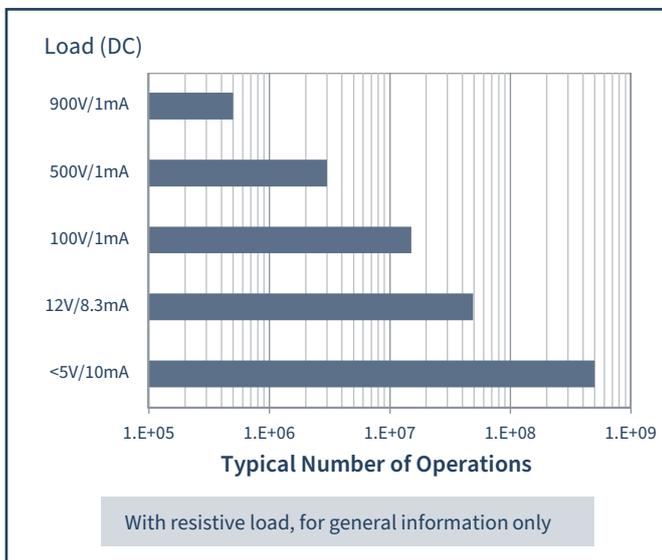
### Dimensions (mm):



### Pin-Out Options:



### Lifecycles: SHV00-2A85



### Qualification and Test Conditions:

Test	Test Conditions
<b>Dielectric Strength (Coil-Contact)</b> Acc. to EN 60255-27	Up to ~2.8 kVDC, controlled ramp rate (~1 kV/s), current limited
<b>Insulation Resistance (Coil-Contact)</b> Acc. to EN 60255-27	Measured at 1000 VDC, IR ≥ 10 <sup>12</sup> Ω (typical)
<b>Coil Temperature Rise</b> Acc. to IEC 61810-1 (JIS C 4523)	Measured at nominal coil voltages under steady-state operation
<b>Magnetic Interaction</b>	Multi-relay configuration under standard ambient conditions
<b>Solder Heat Resistance</b> Acc. to IEC 61810-1 (JIS C 4523)	~260 °C soldering temperature, ~10 s exposure
<b>Thermal Shock</b>	-40 °C to +105 °C cycling, multiple cycles
<b>Vibration Endurance</b> Acc. to IEC 61810-1 (JIS C 4523)	~10-2000 Hz sweep, multi-axis excitation
<b>Mechanical Shock</b> Acc. to IEC 61810-1 (JIS C 4523)	High-g shock pulses (~50 g class), multi-directional

### 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.