



D-HR Series

High Insulation Resistance, High Voltage Relays -10kV & 15kV



- 10kV or 15kV Isolation
- Low Contact Resistance
- 1x10¹⁴ Ohms Minimum Insulation Resistance
- PCB or Flying Leads Connections
- Ideal for sensitive test and measurement circuits which require low leakage current losses

Very high isolation voltages - up to 15kV - are achieved through the use of high vacuum reed switches with either rhodium or tungsten contacts which make these relays suitable for high reliability applications, such as cardiac defibrillators, test equipment and high voltage power supplies.

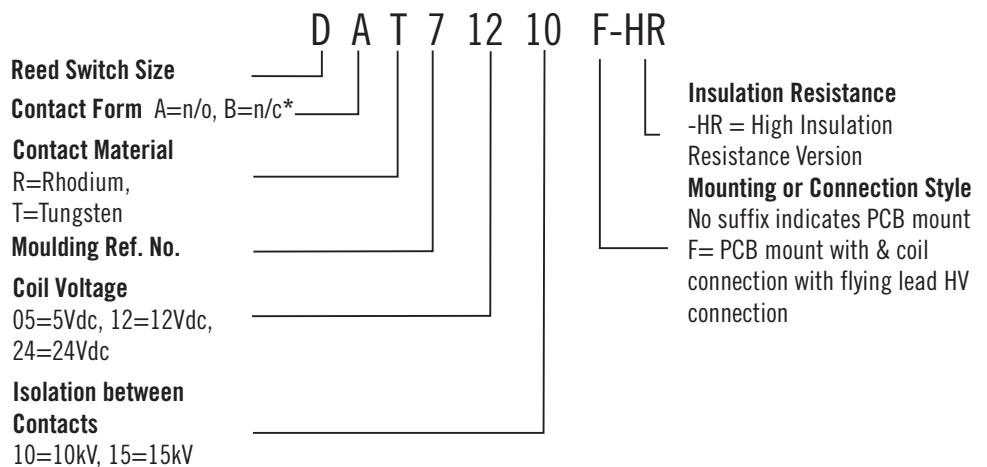
The rhodium contact relays have low contact resistance, while the tungsten contact relays can switch higher voltages.

Contact Specification	Unit	Condition	10kV SPNO		10kV SPNC		15kV SPNO*
			Rhodium	Tungsten	Rhodium	Tungsten	Tungsten
Contact Material			Rhodium	Tungsten	Rhodium	Tungsten	Tungsten
Isolation across contacts	kV	DC or AC peak	10	10	10	10	15
Switching Power Max.	W		50	50	50	50	50
Switching Voltage Max.	V	DC or AC peak	1000	7000	1000	7000	10000
Switching Current Max.	A	DC or AC peak	3	2	3	2	2
Carry Current Max.	A	DC or AC peak	4	3	4	3	2
Capacitance across contacts	pF	coil to 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
		50W switching	10 ⁶	10 ⁶	10 ⁶	10 ⁶	10 ⁶
Contact Resistance	mΩ	max (typical)	50 (15)	250(100)	50 (15)	250(100)	250 (100)
Insulation Resistance	Ωmin		1x10 ¹⁴		1x10 ¹⁴		1x10 ¹⁴

Coil Specification	Unit	Condition	10kV SPNO			10kV SPNC			15kV SPNO*		
			5V	12V	24V	5V	12V	24V	5V	12V	24V
Must Operate Voltage	V	DC	3.7	9	20	3.7	9	20	3.7	9	20
Must Release Voltage	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	Ω		28	150	780	38	240	925	16	95	350

Relay Specification			10kV SPNO			10kV SPNC			15kV SPNO*		
Isolation contact/coil	kV		17			17			17		
Insulation resistance contact to all terminals	Ωmin (typical)		1x10 ¹⁴			1x10 ¹⁴			1x10 ¹⁴		
Environmental											
Operating Temp range	°C		-20 to +70			-20 to +70			-20 to +70		

Part Numbering System



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

Email:sales@cynergy3.com

* Form B (n/c) is not available on 15kV models

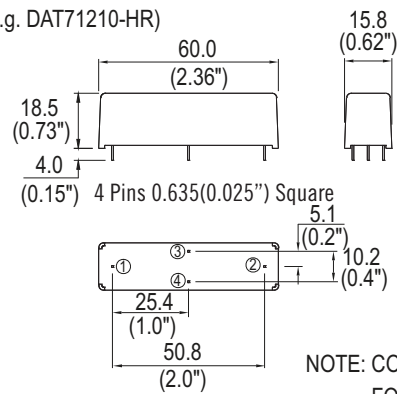
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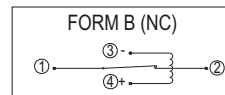
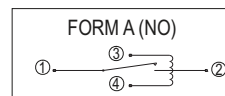
MECHANICAL

STANDARD

(e.g. DAT71210-HR)



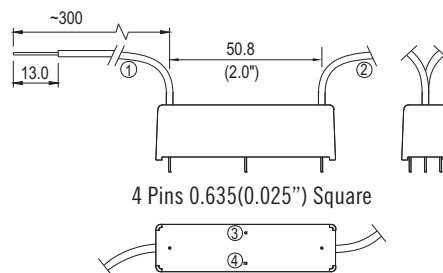
**CIRCUIT DIAGRAMS
(ALL VARIANTS)**



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

FLYING LEAD

(e.g. DAT71210F-HR)



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