DURAKOOL®

DX87 Series
PCB Power Relay



- Miniature PCB power relay
- Up to 12A /28VDC Rating
- Industry standard style
- 'Sensitive' 250mW coil version available
- Cost effective

E305753 RoHS Compliant

Contacts		
Contact arrangement		SPST-NO (1 N/O), SPDT (1 C/O)
Contact material		AgNi 90/10, $AgSnO_2$
Max. switching voltage	AC/DC	440VAC / 125VDC
Max. switching power		2500VA / 3000VA
Min. switching current / voltage		100mA/12VDC
Rated load	AC1	10A, 250VAC (Sensitive Coil) / 12A, 250VAC
	DC1	10A, 30VDC (Sensitive Coil) / 12A, 30VDC
Initial resistance		100mΩ, max. at 0.1A/6VDC
Coil		
Rated voltage	DC	5...110V
Must release voltage	DC	≥ $0.1U_n$
Operating range of supply voltage		See tables 1 & 2
Rated power consumption	DC	250mW (Sensitive Coil) / 400mW
Insulation (EN 60664-1)		
Insulation resistance		≤ 1000MΩ at 500VDC, 50%RH
Dielectric strength	coil to contact	5000Vrms, 1min
	contact to contact	1000Vrms, 1min
General Data		
Operating time	typ.	≤ 15ms
Release time	typ.	≤ 8ms
Electrical life	ops.	≥ 1×10^5
Mechanical life	ops.	≥ 1×10^7
Environmental		
Ambient temperature	operating	-40 to 85°C
	storage	-40 to 85°C
Shock resistance	functional	100m/s²
	destructive	1000m/s²
Vibration resistance		DA 1.5mm 10-55Hz
Dimensions	L x W x H	29 x 12.7 x 15.7mm
Weight	approx.	13.5g

Ordering Code

D X 8 7 N - 3 0 1 1 - 3 5 - 1 0 1 0

- Series
- Contact terminal pitch
  - N: 3.5mm
- Contact material
  - 20: AgNi 90/10
  - 30: $AgSnO_2$
- Contact arrangement
  - 11: SPDT (1C/O)
  - 21: SPST-NO (1N/O)
- Environmental protection
  - 2: In cover, flux tight - IP40
  - 3: In cover, sealed - IP67
- Mounting & terminations
  - 5: For PCB
- Coil code:
  - See tables 1 & 2

Specifications are subject to change without notice. E&OE.

Coil Data (DC voltage 400mW) — Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10%	Max.allowable voltage (VDC)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)
1005	5	62.5	6.5	3.75	0.5
1006	6	90	7.8	4.5	0.6
1009	9	202.5	11.7	6.75	0.9
1012	12	360	15.6	9.0	1.2
1024	24	1440	31.2	18.0	2.4
1048	48	5760	62.4	36.0	4.8

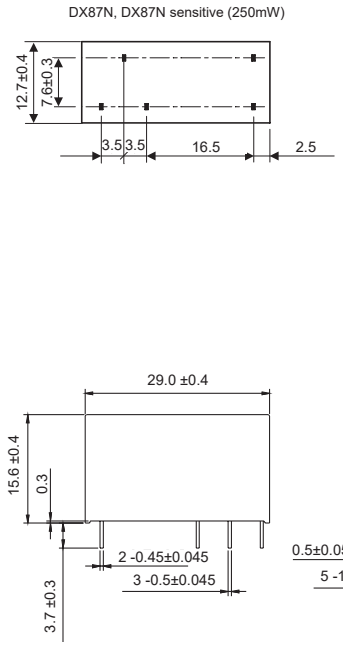
Operating relays below or above the nominal voltage may prove detrimental to performance.

Coil Data (DC voltage 250mW) - SPDT (1 Form C, 1C/O only) — Table 2

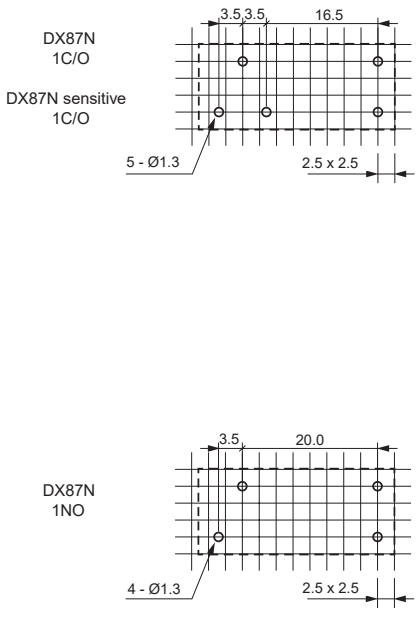
Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10%	Operate voltage max. (VDC)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)
S005	5	100	6.5	3.75	0.5
S006	6	144	7.8	4.50	0.6
S009	9	324	11.7	6.75	0.9
S010	10	400	13.0	7.50	1.0
S012	12	576	15.6	9.00	1.2
S024	24	2304	31.2	18.0	2.4
S048	48	9216	62.4	36.0	4.8

Operating relays below or above the nominal voltage may prove detrimental to performance.

Dimensions mm — Fig. 1

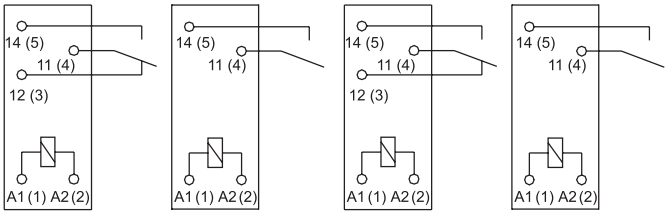


PCB Mounting Holes Dimensions mm (bottom view) — Fig. 2



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Wiring Diagrams (bottom view) Fig. 3



DX87N 1C/O | DX87N 1NO | DX87N sensitive 1C/O | DX87N sensitive 1NO

Terminal (pin)	A1(1); A2(2)	12(3); 11(4); 14(5)
[mm]	Ø 0.5±0.2	0.5±0.2 x 0.8±0.05
Drilling hole: • for relays • for sockets		 Ø 1,3 + 0,1 mm Ø 1,5 + 0,1 mm

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