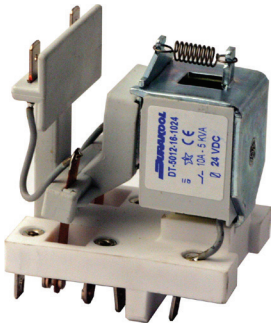
DT series
High Voltage Industrial Relays



- High voltage relay - 5kVAC
- Good inrush current resistance
- Flat insert connectors - fast-on 6.35mm
- Screw mounting or optional DIN rail mount
- Contact gap > 5mm

E305753

RoHS Compliant

Contacts

Contact arrangement		SPST-NO, SPST-NC, SPST-NO+SPST-NC
		DPST-NO, DPST-NC, DPDT
Contact material		$AgSnO_2$
Max. switching voltage	AC	5000V
Rated load (resitive, cos φ=1)	AC1	10A/5000VA
Min. switching current		10mA
Max. inrush current		20A (0.5 sec)
Max. breaking capacity	AC1	5000VA
Min. breaking capacity		1W
Initial contact resistance		<100mΩ
Max. operating frequency	no load	3.600 cycles per hour
	rated load	600 cycles per hour

Coil

Operating range	AC or DC	6... 400VAC / 6... 220VDC See Tables 1 & 2
Rated power consumption		DC: 5.5W / AC 50Hz: 11VA / AC 60Hz: 8VA

Insulation

Insulation resistance		>1TΩ at 5000VDC
Dielectric strength	coil to contact	8000Vrms
	contact to contact	8000Vrms (open contact gap >5mm)
	between adjacent contacts	8000Vrms

General Data

Operate time	max.	40ms (excluding bounce)
Release time	max.	30ms (excluding bounce)
Bounce time	max.	10ms
Mechanical life		5×10^6
Electrical life	Resistive AC1	$>10^5$

Environmental

Ambient temperature	operating	-40 to +55°C
	storage	-40 to +70°C
Vibration resistance		12g (NO) / 5g (NC)
Dimensions	L x W x H	60 x 48 x 70mm (refer to Fig 1)
Weight	approx.	200g

Ordering Code

D T - 5 0 2 2 - 1 6 - 1 0 1 2 - * * * *

Series

Contact material
50: $AgSnO_2$

Contact arrangement
12: DPDT (2CO)
21: SPST-NO (1NO)
22: DPST-NO (2NO)
31: SPST-NC (1NC)
32: DPST-NC (2NC)
42: SPST-NO+SPST-NC

Mounting & terminations
1: Side Mounting Bolt*
H: Side DIN rail bracket
* M4 x 8mm (not supplied)
max. torque = 1.5Nm

Connection mode
6: 6.35 x 0.8mm fast-on blade

Coil code (see Tables 1 & 2)

Reserved for custom modifications

DC Coil Data — Table 1

Coil code	Nominal voltage (VDC)	Must operate voltage max. (VDC@23°C)*	Max. allowable voltage (VDC@23°C) *	Must release voltage min. (VDC@23°C) *	Minimum hold voltage (VDC@23°C)*	Coil resistance Ω ±10% (at 23°C)	Coil Current (mA)
1006	6	4.8	6.6	0.3	3.6	7	920
1012	12	9.6	13.2	0.6	7.2	26	450
1024	24	19.2	26.4	1.2	14.4	105	230
1048	48	38.4	52.8	2.4	28.8	420	115
1060	60	48.0	66.0	3.0	36.0	650	92
1110	110	88.0	121.0	5.5	66.0	2230	50
1220	220	176.0	242.0	11.0	132.0	9100	25

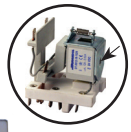
AC Coil Data 50/60Hz — Table 1

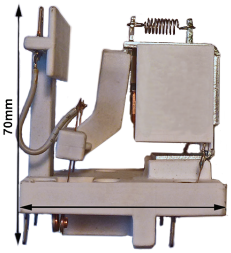
Coil code	Nominal voltage (VAC)	Must operate voltage max. (VAC@23°C)*		Max. allowable voltage (VAC@23°C)*	Must release voltage min. (VAC@23°C)*	Minimum hold voltage (VAC@23°C)*	Coil resistance Ω ±10% (at 23°C)	Coil Current (mA)	
		50z	60Hz					50HZ	60Hz
5006	6	4.8	5.1	6.6	0.9	4.8	0.8	1840	1340
5012	12	9.6	10.2	13.2	1.8	9.6	3.4	920	670
5024	24	19.2	20.4	26.4	3.6	19.2	13	460	335
5048	48	38.4	40.8	52.8	7.2	38.4	52	230	168
5060	60	48.0	51.0	66.0	9.0	48.0	80	185	134
5110	110	88.0	93.5	121.0	16.5	88.0	240	100	73
5230	230	184.0	195.5	253.0	34.5	184.0	1200	48	35
5400	400	320.0	340.0	440.0	60.0	320.0	4350	28	20

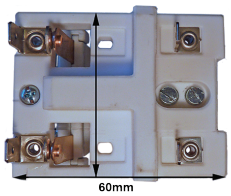
* Minimum Hold Voltage specifies the point at which relays will start to “drop out”. They will all have dropped out by the point the Must Release Voltage is reached.

Dimensions — Fig 1

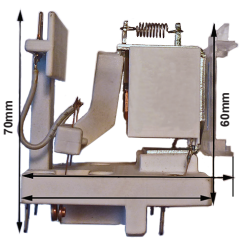
Standard mounting with M4 x 8mm screw into yoke, centre of coil)

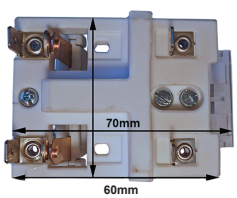






DIN rail clip fixed to yoke





NB: Minimum mounting distance to maintain isolation = 15mm

Circuit diagrams — Fig 2