



Very high isolation voltages, up to 15kV, are achieved through the use of high vacuum reed switches with either Rhodium or Tungsten contacts and make these relays suitable for high reliability applications such as cardiac defibrillators, test equipment and high voltage power supplies.

The Rhodium contacts have low contact resistance while the Tungsten contacts can switch higher voltages.

Printed Circuit Board (PCB) or Panel mount, via nylon studs, versions are available.

Connection options include PCB, solder turret tag, flying lead and Faston* style Spade Terminals.

Available as Form A (SPNO) or Form B (SPNC) contact configurations.

- **15kV Isolation**
- **Low Contact Resistance**
- **High Power Switching**
- **PCB or Panel Mount**
- **Flying Lead, Solder and Faston* Style Spade Terminal Options**

| Contact | | Units | Conditions | | 10kV Form A | | | 10kV Form B | | | 15kV Form A | | |
|-------------------------------|------------|-------|----------------------|--|--------------------------------------|--------------------------------------|------------|--------------------------------------|--------------------------------------|------------|--------------------------------------|------------|------------|
| Contact Materials | | | | | Rhodium | Tungsten | | Rhodium | Tungsten | | Tungsten | | |
| Isolation Across Contacts | kV | | DC or AC peak | | 10 | 10 | | 10 | 10 | | 15 | | |
| Max. Switching Power | W | | | | 50 | 50 | | 50 | 50 | | 50 | | |
| Max. Switching Voltage | V | | DC or AC peak | | 1000 | 7000 | | 1000 | 7000 | | 10000 | | |
| Max. Switching Current | A | | DC or AC peak | | 3 | 2 | | 3 | 2 | | 2 | | |
| Max. Current Carry | A | | DC or AC peak | | 4 | 3 | | 4 | 3 | | 2 | | |
| Capacitance Across Contacts | pF | | Coil/Screen Grounded | | <0.2 | <0.2 | | <0.2 | <0.2 | | <0.2 | | |
| Lifetime | Operations | | Dry Switching | | 10 ⁹ | 10 ⁹ | | 10 ⁹ | 10 ⁹ | | 10 ⁹ | | |
| Lifetime | Operations | | 50W Switching | | 10 ⁶ | 10 ⁶ | | 10 ⁶ | 10 ⁶ | | 10 ⁸ | | |
| Contact Resistance | mOhms | | Maximum (Typical) | | 50 (15) | 250 (100) | | 50 (15) | 250 (100) | | 250 (100) | | |
| Insulation Resistance | Ohms | | Minimum (Typical) | | 10 ¹⁰ (10 ¹³) | 10 ¹⁰ (10 ¹³) | | 10 ¹⁰ (10 ¹³) | 10 ¹⁰ (10 ¹³) | | 10 ¹⁰ (10 ¹³) | | |
| Coil at 20°C | | | | | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V |
| Must Operate | V | | DC | | 3.7 | 9 | 20 | 3.7 | 9 | 20 | 3.7 | 9 | 20 |
| Must Release | V | | DC | | 0.5 | 1.25 | 4 | 0.5 | 1.25 | 4 | 0.5 | 1.25 | 4 |
| Operate Time | ms | | Diode Fitted | | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 | 3.0 |
| Release Time | ms | | Diode Fitted | | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| Resistance | Ohms | | | | 28 | 150 | 780 | 38 | 240 | 925 | 16 | 95 | 350 |
| Construction | | | | | | | | | | | | | |
| Isolation Contact to Coil | kV | | DC or AC peak | | 17 | | | 17 | | | 17 | | |
| Insulation Resistance Contact | | | | | | | | | | | | | |
| to All Other Terminals | Ohms | | Minimum (Typical) | | 10 ¹⁰ (10 ¹³) | | | 10 ¹⁰ (10 ¹³) | | | 10 ¹⁰ (10 ¹³) | | |
| Environmental | | | | | | | | | | | | | |
| Operating Temperature Range | °C | | | | -20 to +70 | | | -20 to +70 | | | -20 to +70 | | |
| Weight | Version | | Standard | | Panel | | | Spade | | | Flying Lead | | |
| | Form A | gm | 23 | | 28 | | | 29 | | | 38 | | |
| | Form B | gm | 31 | | 36 | | | 37 | | | 46 | | |

