

## KT Series Reed Relays

- **Features:** High Voltage THT or SMD Relay in compact housing, High Isolation Voltage, Low Leakage Current
- **Tested in accordance with** AEC-Q200, UL listed
- **Applications:** Automotive, Battery Management Systems, Photovoltaic Inverters, Isolation Measurement
- **Markets:** E-Cars, Solar, Test & Measurement, Medical


Part Description: **KT00-0X-40L-XXX**

| Nominal Voltage | Contact Quantity & Contact Form | Option | Version                                       |
|-----------------|---------------------------------|--------|-----------------------------------------------|
| 03, 05, 12, 24  | 1A                              | L      | THT = Thru hole<br>SMD = Surface Mount Design |

| 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   |

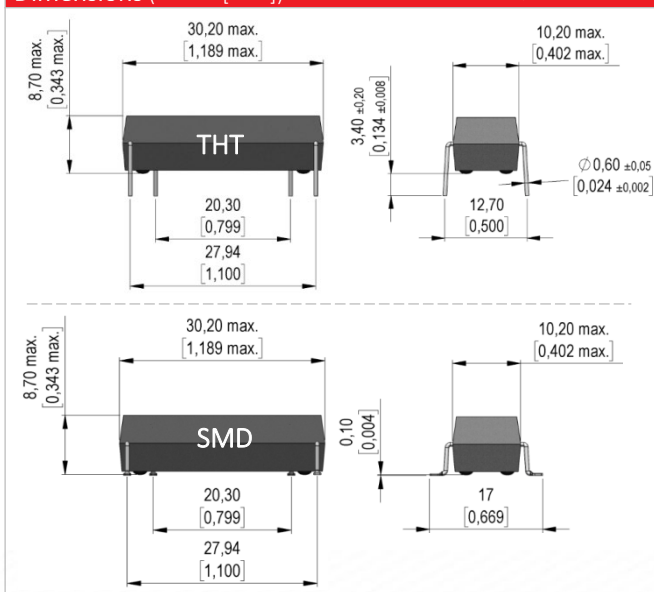
# KT Series Reed Relays

| 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           | 03                 | 05   | 65                    | 2.5                   | 0.6                    | 138             | 21                   |
|                     |              | 05                 | 7.5  | 80                    | 3.5                   | 0.55                   | 313             | 21                   |
|                     |              | 12                 | 16   | 475                   | 8.4                   | 1.4                    | 303             | 120                  |
|                     |              | 24                 | 30   | 1,800                 | 16.0                  | 2.9                    | 320             | 430                  |

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.)<br>According to EN60255-27         | 100                                | kVDC |
| Insulation Resistance Coil/Contact (min/typ)<br>1/2 sine wave, 6md, 3-axis | 10 <sup>12</sup> /10 <sup>13</sup> | Ohm  |
| Capacitance Coil/Contact (typ.)<br>@10 kHz                                 | 1.2                                | pF   |
| Shock Resistance (max.)<br>1/2 sine wave, 6md, 3-axis                      | 100                                | g    |
| Vibration Resistance (max.)<br>10 – 2,000 Hz                               | 20                                 | g    |
| Operating Temperature (max.)<br>Surrounding of the relay's housing         | -40 to 100                         | °C   |
| Storage Temperature (max.)<br>Surrounding of the relay's housing           | -40 to 125                         | °C   |
| Soldering Temperature (max.)<br>5 sec. max.                                | 260                                | °C   |
| Washability<br>Aqueous rinse suitable. Proper drying necessary.            | Fully Sealed                       |      |
| For the list of AEC-Q200 Tests, see page 3                                 |                                    |      |

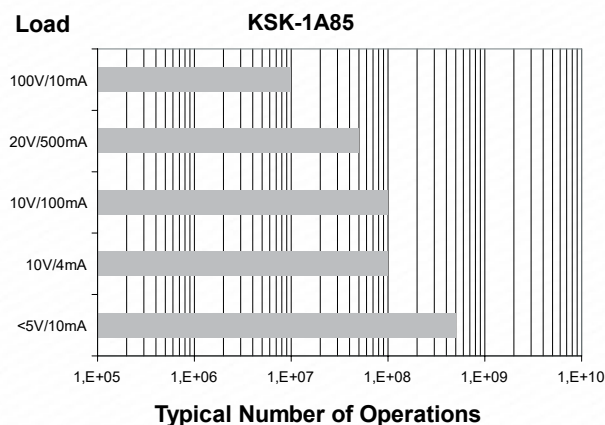
## Dimensions (in mm [inch]) Tolerances acc. to ISO 2768-m



## 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 - 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.
- Reflow soldering: See the page 4. Recommendations given by the soldering paste manufacturer need to be considered as well as the temperature limits of other components/processes.

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

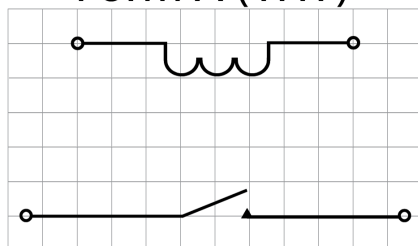


# KT Series Reed Relays

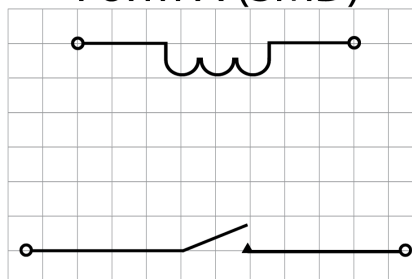
## Pin-Out (Top View)

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

### Form A (THT)



### Form A (SMD)



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.