

DG82

micro plug-in/pcb automotive relay

DURAKOOL



- Industry Standard micro-ISO plug-in relay
- Up to 120A 12VDC inrush capability
- PCB Mounting option
- Cost effective
- RoHS Compliant

Contacts

Contact number & arrangement	SPST-NO (1 Form A); SPDT (1 Form C)
Contact material	AgNi0.15; AgNi90/10; AgSnOInO; AgCdO
Max. switching voltage	DC 16VDC (current dependent - see Fig 3)
Rated load (max. continuous current)	DC1 40A/12VDC (Normally open); 30A/12VDC (Normally closed)
Max. switching current ³	Make 90A (120A:AgSnOInO) (Normally open); 45A (Normally closed) Break 40A (Normally open contact) / 30A (Normally closed contact)
Minimum load	AgNi0.15: 0.1A/12VDC, AgSnOInO: 05A/12VDC
Initial resistance	50mΩ, max. at 0.1A/6VDC

Coil

Rated voltage	DC 6...24V
Must release voltage	≥0.1Un
Operating range of supply voltage	See coil table 1
Rated power consumption	DC Approx. 1.2W (SPST-NO) / 1.5W (SPDT); 1.81W with resistor

Insulation

Insulation resistance	100MΩ at 500VDC, 50%RH
Dielectric strength	
coil to contact	500Vrms, 1min
contact to contact	500Vrms, 1min

General Data

Operating time (typical)	ms 9
Release time (typical)	ms 7
Electrical Life ²	ops 2 x 10 ⁵
Mechanical life	ops 1 x 10 ⁷
Dimensions	L x W x H 23.5 x 15.7 x 26.0 mm (excluding terminals)
Weight	Plug-in: 21g / PCB: 19g approx.
Ambient temperature	storage -40 to 155°C operating -40 to 125°C (Derate above 85°C - consult factory)
Shock resistance	Functional: 20g 11ms; Destructive: 100g
Vibration resistance	DA 1.27mm 10-40Hz / 40-70Hz:5g / DA 0.5mm 100-500Hz: 10g

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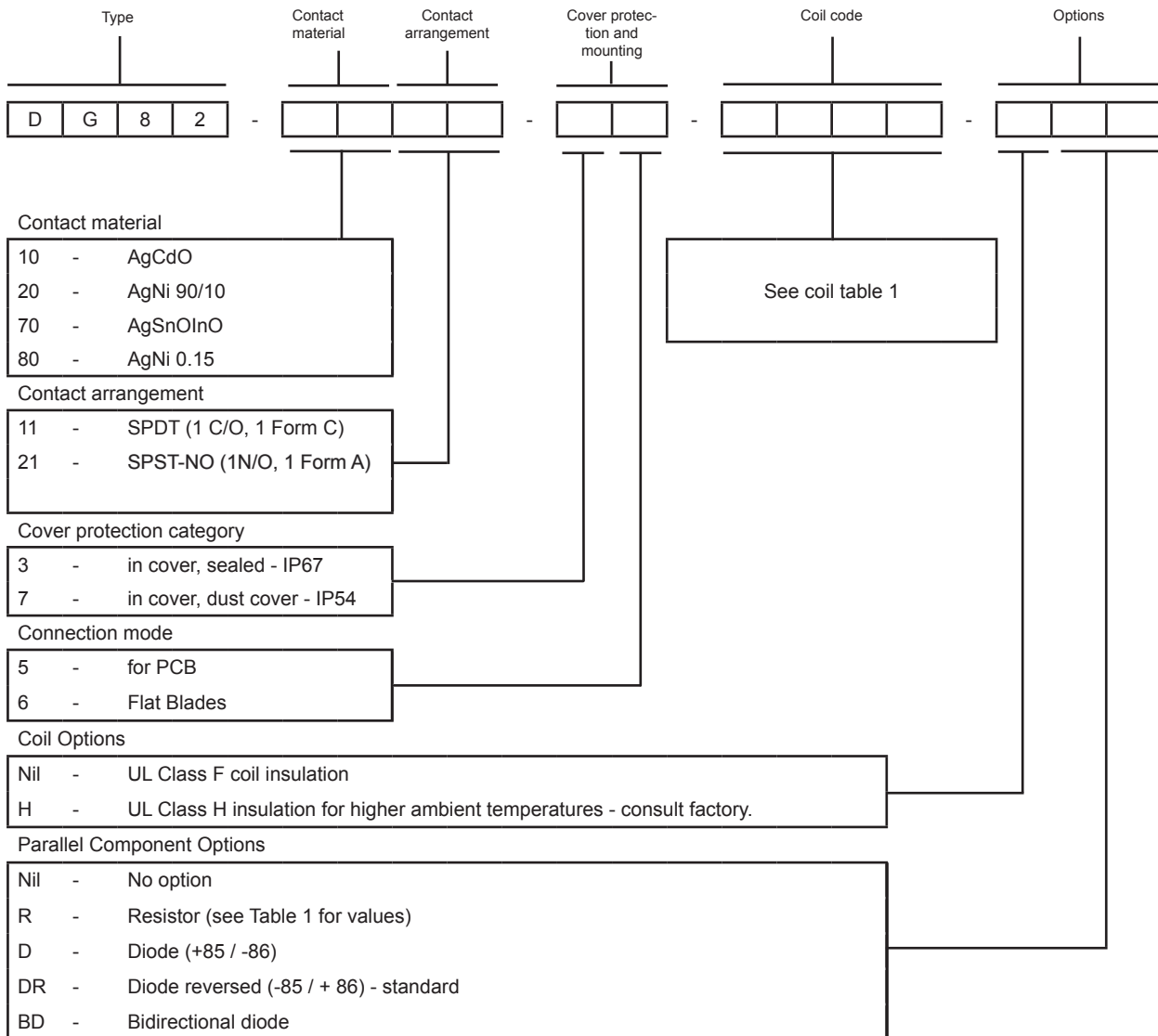
Coil Data

