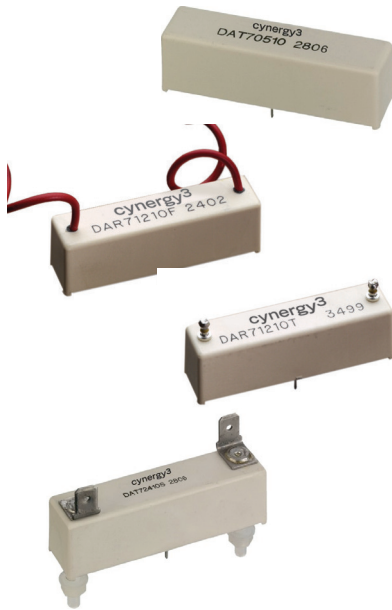




D Series

High Voltage relays 10kV & 15kV



- 10kV or 15kV Isolation
- Low Contact Resistance
- PCB or Panel Mount
- HV connections via Flying Leads, Solder Turret (wire wrap), or 1/4" Spade Terminals
- Excellent AC characteristics

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 contact relays have low contact resistance, while the Tungsten contact relays can switch higher voltages.

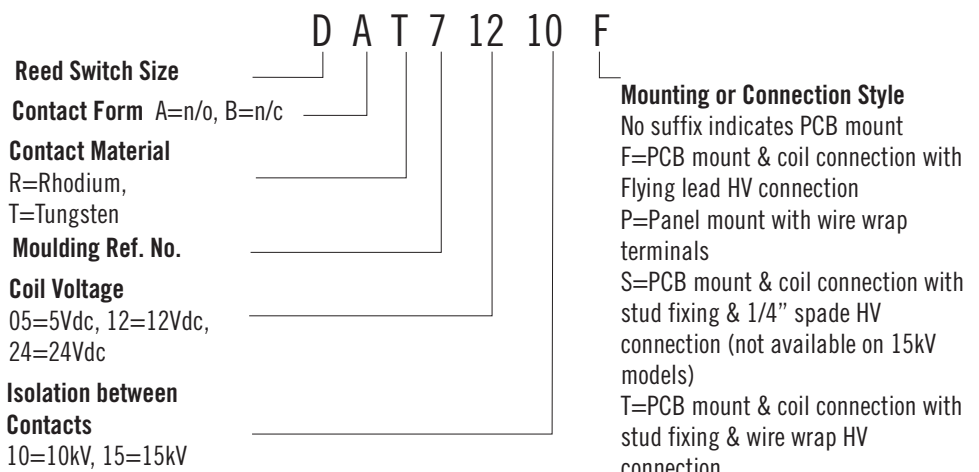
PCB or Panel Mount, via Nylon studs, versions are available.

Connection options, for the HV, include PCB, solder turret(wire wrap), flying lead and 0.25" spade terminals.

| Contact Specification | Unit Condition | 10kV SPNO | | 10kV SPNC | | 15kV SPNO | | | | |
|--|-----------------------------|--------------------------------------|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|-----|--------------------------------------|------|-----|
| Contact Material | | Rhodium Tungsten | | Rhodium Tungsten | | Tungsten | | | | |
| Isolation across contacts kV | DC or AC peak | 10 | 10 | 10 | 10 | 15 | | | | |
| Switching Power Max. W | | 50 | 50 | 50 | 50 | 50 | | | | |
| Switching Voltage Max. V | DC or AC peak | 1000 | 7000 | 1000 | 7000 | 10000 | | | | |
| Switching Current Max. A | DC or AC peak | 3 | 2 | 3 | 2 | 2 | | | | |
| Carry Current Max. A | DC or AC peak | 4 | 3 | 4 | 3 | 2 | | | | |
| Capacitance across contacts | pF coil to screen grounded | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | | | | |
| Lifetime operations | dry switching 50W switching | 10 ⁹ | 10 ⁹ | 10 ⁹ | 10 ⁹ | 10 ⁹ | | | | |
| Contact Resistance | mΩ max (typical) | 50 (15) | 250(100) | 50 (15) | 250(100) | 250 (100) | | | | |
| Insulation Resistance | Ωmin (typical) | 10 ¹⁰ (10 ¹³) | | 10 ¹⁰ (10 ¹³) | | 10 ¹⁰ (10 ¹³) | | | | |
| Coil Specification | | 5V | 12V | 24V | 5V | 12V | 24V | 5V | 12V | 24V |
| Must Operate Voltage | V DC | 3.7 | 9 | 20 | 3.7 | 9 | 20 | 3.7 | 9 | 20 |
| Must Release Voltage | 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 | Ω | 28 | 150 | 780 | 38 | 240 | 925 | 16 | 95 | 350 |
| Relay Specification | | | | | | | | | | |
| Isolation contact/coil | kV | 17 | | | 17 | | | 17 | | |
| Insulation resistance contact to all terminals | Ωmin (typical) | 10 ¹⁰ (10 ¹³) | | | 10 ¹⁰ (10 ¹³) | | | 10 ¹⁰ (10 ¹³) | | |
| Environmental Operating Temp range | °C | -20 to +70 | | | -20 to +70 | | | -20 to +70 | | |

