# Sealed DIL Version w/ up to 4.25 kVDC Breakdown Voltage Option

## DESCRIPTION

Several pin out options are possible with the 14 pin DIL series. Suitable for telecommunication applications where breakdown voltages up to 4.25 kVDC is required.

## FEATURES

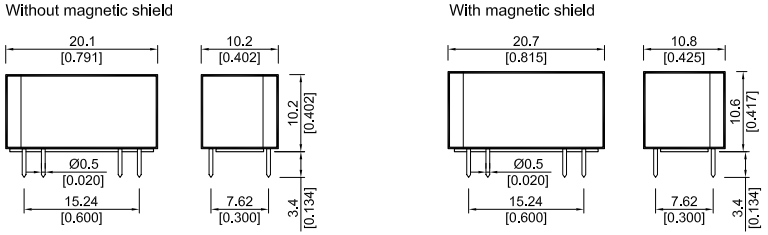
- Compatible with 14 pin DIL socket
- High resistance coil up to 11 kOhm available.
- Plastic case sealed with PU-resin
- Magnetic shield available
- 4.25 kVDC breakdown voltage available.
- Diode option
- RoHS compliant.

## CHARACTERISTICS

- Telecommunications
- General purposes
- Test and Measurement
- Medical equipment

## DIMENSIONS

All dimensions in mm [inch]




## ORDER INFORMATION

| Series | Nominal Voltage | Contact Form | Switch Model | Pin Out | Option () Version with magnetic Shield | Version |
|---|---|---|---|---|---|---|
| DIL | XX - | XX | XX - | XX | X | XX |
| Options | 05, 12, 24 | 1A | 66, 72, 75 | 13*,15 | L(M),D(Q),E(R)[t], F(S)[tt] | HR, L |
| | | 2A | 66, 72, 75 | 21 | | L |
| | 05, 12 | 1C | 90 | 51* | | HR, L |
| | 05, 12, 24 | 2C | 90 | 62, 63 | | L |

* When HR is selected, 24 V coil is not available.
L = No Option.

[t] Not available with Pin out 62, 63.

**Part Number Example**

DIL12 - 1A72 - 10LHR

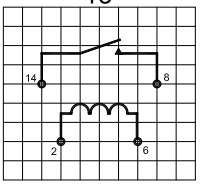
**12** is the nominal voltage
**1A** is the contact form
**72** is the switch model
**13** is the pin out
**L** is the option
**HR** is the high resistance version

**Sealed DIL Version w/ up to 4.25 kVDC Breakdown Voltage Option**

## PIN OUT

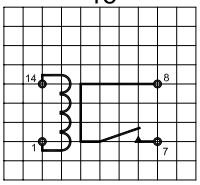
View from top of component
2.54mm [0.10"] pitch grid

13

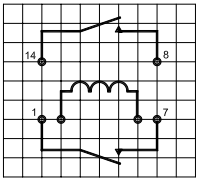



UP
ONLY WHEN USING A MERCURY WETTED (88) SWITCH

15

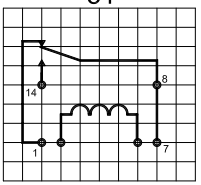



21

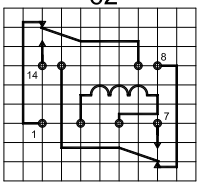



UP
ONLY WHEN USING A MERCURY WETTED (88) SWITCH

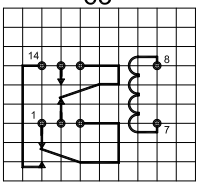
51




62




63

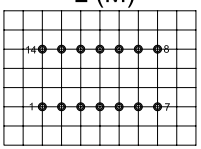



## OPTIONS

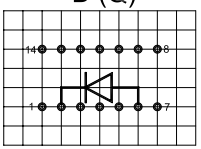
( ) Versions with magnetic shield

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

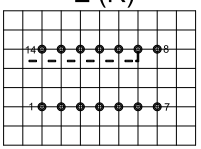
L (M)



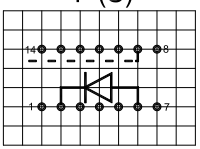

D (Q)




E (R)




F (S)




Please note: any option can affect the coil resistance, the breakdown voltage or other electronical data. Please contact us.

