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.

Cynergy3 Components Ltd. 7 Cobham Road Ferndown Industrial Estate Wimborne, Dorset BH21 7PE *Telephone +44 (0) 1202 897969*

Email:sales@cynergy3.com

IS09001 CERTIFIED

DA(UL) 2016

- 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	s 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 ⁹ 10 ⁹
	50W switching	10 ⁶ 10 ⁶	10 ⁶ 10 ⁶
Contact Resistance	m Ω 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 Valters	V DC	3.7 9 20	3.7 9 20
Must Operate Voltage Must Release Voltage	V DC 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	52	28 130 780	58 240 925
Isolation contact/coil	kV	17	17
Insulation resistance co		10 10	
to all terminals	Ω min (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

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

 DA	T 7	12	10	F	U
				Mou No s F=P	suffi

- "**U**" indicates UL approved

Mounting or Connection Style

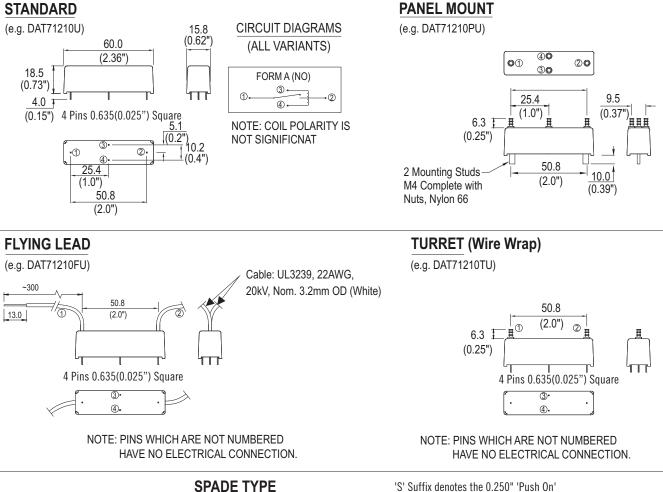
No suffix indicates PCB mount F=PCB mount & coil connection with Flying lead HV connection P=Panel mount with wire wrap terminals S=PCB mount & coil connection with stud fixing & 1/4" spade HV connection T=PCB mount & coil connection with stud fixing & wire wrap HV connection

www.cynergy3.com

© 2016 Cynergy3 Components, All Rights Reserved. Specifications are subject to change without prior notice. Cynergy3 Components and the Cynergy3 Components logo are trademarks of Cynergy3 Components Limited.



MECHANICAL



DFADE ITFE

(e.g. DAT71210SU)

15.8 00 **ो** 🛈 60.0 11.60 48.00 F F 1140 30.0 max 18.5 世 4.0^{±1} ₽ 丗 <u>9.00^{±1} °</u> 50.80 25.40 2 Pins 0.635(0.025") Square 3 ۲ . @ 2 Mounting Studs 10.16 M4 complete with nuts, Nylon 66. 5.08 Requires 2x holes minimum 4.0mm.

blade connectors, M4 fixing bolts and Epoxy potting.

Cynergy3 Components Ltd. 7 Cobham Road Ferndown Industrial Estate Wimborne, Dorset BH21 7PE *Telephone +44 (0) 1202 897969*

Email:sales@cynergy3.com

IS09001certified

www.cynergy3.com

© 2016 Cynergy3 Components, All Rights Reserved. Specifications are subject to change without prior notice. Cynergy3 Components and the Cynergy3 Components logo are trademarks of Cynergy3 Components Limited.

DB(UL) Series



UL Approved* Normally Closed, 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 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.

Cynergy3 Components Ltd. 7 Cobham Road Ferndown Industrial Estate Wimborne, Dorset BH21 7PE *Telephone +44 (0) 1202 897969*

