



DB(UL) Series

UL Approved* Normally Closed, 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 Tungsten contacts and make these relays suitable for high reliability applications, such as cardiac defibrillators, test equipment and high voltage power supplies.

The Tungsten contact relays can switch higher voltages, up to 7000Vdc/ac peak to 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.

Contact Specification	Unit	Condition	10kV SPNC
Contact Form			N/C (normally closed)
Contact Material			Tungsten
Isolation across contacts	kV	DC or AC peak	10
Switching Power Max.	W		50
Switching Voltage Max.	V	DC or AC peak	7000
Switching Current Max.	A	DC or AC peak	2
Carry Current Max.	A	DC or AC peak	3
Capacitance across contacts	pF	coil to screen grounded	<0.2
Lifetime operations		dry switching	10 ⁹
		50W switching	10 ⁶
Contact Resistance	mΩ	max (typical)	250(100)
Insulation Resistance	Ωmin	(typical)	(10 ¹³)
Coil Specification			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
Relay Specification			
Isolation contact/coil	kV		17
Insulation resistance contact to all terminals	Ωmin	(typical)	10 ¹⁰ (10 ¹³)
Environmental			
Operating Temp range	°C		-20 to +70

*Consult factory for UL ratings

Part Numbering System

	D	B	T	7	12	10	F	U
Reed Switch Size								
Contact Form B =n/c								
Contact Material 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							

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

ISO9001 CERTIFIED

DB(UL) 2016

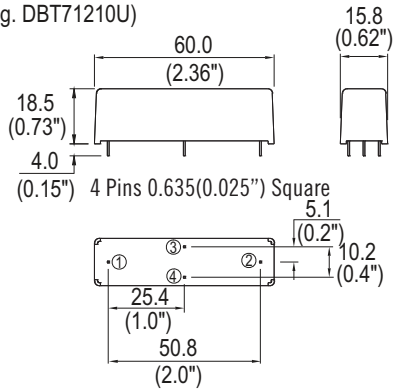
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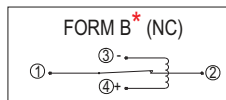
MECHANICAL

STANDARD

(e.g. DBT71210U)



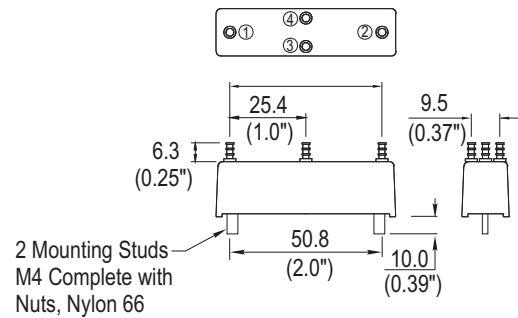
CIRCUIT DIAGRAMS (ALL VARIANTS)



NOTE: COIL POLARITY IS IMPORTANT

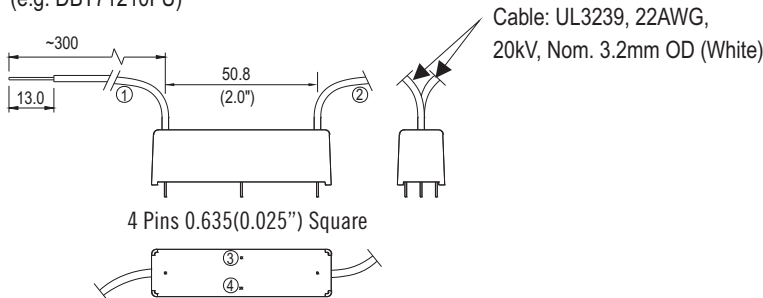
PANEL MOUNT

(e.g. DBT71210PU)



FLYING LEAD

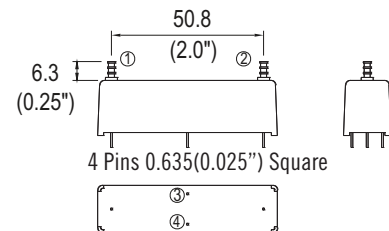
(e.g. DBT71210FU)



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

TURRET (Wire Wrap)

(e.g. DBT71210TU)

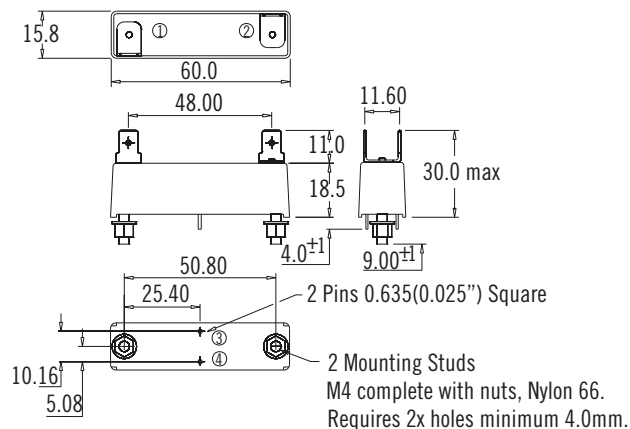


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SPADE TYPE

(e.g. DBT71210SU)

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



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