cynergy3 components™

D series

high voltage reed relays

15kV, 50W











Very high isolation voltages, up to 15kV, 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 contacts have low contact resistance while the Tungsten contacts can switch higher voltages.

Printed Circuit Board (PCB) or Panel mount, via nylon studs, versions are available.

Connection options include PCB, solder turret tag, flying lead and Faston* style Spade Terminals.

Available as Form A (SPNO) or Form B (SPNC) contact configurations.

- ***15kV Isolation***
- ***Low Contact Resistance***
- ***High Power Switching***
- ***PCB or Panel Mount***
- ***Flying Lead, Solder and Faston* Style Spade Terminal Options***

Contact	Units	Conditions	10kV Form A			10kV Form B			15kV Form A		
Contact Materials			Rhodium	Tungsten		Rhodium	Tungsten		Tungsten		
Isolation Across Contacts	kV	DC or AC peak	10	10		10	10		15		
Max. Switching Power	W		50	50		50	50		50		
Max. Switching Voltage	V	DC or AC peak	1000	7000		1000	7000		10000		
Max. Switching Current	A	DC or AC peak	3	2		3	2		2		
Max. Current Carry	A	DC or AC peak	4	3		4	3		2		
Capacitance Across Contacts	pF	Coil/Screen Grounded	<0.2	<0.2		<0.2	<0.2		<0.2		
Lifetime	Operations	Dry Switching	10^9	10^9		10^9	10^9		10^9		
Lifetime	Operations	50W Switching	10^6	10^6		10^6	10^6		10^8		
Contact Resistance	mOhms	Maximum (Typical)	50 (15)	250 (100)		50 (15)	250 (100)		250 (100)		
Insulation Resistance	Ohms	Minimum (Typical)	10^{10} (10^{13})	10^{10} (10^{13})		10^{10} (10^{13})	10^{10} (10^{13})		10^{10} (10^{13})		
Coil at 20°C			**5V**	**12V**	**24V**	**5V**	**12V**	**24V**	**5V**	**12V**	**24V**
Must Operate	V	DC	3.7	9	20	3.7	9	20	3.7	9	20
Must Release	V	DC	0.5	1.25	4	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	3.0	3.0	3.0
Release Time	ms	Diode Fitted	2.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Resistance	Ohms		28	150	780	38	240	925	16	95	350
Construction											
Isolation Contact to Coil	kV	DC or AC peak	17			17			17		
Insulation Resistance Contact											
to All Other Terminals	Ohms	Minimum (Typical)	10^{10} (10^{13})			10^{10} (10^{13})			10^{10} (10^{13})		
Environmental											
Operating Temperature Range	°C		-20 to +70			-20 to +70			-20 to +70		
Weight	**Version**		**Standard**			**Panel**			**Spade**			**Flying Lead**		
	Form A	gm	23			28			29			38		
	Form B	gm	31			36			37			46		

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Part Numbering System

Reed Switch size: **D** — D A T 7 24 15 F

Contact Form - **A**: Form A **B**: Form B

Contact Material **R:** Rhodium **T:** Tungsten

Moulding Ref. **N**umber

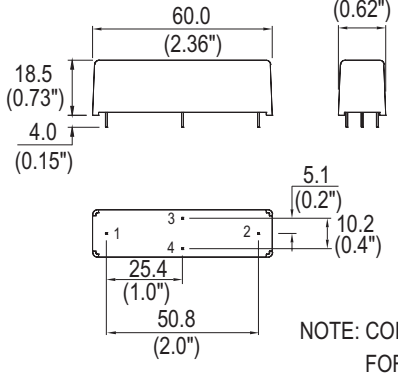
Coil Voltage **05:** 5V **12:** 12V **24:** 24V

Isolation Between Contacts - **10:** 10kV, **15:** 15kV (dat only)

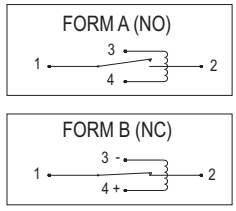
Mounting Style:
No suffix: Standard PCB mount
F: Flying Lead Contact Terminals
P: Panel Mount via nylon studs, turret contact/coil terminals
S: Panel Mount via nylon studs, Faston* style spade terminals

STANDARD

(e.g. DAT71210)



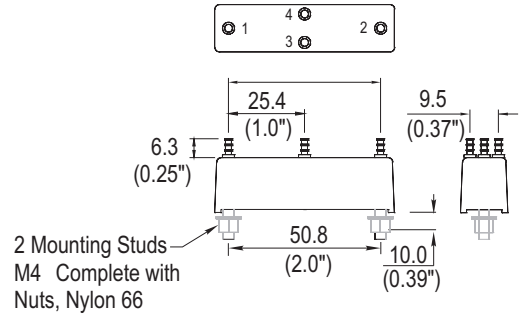
CIRCUIT DIAGRAMS
(ALL VARIANTS)
Viewed from underside



NOTE: COIL POLARITY IS IMPORTANT FOR FORM B VARIANT ONLY.

PANEL MOUNT

(e.g. DAT71210P)

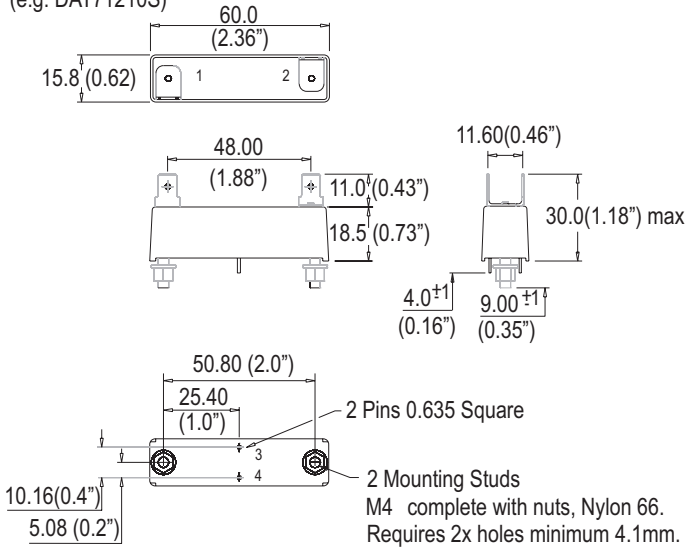


2 Mounting Studs
M4 Complete with
Nuts, Nylon 66
Requires 2x holes minimum 4.1mm.

SPADE TYPE

'S' Suffix denotes the 6.3 'Push On' blade connectors, M4 fixing bolts and Epoxy potting.

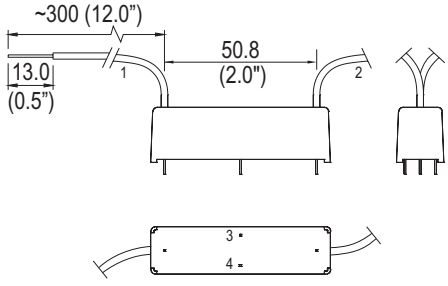
(e.g. DAT71210S)



2 Mounting Studs
M4 complete with nuts, Nylon 66.
Requires 2x holes minimum 4.1mm.

FLYING LEAD

(e.g. DAT71210F)



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

ISO9001 Certified

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