Part Numbering System

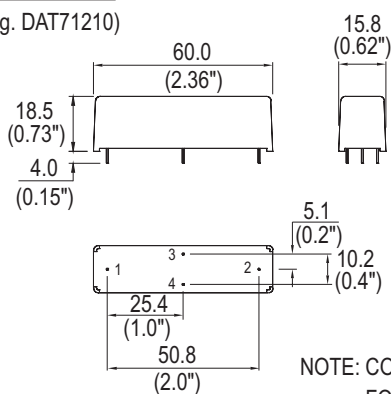
Reed Switch size: **D** ——— **D** **A** **T** **7** **24** **15** **F**
 Contact Form - **A**: Form A **B**: Form B
 Contact Material **R**: Rhodium **T**: Tungsten
 Moulding Ref. Number
 Coil Voltage **05**: 5V **12**: 12V **24**: 24V
 Isolation Between Contacts - **10**: 10kV, **15**: 15kV (dat only)

Mounting Style:

No suffix: Standard PCB mount
F: Flying Lead Contact Terminals
P: Panel Mount via nylon studs, turret contact/coil terminals
S: Panel Mount via nylon studs, Faston* style spade terminals

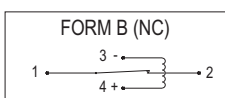
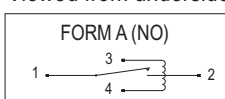
STANDARD

(e.g. DAT71210)



CIRCUIT DIAGRAMS (ALL VARIANTS)

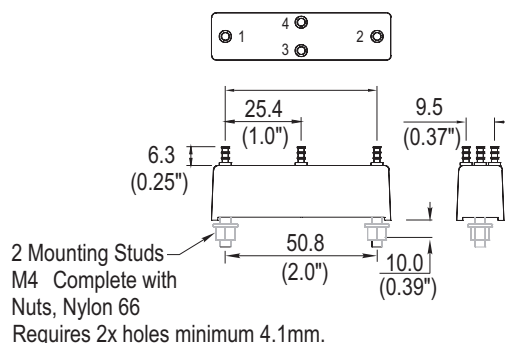
Viewed from underside



NOTE: COIL POLARITY IS IMPORTANT
FOR FORM B VARIANT ONLY.

PANEL MOUNT

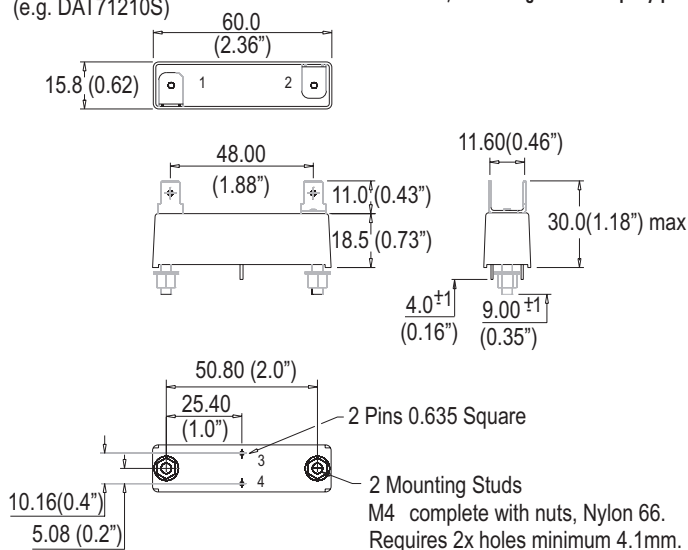
(e.g. DAT71210P)



SPADE TYPE

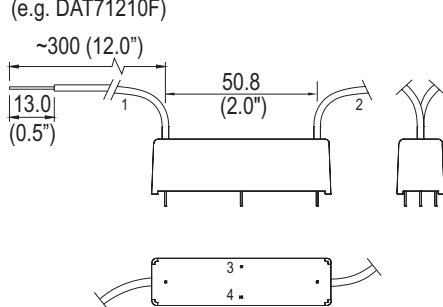
(e.g. DAT71210S)

'S' Suffix denotes the 6.3 'Push On' blade connectors, M4 fixing bolts and Epoxy potting.



FLYING LEAD

(e.g. DAT71210F)



NOTE: PINS WHICH ARE NOT NUMBERED
HAVE NO ELECTRICAL CONNECTION.

ISO9001 Certified

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