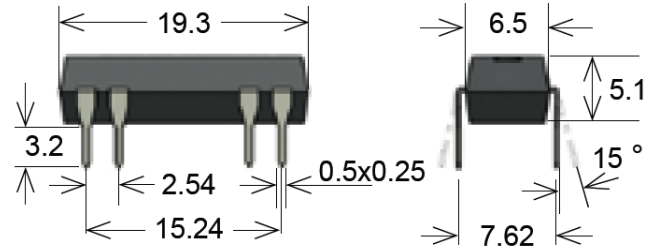
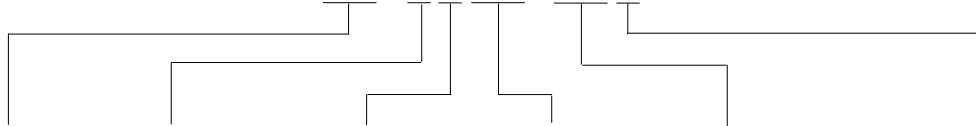


# DIP Series Reed Relays



- Features: Dual In-Line IC Compatible Relay, Available with Dielectric Strength 4.25VDC
- Applications: General Purpose, Measuring and Testing Devices & Others
- Markets: Telecommunications, Test and Measurement, Security & Others

Part Description: **DIP 00-0X00-00X**



| Nominal Voltage | Contact QTY | Contact Form | Switch Model | Pin Out                       | Option<br>( ) Version with Magnetic Shield |
|-----------------|-------------|--------------|--------------|-------------------------------|--|
| 05, 12, 15, 24  | 1, 2        | A, B, C      | 72, 75, 90   | 10, 11, 12, 13,<br>19, 21, 51 | A, B, C,<br>L(M), D(Q), E(R), F(S)         |

| Customer Options   | Switch Model     |                  |                 | Unit |
|--|------------------|------------------|-----------------|------|
|  | 72               | 75               | 90              |      |
| <b>Contact Data</b>  |                  |                  |                 |      |
| <b>Rated Power (max.)</b><br>Any DC combination of V&A not to exceed their individual max.'s | 10               | 10               | 10              | W    |
| <b>Switching Voltage (max.)</b><br>DC or peak AC   | 200              | 500              | 175             | V    |
| <b>Switching Current (max.)</b><br>DC or peak AC   | 0.5              | 0.5              | 0.5             | A    |
| <b>Carry Current (max.)</b><br>DC or peak AC   | 1.0              | 1.0              | 1.2             | A    |
| <b>Contact Resistance (max.)</b><br>@ 0.5V & 50mA  | 100              | 200              | 150             | mOhm |
| <b>Breakdown Voltage (min.)</b><br>According to EN60255-5                                    | 0.25             | 0.6              | 0.2             | kVDC |
| <b>Operating Time (max.)</b><br>Incl. Bounce; Measured with w/ Nominal Voltage               | 0.5              | 0.5              | 0.7             | ms   |
| <b>Release Time (max.)</b><br>Measured with no Coil Excitation                               | 0.1              | 0.1              | 1.5             | ms   |
| <b>Insulation Resistance (typ.)</b><br>Rh<45%, 100V Test Voltage                             | 10 <sup>10</sup> | 10 <sup>10</sup> | 10 <sup>9</sup> | GOhm |
| <b>Capacitance (typ.)</b><br>@ 10kHz across open Switch                                      | 0.3              | 0.4              | 1.0             | pF   |

| Coil Data       |                 | Coil Voltage<br>(nom.) | Coil Resistance<br>(typ.) | Pull-In Voltage<br>(max.) | Drop-Out Voltage<br>(min.) | Nominal Coil Power<br>(typ.) |
|-----------------|-----------------|------------------------|---------------------------|---------------------------|----------------------------|------------------------------|
| Contact<br>Form | Switch<br>Model |                        |                           |                           |                            |                              |
| Unit            |                 | VDC                    | Ohm                       | VDC                       | VDC                        | mW                           |
| 1A, 1B*         | 72, 75**        | 05                     | 500 (200)                 | 3.5                       | 0.75                       | 50                           |
|                 |                 | 12                     | 1,000                     | 8.4                       | 1.8                        | 145                          |
|                 |                 | 15                     | 2,000                     | 10.5                      | 2.2                        | 115                          |
|                 |                 | 24                     | 2,000                     | 16.8                      | 3.6                        | 290                          |
| 1C              | 90              | 05                     | 200                       | 3.5                       | 0.75                       | 125                          |
|                 |                 | 12                     | 500                       | 8.4                       | 1.8                        | 290                          |
|                 |                 | 15                     | 2,000                     | 10.5                      | 2.2                        | 115                          |
|                 |                 | 24                     | 2,000                     | 16.8                      | 3.6                        | 290                          |
| 2A              | 72              | 05                     | 200                       | 3.5                       | 0.75                       | 125                          |
|                 |                 | 12                     | 500                       | 8.4                       | 1.8                        | 290                          |
|                 |                 | 15                     | 2,000                     | 10.5                      | 2.2                        | 115                          |
|                 |                 | 24                     | 2,000                     | 16.8                      | 3.6                        | 290                          |