Email:sales@cynergy3.com

IS09001 CERTIFIED

DB(UL) 2016

- 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 SPNC
Contact Form		N/C (normally closed)
Contact Material		Tungsten
Isolation across contacts	s 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	pF coil to screen	<0.2
contacts	grounded	
Lifetime operations	dry switching	10 ⁹
	50W switching	10 ⁶
Contact Resistance	m Ω max (typical)	250(100)
Insulation Resistance	Ωmin (typical)	(10 ¹³)
Coil Specification		5V 12V 24V
Must Operate Voltage	V DC	37 0 20
Must Operate Voltage Must Release Voltage	V DC V DC	3.7 9 20 0.5 1.25 4
Must Release Voltage	V DC	0.5 1.25 4
Must Release Voltage Operate Time	V DC ms diode fitted	0.5 1.25 4 2.0 2.0 2.0
Must Release Voltage Operate Time Release Time	V DC ms diode fitted ms diode fitted	0.5 1.25 4 2.0 2.0 2.0 3.0 3.0 3.0
Must Release Voltage Operate Time	V DC ms diode fitted	0.5 1.25 4 2.0 2.0 2.0
Must Release Voltage Operate Time Release Time Resistance Relay Specification	V DC ms diode fitted ms diode fitted	0.5 1.25 4 2.0 2.0 2.0 3.0 3.0 3.0 38 240 925
Must Release Voltage Operate Time Release Time Resistance Relay Specification Isolation contact/coil	V DC ms diode fitted ms diode fitted Ω	0.5 1.25 4 2.0 2.0 2.0 3.0 3.0 3.0
Must Release Voltage Operate Time Release Time Resistance Relay Specification	V DC ms diode fitted ms diode fitted Ω	0.5 1.25 4 2.0 2.0 2.0 3.0 3.0 3.0 38 240 925
Must Release Voltage Operate Time Release Time Resistance Relay Specification Isolation contact/coil Insulation resistance con to all terminals	V DC ms diode fitted ms diode fitted Ω	0.5 1.25 4 2.0 2.0 2.0 3.0 3.0 3.0 38 240 925
Must Release Voltage Operate Time Release Time Resistance Relay Specification Isolation contact/coil Insulation resistance con	V DC ms diode fitted ms diode fitted Ω kV ntact	0.5 1.25 4 2.0 2.0 2.0 3.0 3.0 3.0 38 240 925

*Consult factory for UL ratings

Part Numbering System

Coil Voltage

05=5Vdc, 12=12Vdc, 24=24Vdc

Isolation between Contacts 10=10kV

 D	В	T	7	12	10

- "**U**" indicates UL approved

Mounting or Connection Style

Fυ

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

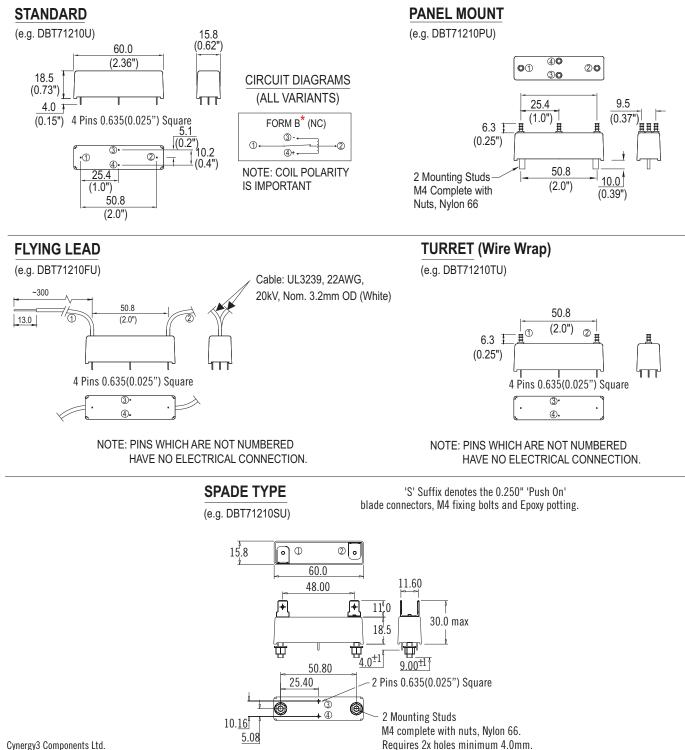
www.cynergy3.com



© 2016 Cynergy3 Components, All Rights Reserved. Specifications are subject to change without prior notice. Cynergy3 Components and the Cynergy3 Components limited.



MECHANICAL



Cynergy3 Components Ltd. 7 Cobham Road Ferndown Industrial Estate Wimborne, Dorset BH21 7PE *Telephone +44 (0) 1202 897969*

Email:sales@cynergy3.com

IS09001certified

www.cynergy3.com

© 2016 Cynergy3 Components, All Rights Reserved. Specifications are subject to change without prior notice. Cynergy3 Components and the Cynergy3 Components logo are trademarks of Cynergy3 Components Limited.