Special performance: The following special options are available on request:

- Other pinning layout
- Other coil resistance values
- Other switches available

## Sealed DIL Version w/ up to 4.25 kVDC Breakdown Voltage Option

# RELAY DATA

| All Data at 20° C | Switch Model → Contact Form → | Switch 66 Form A | | | Switch 72 Form A | | | |
|---|---|---|---|---|---|---|---|---|
| **Contact Ratings** | **Conditions** | **Min.** | **Typ.** | **Max.** | **Min.** | **Typ.** | **Max.** | **Units** |
| Switching Power | Any DC combination of V & A not to exceed their individual max.'s. | | | 10 | | | 15 | W |
| Switching Voltage | DC or peak AC | | | 200 | | | 200 | V |
| Switching Current | DC or peak AC | | | 0.5 | | | 1.0 | A |
| Carry Current | DC or peak AC | | | 1.25 | | | 1.25 | A |
| Static Contact Resistance | Measured w/ 0.5 V & 50 mA | | | 150 | | | 150 | mΩ |
| Dynamic Contact Resistance | Measured w./ 0.5 V &50m A, 1.5 ns after closure | | | 200 | | | 200 | mΩ |
| Insulation Resistance (100 Volts applied) | Across contacts<br>Contact to coil | $10^{10}$<br>$10^{12}$ | | | $10^{12}$<br>$10^{12}$ | | | Ω |
| Breakdown Voltage | Across contacts<br>Coil to contact | 225<br>1.5* | | | 250<br>1.5* | | | VDC<br>kVDC |
| Operate Time incl. Bounce | Nominal voltage | | | 0.5 | | | 0.5 | ms |
| Release Time | Measured w/ no coil suppression | | | 0.1 | | | 0.1 | ms |
| Capacitance | Across contacts<br>Contact to coil | | 0.2<br>4.0 | | | 0.4<br>4.0 | | pF |
| **Life Expectancies** | | | | | | | | |
| Switching 5V & 10 mA | DC only & < 10 pF stray cap. | | 1000 | | | 1000 | | $10^6$ Cycles |
| For other load requirements, see the life test section on P. 120. | | | | | | | | |
| **Environmental Data** | | | | | | | | |
| Shock Resistance | 1/2 sine wave duration for 11 ms | | | 50 | | | 50 | g |
| Vibration Resistance | From 10 - 2000 Hz | | | 20 | | | 20 | g |
| Ambient Temperature | 10°C/ minute max. allowable | -20 | | 70 | -20 | | 70 | °C |
| Storage Temperature | 10°C/ minute max. allowable | -25 | | 85 | -35 | | 95 | °C |
| Soldering Temperature | 5 sec. dwell | | | 260 | | | 260 | °C |

* 4.25 kVDC / 3.0 kVRMS for pin outs 13 and 15.