The Pull-In / Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °C. \*Re-closure of Form B may occur if the max. coil voltage is exceeded. Coil polarity on Form B must be observed. Pin 2 is positive. ( ) For Switch 1A75 \*\*1B-75 only with Coil Voltage 24 available.

| Environmental Data  |           | Unit |
|---|-----------|------|
| <b>Shock Resistance (max.)</b><br>1/2 sine wave duration 11ms | 50        | g    |
| <b>Vibration Resistance (max.)</b>                            | 20        | g    |
| <b>Operating Temperature</b>                                  | -20 to 70 | °C   |
| <b>Storage Temperature</b>                                    | -35 to 95 | °C   |
| <b>Soldering Temperature (max.)</b><br>5 sec. max.            | 260       | °C   |

#### DIP Reed Relay

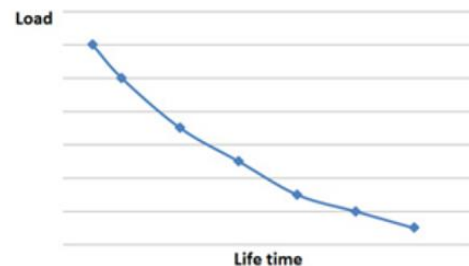


#### Handling & Assembly Instructions

- 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.

#### Life Test Data

\*Load increase reduces life expectancy of Reed Switches



| Glossary Contact Form |  |  |
|-----------------------|--|--|
| Form A                | NO = Normally Open Contacts<br>SPST = Single Pole Single Throw   |  |
| Form B                | NC = Normally Closed Contacts<br>SPST = Single Pole Single Throw |  |
| Form C                | Changeover<br>SPDT = Single Pole Double Throw                    |  |



| Pin Out                               |    |    |    |
|---------------------------------------|----|----|----|
| Top View<br>2.54mm [0.10"] pitch grid | 10 | 11 | 12 |
|                                       |    |    |    |
|                                       | 13 | 19 | 21 |
|                                       |    |    |    |
|                                       |    |    | 51 |
|                                       |    |    |    |

| Contact Form | Package Size | Pin Out | Options |   |   |   |   |   |   |   |   |   |   |   |  |
|--------------|--------------|---------|---------|---|---|---|---|---|---|---|---|---|---|---|--|
|              |              |         | L       | A | B | C | D | E | F | M | Q | R | S |   |  |
| 1A           | Low Profile  | 10      | X       | X | X | X |   |   |   |   |   |   |   |   |  |
|              |              | 11      | X       |   |   |   |   | X |   |   |   |   |   |   |  |
|              |              | 12      | X       | X |   |   |   |   |   |   |   |   |   |   |  |
|              |              | 13      | X       |   |   |   |   |   |   |   |   |   |   |   |  |
|              | High Profile | 10      |         |   |   | X |   |   |   |   |   |   |   |   |  |
|              |              | 11      |         |   |   |   | X | X | X | X | X |   |   | X |  |
|              |              | 12      |         |   |   |   | X | X | X |   |   |   |   |   |  |
|              |              | 13      |         |   |   | X |   |   | X | X |   |   |   |   |  |
| 1B           | High Profile | 19      | X       |   |   | X |   |   | X | X |   |   |   |   |  |
| 2A           | High Profile | 21      | X       | X |   | X | X | X | X | X | X | X | X | X |  |
| 1C           | Low Profile  | 51      | X       |   |   |   |   |   |   |   |   |   |   |   |  |
|              | High Profile |         |         |   |   | X | X | X | X | X | X | X | X | X |  |

| Options   |       |   |
|---|-------|---|
| () Versions with magnetic shield<br>Top View, 2.54mm [0.10"] pitch grid |       |   |
| A   | B     | C |
|   |       |   |
| L (M)   | D (Q) |   |
|   |       |   |
| E (R)   | F (S) |   |
|   |       |   |