



DA(UL) Series

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



- **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**



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.

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 contacts	pF		coil to screen grounded			<0.2	<0.2		<0.2	<0.2		
Lifetime operations			dry switching			10 ⁹	10 ⁹		10 ⁹	10 ⁹		
			50W switching			10 ⁶	10 ⁶		10 ⁶	10 ⁶		
Contact Resistance	mΩ		max (typical)			50 (15)	250(100)		50 (15)	250(100)		
Insulation Resistance	Ωmin		(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 to all terminals	Ωmin		(typical)			10 ¹⁰ (10 ¹³)			10 ¹⁰ (10 ¹³)			
Environmental Operating Temp range	°C					-20 to +70			-20 to +70			

*Consult factory for UL ratings

Part Numbering System

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

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ISO9001 CERTIFIED
DA(UL) 2016

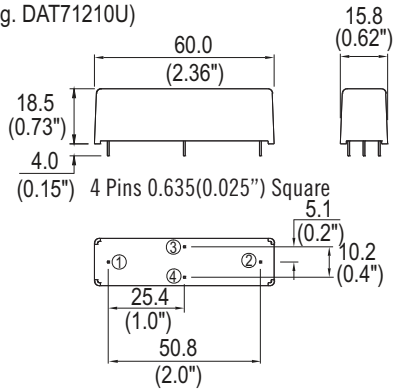
www.cynergy3.com



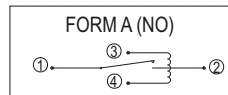
MECHANICAL

STANDARD

(e.g. DAT71210U)



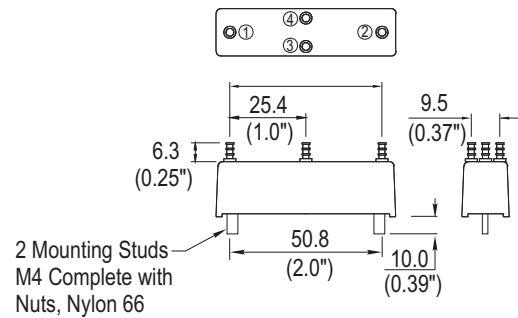
CIRCUIT DIAGRAMS (ALL VARIANTS)



NOTE: COIL POLARITY IS NOT SIGNIFICANT

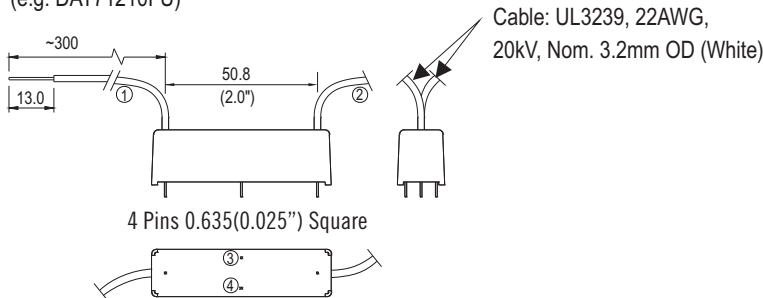
PANEL MOUNT

(e.g. DAT71210PU)



FLYING LEAD

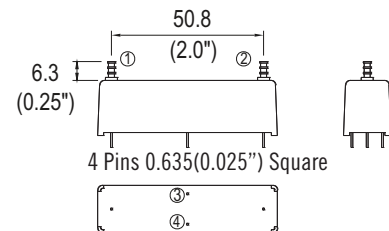
(e.g. DAT71210FU)



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

TURRET (Wire Wrap)

(e.g. DAT71210TU)

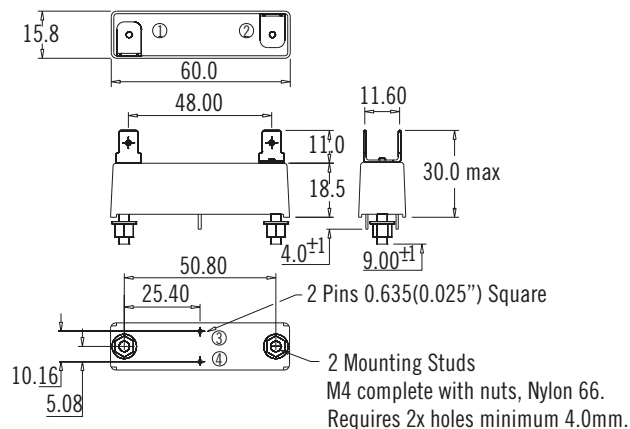


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SPADE TYPE

(e.g. DAT71210SU)

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



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