**Sealed DIL Version w/ up to 4.25 kVDC Breakdown Voltage Option**

## RELAY DATA

| All Data at 20° C | Switch Model → Contact Form → | Switch 75 Form A | | | Switch 90 Form C | | | |
|---|---|---|---|---|---|---|---|---|
| **Contact Ratings** | **Conditions** | **Min.** | **Typ.** | **Max.** | **Min.** | **Typ.** | **Max.** | **Units** |
| Switching Power | Any DC combination of V & A not to exceed their individual max.'s. | | | 10 | | | 10 | W |
| Switching Voltage | DC or peak AC | | | 500 | | | 175 | V |
| Switching Current | DC or peak AC | | | 0.5 | | | 0.5 | A |
| Carry Current | DC or peak AC | | | 1.0 | | | 1.0 | A |
| Static Contact Resistance | Measured w/ 0.5 V & 50 mA | | | 200 | | | 150 | mΩ |
| Dynamic Contact Resistance | Measured w./ 0.5 V &50m A, 1.5 ns after closure | | | 200 | | | 250 | mΩ |
| Insulation Resistance (100 Volts applied) | Across contacts<br>Contact to coil | $10^{10}$<br>$10^{12}$ | | | $10^{9}$<br>$10^{12}$ | | | Ω |
| Breakdown Voltage | Across contacts<br>Coil to contact | 1500<br>1.5* | | | 200<br>1.5 | | | VDC<br>kVDC |
| Operate Time incl. Bounce | Nominal voltage | | | 0.5 | | | 0.7 | ms |
| Release Time | Measured w/ no coil suppression | | | 0.1 | | | 1.5 | ms |
| Capacitance | Across contacts<br>Contact to coil | | 0.4<br>4.0 | | | 1.0<br>4.0 | | pF |
| **Life Expectancies** | | | | | | | | |
| Schaltspannung 5V - 10 mA | DC <10 pF Streukapazität | | 500 | | | 100 | | $10^{6}$ Cycles |
| For other load requirements, see the life test section on P. 120.. | | | | | | | | |
| **Allgemeine Daten** | | | | | | | | |
| Shock Resistance | 1/2 sine wave duration for 11 ms | | | 50 | | | 50 | g |
| Vibration Resistance | From 10 - 2000 Hz | | | 20 | | | 20 | g |
| Ambient Temperature | 10°C/ minute max. allowable | -20 | | 70 | -20 | | 70 | °C |
| Storage Temperature | 10°C/ minute max. allowable | -25 | | 85 | -25 | | 85 | °C |
| Soldering Temperature | 5 sec. dwell | | | 260 | | | 260 | °C |

* 4.25 kVDC / 3.0 kVRMS for pin outs 13 and 15.

**Sealed DIL Version w/ up to 4.25 kVDC Breakdown Voltage Option**

## COIL DATA

| Contact Form | Switch Model | Coil Voltage | | Coil Resistance | | | Pull-in Voltage | Drop-out Voltage | Nominal Coil Power |
|---|---|---|---|---|---|---|---|---|---|
| All Data at 20 °C * | | VDC | | Ω | | | VDC | VDC | mW |
| | | Nom. | Max. | Min. | Typ. | Max. | Max. | Min. | Typ. |
| 1A | 66 72 75 | 5 | 7.5 | 405 | 450 | 495 | 3.5 | 0.75 | 55 |
| | | 12 | 16 | 1620 | 1800 | 1980 | 8.4 | 1.8 | 80 |
| | | 24 | 30 | 4050 | 4500 | 4950 | 16.8 | 3.6 | 130 |
| 2A | 66 72 75 | 5 | 7.5 | 180 | 200 | 220 | 3.5 | 0.75 | 125 |
| | | 12 | 16 | 621 | 680 | 748 | 8.4 | 1.8 | 210 |
| | | 24 | 30 | 1800 | 2000 | 2200 | 16.8 | 3.6 | 290 |
| 1C | 90 | 5 | 7.5 | 180 | 200 | 220 | 3.5 | 0.75 | 125 |
| | | 12 | 16 | 900 | 1000 | 1100 | 8.4 | 1.8 | 145 |
| | | 24 | 30 | 2700 | 3000 | 3300 | 16.8 | 3.6 | 190 |
| 2C | | 5 | 7.5 | 145 | 150 | 165 | 3.5 | 0.75 | 165 |
| | | 12 | 16 | 612 | 680 | 748 | 8.4 | 1.8 | 210 |
| | | 24 | 30 | 1800 | 2000 | 2200 | 16.8 | 3.6 | 290 |

* The pull-in, drop-out voltages and coil resistance will change at the rate of 0,4 % / °C.