Table 1

Coil Voltage Code	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$		Must Operate Voltage Max. (VDC)	Allowable Voltage (VDC)*		Must release voltage min. (VDC)	Parallel Resistor (optional) (Ω)
		1 Form A	1 Form C		1 Form A	1 Form C		
1006	6	32	25	3.6	10.4	9.2	0.6	170
1012	12	123	97	7.2	20.4	18.1	1.2	680
1024	24	483	384	14.4	40.4	36.0	2.4	2720

* At ambient temperature of 85°C, maximum allowable voltage should be reduced by 28%

Ordering codes



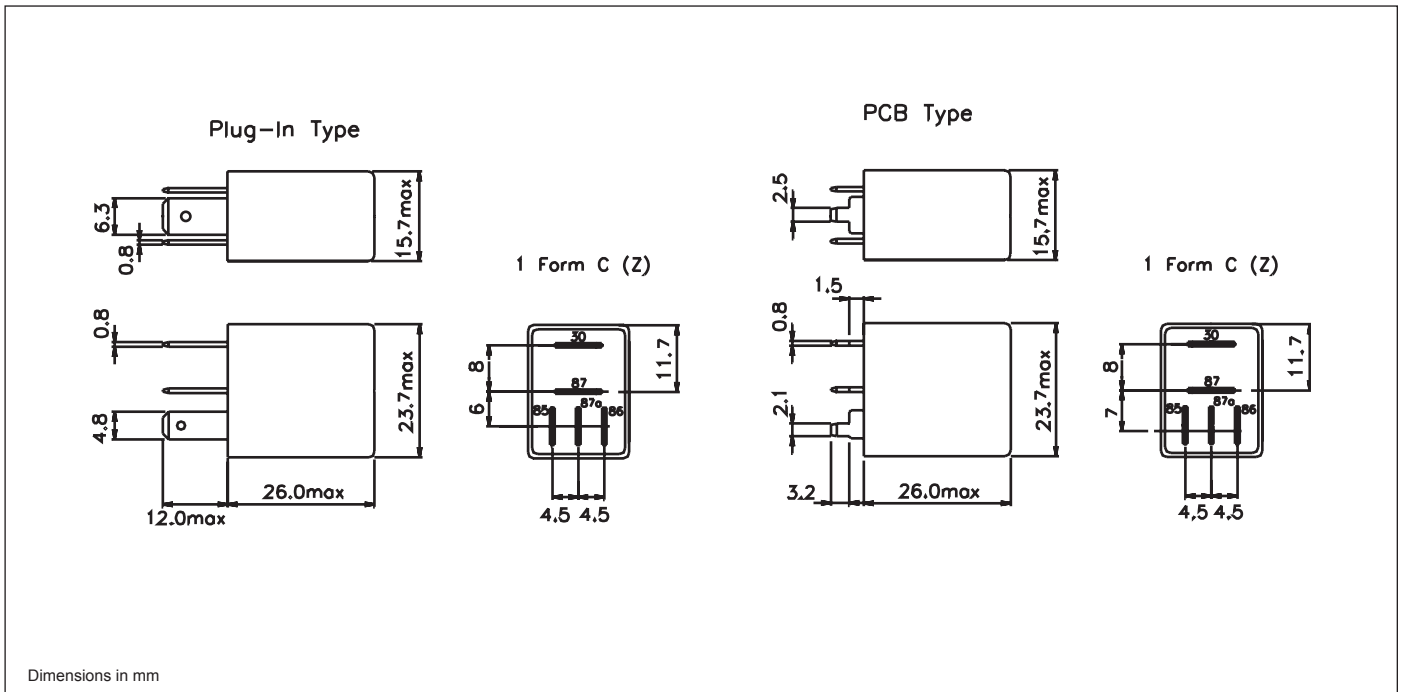
