Sensata Technologies | cynergy3

| DA(UL) SERIES

UL APPROVED*, NORMALLY OPEN, HIGH VOLTAGE RELAYS - 10KV, 7.5KV & 5KV

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The DA(UL) series is a UL* approved 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.

A choice of 5kV, 7.5kV and 10kV isolation voltages is available.

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.

Features

- Choice of 10kV, 7.5kV or 5kV 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

SPECIFICATIONS

Contact	Units	Condition	10kV		7.5kV		5kV	
Contact Form			N/O (normally open)					
Contact Material			Rhodium	Tungsten	Rhodium	Tungsten	Rhodium	Tungsten
Isolation Across Contacts	kV	DC or AC peak	10	10	7.5	7.5	5	5
Switching Power Max	W		50	50	50	50	50	50
Switching Voltage Max.	V	DC or AC peak	1000	7000	1000	5000	1000	3500
Switching Current Max.	A	DC or AC peak	3	2	3	2	3	2
Carry Current Max	A	DC or AC peak	4	3	4	3	4	3
Capacitance Across Contacts	pF	coil to screen grounded	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Lifetime Operations		dry switching	10^9	10^9	10^9	10^9	10^9	10^9
		50W switching	10^6	10^6	10^6	10^6	10^6	10^6
Contact Resistance	mΩ max (typical)		50 (15)	250 (100)	50 (15)	250 (100)	50 (15)	250 (100)
Insulation Resistance	Ω min (typical)		10^{10}	(10^{13})	10^{10}	(10^{13})	10^{10}	(10^{13})

Coil	Units	Condition	5kV	12kV	24kV
Must Operate Voltage	V	DC	3.7	9	20
Must Release Voltage	V	DC	0.5	1.25	4
Operate Time	ms	diode fitted	3.0	3.0	3.0
Release Time	ms	diode fitted	2.0	2.0	2.0
Resistance	Ω		28	150	780
Note. The operate / release voltage and coil resistance will change at a rate of 0.4% per degree C. Values are stated at room temperature (20 degrees C)					
Relay					
Isolation Contact/Coil	kV	DC or AC peak	17		
Insulation Resistance Contact to all Terminals	Ω min (typical)		10^{10} (10^{13})		
Environmental Conditions					
Operating Temperature Range	°C		-20 to +70		

***Consult factory for UL ratings**

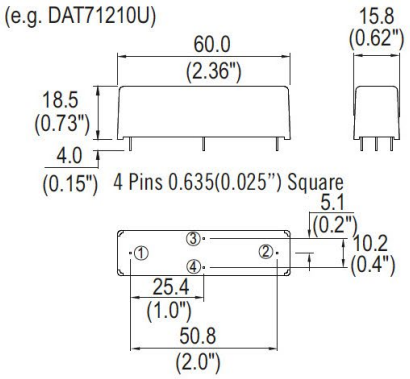
These products have been UL approved for use as per pollution degree 2 classification.
If you require further information as to how this may affect product usage,
please contact c3w_sales@sensata.com.

DIMENSIONS

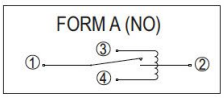
All dimensions are in millimeters.

STANDARD

(e.g. DAT71210U)



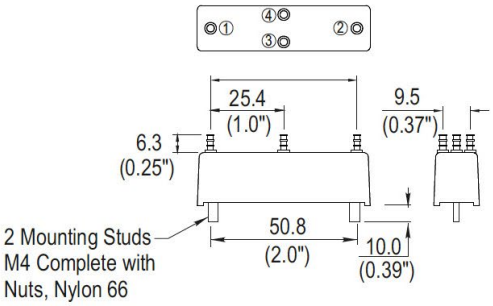
CIRCUIT DIAGRAMS (ALL VARIANTS)



NOTE: COIL POLARITY IS NOT SIGNIFICNAT

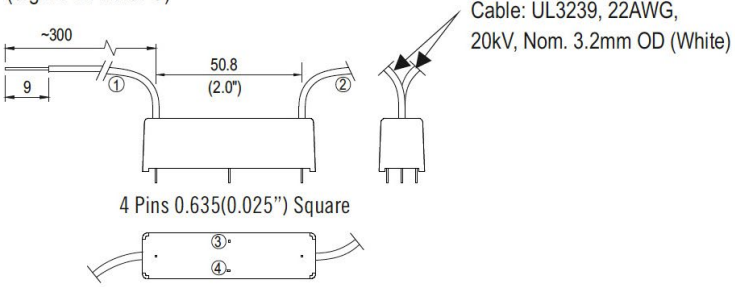
PANEL MOUNT

(e.g. DAT71210PU)



FLYING LEAD

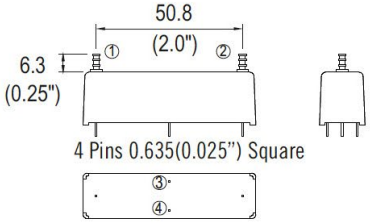
(e.g. DAT71210FU)



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

TURRET (Wire Wrap)

(e.g. DAT71210TU)

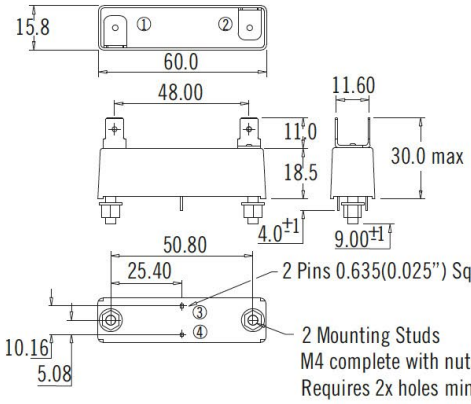


NOTE: PINS WHICH ARE NOT NUMBERED HAVE NO ELECTRICAL CONNECTION.

SPADE TYPE

(e.g. DAT71210SU)

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



ORDERING OPTIONS

Example : DAT71210FU

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
75 = 7.5kV
05 = 5kV

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

U

U = indicates UL approved