

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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DA(UL) Series

UL Approved *, Normally Open, High Voltage Relays - 10kV



Recently approved by UL, very high isolation voltages (up to 10kV) 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.

- 10kV 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



Contact Specification Unit Condition	10kV SPNO	10kV SPNC
Contact Type	N/O (normally open)	N/O (normally open)
Contact Material	Rhodium Tungsten	Rhodium Tungsten
Isolation across contacts kV DC or AC peak	10 10	10 10
Switching Power Max. W	50 50	50 50
Switching Voltage Max. V DC or AC peak	1000 7000	1000 7000
Switching Current Max. A DC or AC peak	3 2 3	2
Carry Current Max A DC or AC peak	4 3 4	3
Capacitance across pF coil to screen	<0.2 <0.2	<0.2 <0.2
contacts grounded		
Lifetime operations dry switching	10 ⁹ 10 ⁹	10° 10°
50W switching	10 ⁶ 10 ⁶	10 ⁶ 10 ⁶
Contact Resistance $m\Omega$ max (typical)	50 (15) 250(100)	50 (15) 250(100)
Insulation Resistance Ω min (typical)	10 ¹⁰ (10 ¹³)	10 ¹⁰ (10 ¹³)
Coil Specification	5V 12V 24V	5V 12V 24V
Must Operate Voltage V DC	3.7 9 20	3.7 9 20
Must Release Voltage V DC	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
Release Time ms diode fitted	2.0 2.0 2.0	3.0 3.0 3.0
Resistance Ω	28 150 780	38 240 925
Relay Specification		
Isolation contact/coil kV	17	17
Insulation resistance contact	17	17
	10 ¹⁰ (10 ¹³)	10 ¹⁰ (10 ¹³)
(-)	10 (10)	10 (10)
Environmental Operating Temp range °C	-20 to +70	-20 to +70

^{*}Consult factory for UL ratings

Part Numbering System

T 7 12 10 F U **Reed Switch Size** Contact Form A=n/o - "**U**" indicates UL approved **Contact Material** R=Rhodium, **Mounting or Connection Style** T=Tungsten No suffix indicates PCB mount F=PCB mount & coil connection with Moulding Ref. No. Flying lead HV connection **Coil Voltage** P=Panel mount with wire wrap 05=5Vdc, 12=12Vdc, terminals 24=24Vdc S=PCB mount & coil connection with Isolation between stud fixing & 1/4" spade HV **Contacts** connection 10=10kV T=PCB mount & coil connection with stud fixing & wire wrap HV connection

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ISO9001 CERTIFIED

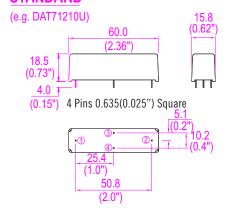
DA(UL) 2016

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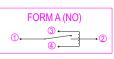


MECHANICAL

STANDARD



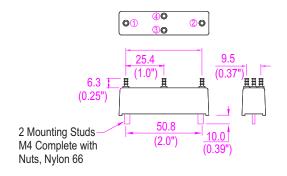
CIRCUIT DIAGRAMS (ALL VARIANTS)



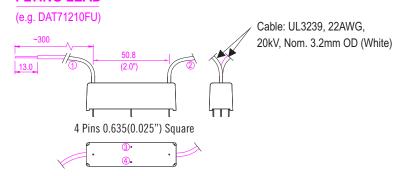
NOTE: COIL POLARITY IS NOT SIGNIFICNAT

PANEL MOUNT

(e.g. DAT71210PU)



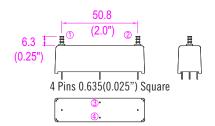
FLYING LEAD



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

TURRET (Wire Wrap)

(e.g. DAT71210TU)

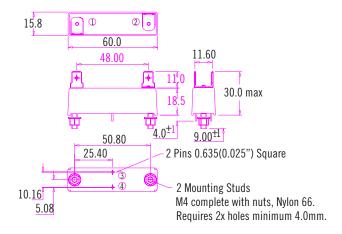


NOTE: PINS WHICH ARE NOT NUMBERED HAVE NO ELECTRICAL CONNECTION.

SPADE TYPE

(e.g. DAT71210SU)

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



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