

# LI Series Reed Relays

- **Features:** Small Size High Voltage Relay, High Dielectric Strength, High Insulation Resistance
- **Applications:** Cable & In-Circuit, Battery Mngt., High Voltage Test Equipment, Electric Vehicles & Others
- **Markets:** Solar, Test & Measurement, Automotive & Others


Part Description: **LI00-1A85**

| Nominal Voltage | Contact Quantity & Contact Form | Switch Model |
|-----------------|---------------------------------|--------------|
| 05, 12, 24      | 1A                              | 85           |

| Customer Options                                                                | Switch Model                        | Unit |
|---------------------------------------------------------------------------------|-------------------------------------|------|
| Contact Data (@ 20°C)                                                           | 85 (A-Dry)                          |      |
| Contact Material                                                                | Rhodium                             |      |
| Rated Power (max.)<br>Any DC combination of V&A not to exceed max. rated power  | 100                                 | W    |
| Switching Voltage (max.)<br>DC or peak AC                                       | 1000                                | V    |
| Switching Current (max.)<br>DC or peak AC                                       | 1.0                                 | A    |
| Carry Current (max.)<br>DC or peak AC                                           | 2.5                                 | A    |
| Contact Resistance (max.)<br>@ 0.5V & 10mA, Measured with 40% Pull-In Overdrive | 150                                 | mOhm |
| Breakdown Voltage (min.) (upon request)*<br>According to EN60255-27             | 3 - 4.5*                            | kVDC |
| Operating Time (max.)<br>Including Bounce, Measured w/40% Pull-In Overdrive     | 1.1                                 | ms   |
| Release Time (max.)<br>Measured without Coil Suppression                        | 0.1                                 | ms   |
| Insulation Resistance (min./typ.)<br>Rh<45%, 100V Test Voltage                  | 10 <sup>10</sup> / 10 <sup>12</sup> | Ohm  |
| Capacitance (typ.)<br>@ 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) | Coil Inductance (mH) |
|---------------------|--------------|--------------------|------|-----------------------|-----------------------|------------------------|-----------------|----------------------|
| Contact Form        | Switch Model | Nominal            | Max. | Typical (± 10 %)      | Max.                  | Min.                   | Nominal         | Nominal              |
| 1A                  | 85           | 05                 |      | 200                   | 3.5                   | 0.75                   | 125             |                      |
|                     |              | 12                 |      | 680                   | 8.4                   | 1.4                    | 211             |                      |
|                     |              | 24                 |      | 2,000                 | 16.8                  | 3.6                    | 288             |                      |

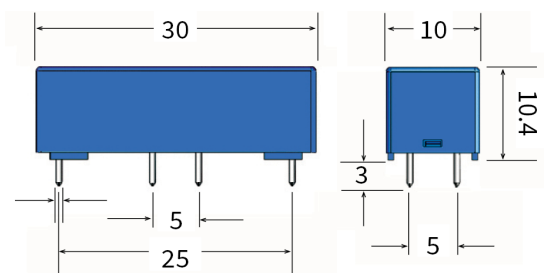
The Pull-In, Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °C

| Relay Data (@ 20°C)                                                               |                                    | Unit |
|-----------------------------------------------------------------------------------|------------------------------------|------|
| <b>Dielectric Strength Coil/Contact (min.)</b><br>According to EN60255-27         | 100                                | kVDC |
| <b>Insulation Resistance Coil/Contact (min/typ)</b><br>1/2 sine wave, 6md, 3-axis | 10 <sup>12</sup> /10 <sup>13</sup> | Ohm  |
| <b>Capacitance Coil/Contact (typ.)</b><br>@10 kHz                                 | 1.2                                | pF   |
| <b>Shock Resistance (max.)</b><br>1/2 sine wave, 6md, 3-axis                      | 100                                | g    |
| <b>Vibration Resistance (max.)</b><br>10 – 2,000 Hz                               | 20                                 | g    |
| <b>Operating Temperature (max.)</b><br>Surrounding of the relay's housing         | -40 to 100                         | °C   |
| <b>Storage Temperature (max.)</b><br>Surrounding of the relay's housing           | -40 to 125                         | °C   |
| <b>Soldering Temperature (max.)</b><br>5 sec. max.                                | 260                                | °C   |
| <b>Washability</b><br>Aqueous rinse suitable. Proper drying necessary.            | Fully Sealed                       |      |

## Handling & Assembly Instructions

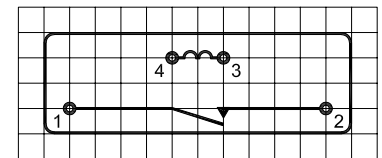
- Switching inductive and/or capacitive loads create voltage and/or current peaks, which may damage the relay. Protective circuits need to be used.
- External magnetic fields needs to be taken into consideration, including a too high packing density. This may influence the relays' electrical characteristics.
- 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.

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

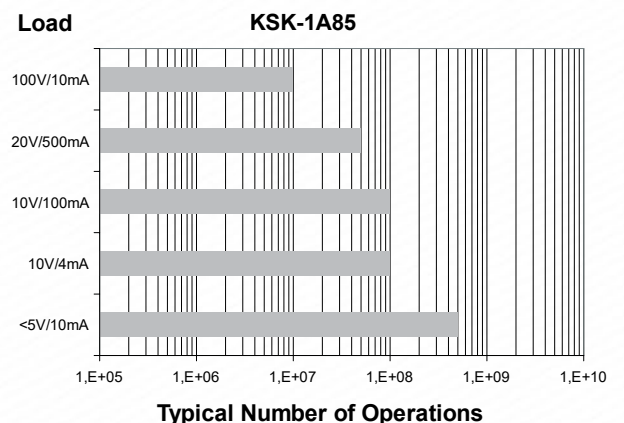


## Pin-Out (Top View)

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



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



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.