Please refer to this document for circuit design notes:- <http://www.cynergy3.com/blog/application-notes-reed-relays-0>

Part Numbering System



Cynergy3 Components Ltd.
7 Cobham Road
Ferndown Industrial Estate
Wimborne, Dorset BH21 7PE
Telephone +44 (0) 1202 897969
Email:sales@cynergy3.com

ISO9001 CERTIFIED

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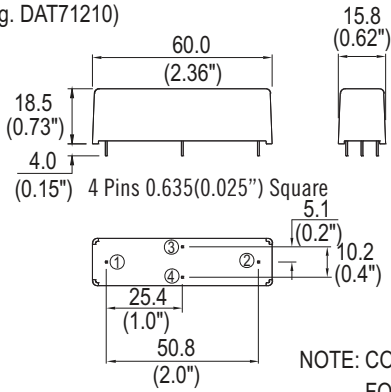
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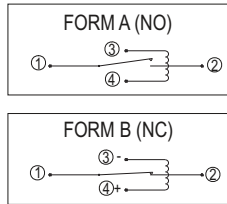
MECHANICAL

STANDARD

(e.g. DAT71210)



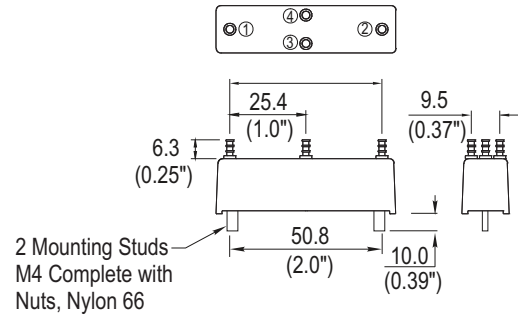
CIRCUIT DIAGRAMS (ALL VARIANTS)



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

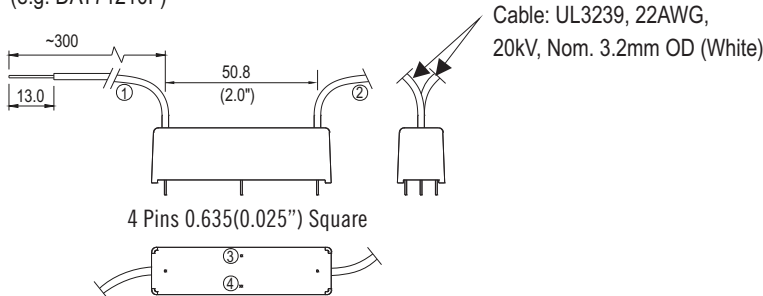
PANEL MOUNT

(e.g. DAT71210P)



FLYING LEAD

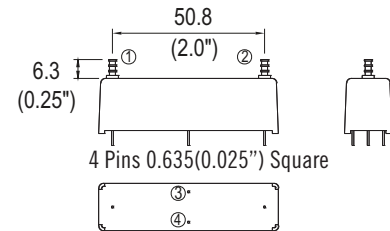
(e.g. DAT71210F)



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

TURRET (Wire Wrap)

(e.g. DAT71210T)



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

SPADE TYPE

(e.g. DAT71210S)

'S' Suffix denotes the 0.250" 'Push On' blade connectors, M4 fixing bolts and Epoxy potting.

