| DB(UL) SERIES

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



The DB(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, up to 7000V DC/AC peak.

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/C (normally closed)					
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})

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Coil	Units	Condition	5V	12V	24V
Must Operate Voltage	V	DC	3.7	9	20
Must Release Voltage	V	DC	0.5	1.25	4
Operate Time	ms	diode fitted	2.0	2.0	2.0
Release Time	ms	diode fitted	3.0	3.0	3.0
Resistance	Ω		38	240	925
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	ºC		-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.

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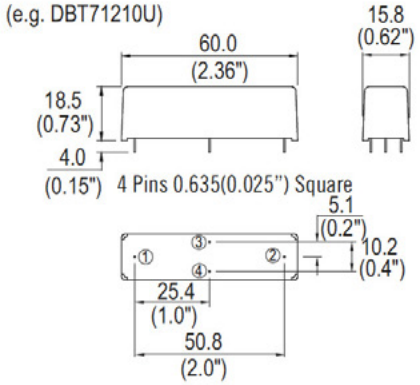
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DIMENSIONS

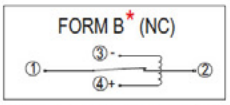
All dimensions are in millimeters.

STANDARD

(e.g. DBT71210U)



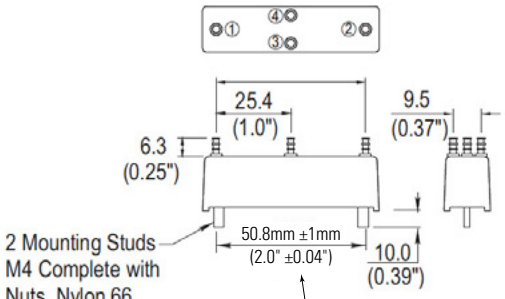
CIRCUIT DIAGRAMS
(ALL VARIANTS)



NOTE: COIL POLARITY IS IMPORTANT

PANEL MOUNT

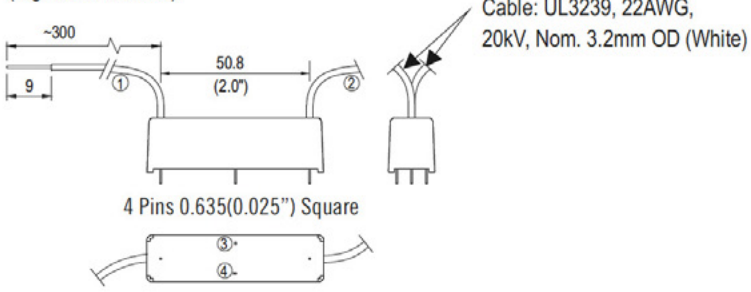
(e.g. DBT71210PU)



Mounting hole recommendations for M4 fixing studs: X2 M4 clearance holes Ø4.8mm to Ø5.1mm at 50.8mm ±0.2mm centres.

FLYING LEAD

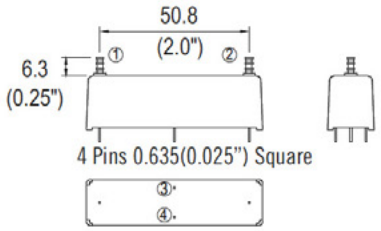
(e.g. DBT71210FU)



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

TURRET (Wire Wrap)

(e.g. DBT71210TU)

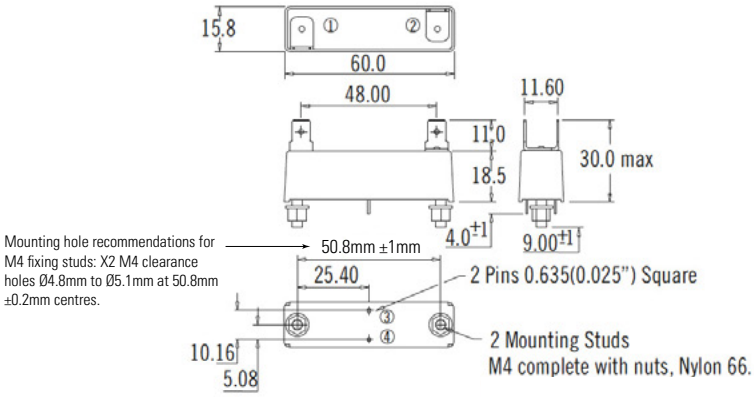


NOTE: PINS WHICH ARE NOT NUMBERED HAVE NO ELECTRICAL CONNECTION.

SPADE TYPE

(e.g. DBT71210SU)

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

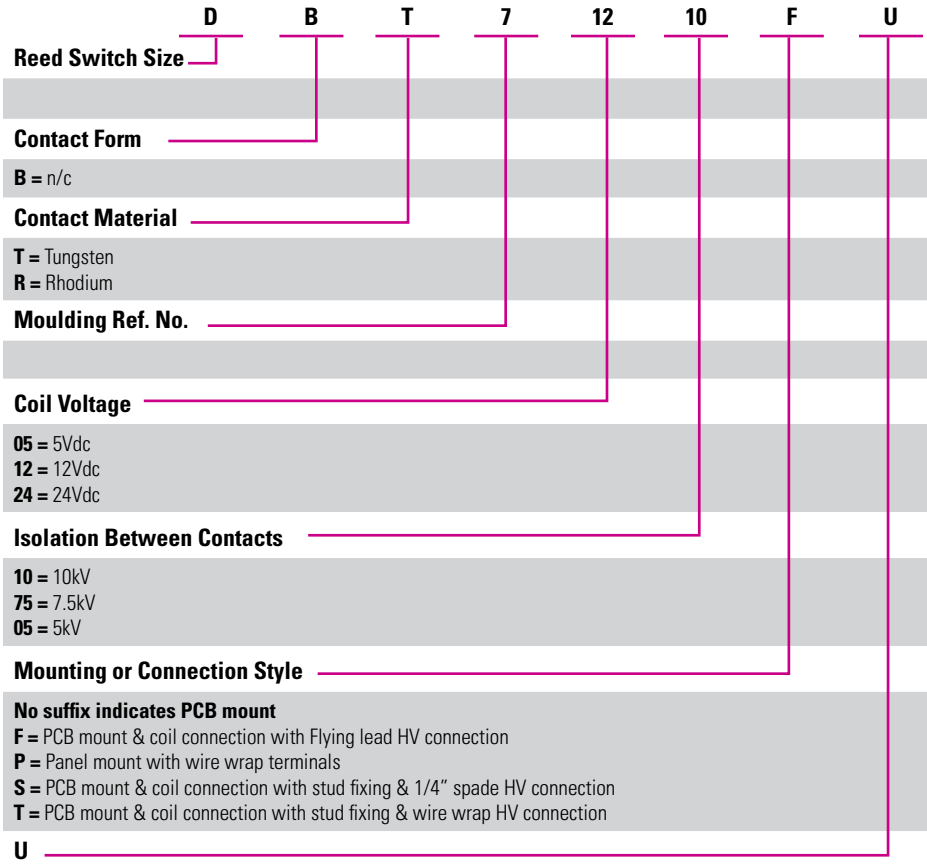


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ORDERING OPTIONS

Example : DBT71210FU



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