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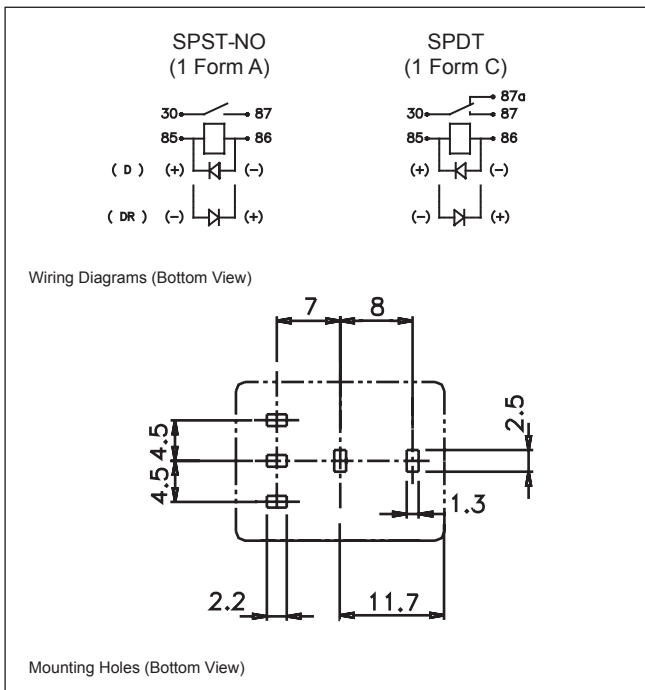
Overall Dimensions

Fig. 1



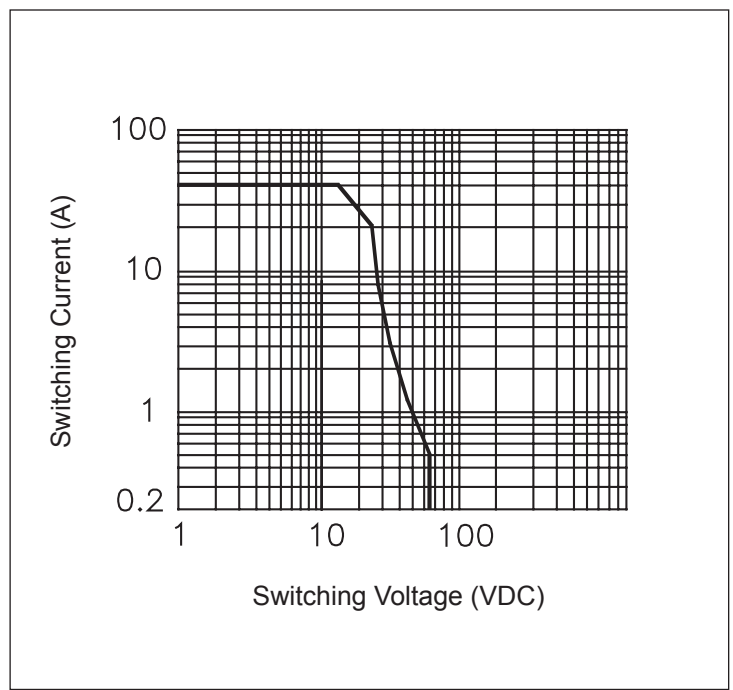
PCB Mounting Dimensions

Fig. 2



Reference Curves

Fig. 3



Notes:

- 1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.
- 2: Electrical life obtained at resistive or inductive load at 40A, 15VDC with suitable arc suppression circuit attached and with operating frequency of 1 op/sec.
- 3: Maximum make current refers to lamp load inrush current.