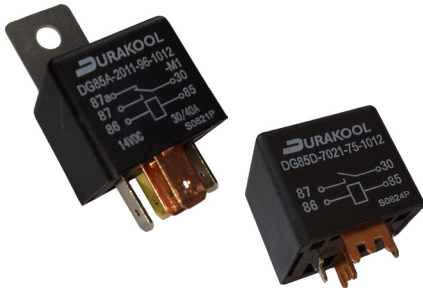


DG85 series

automotive / industrial relays

DURAKOOL



- General purpose automotive or industrial relays
- High inrush capabilities
- PCB Mounting option
- Ideal for DC Motor Control
- High continuous DC current capacity
- Industry standard size and footprint
- DG85F optimised for 24VDC switching
- 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	30VDC (current dependent - see Figs 5 & 6); DG85F 24VDC				
		DG85A	DG85B	DG85C	DG85D	DG85F
Max. continuous current	SPST-NO	40A	60A	80A	100A	60A
	SPDT (NO/NC)	40A/30A	60A/40A	80A/60A	-	60A/40A
Max. switching current - make	SPST-NO	120A	120A	240A	240A	120A
	SPDT (NO/NC)	120A/45A	120A/45A	240/180A	-	120A/45A
Max. switching current - break	SPST-NO	40A	60A	80A	100A	60A
	SPDT (NO/NC)	40A/30A	60A/40A	80A/60A	-	60A/40A
Min. switching current		0.1A 12VDC	0.5A 12VDC	0.5A 12VDC	0.5A 12VDC	0.5A 24VDC
Contact gap		>0.5mm	>0.5mm	>0.5mm	≤1.0mm	>1.0mm
Initial contact resistance		<100mΩ, 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	1.6W; 1.81W with resistor; DG85F, 2.3W

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	≤ 7mS
Release time (typical)	mS	≤ 2 mS
Electrical Life	ops	1 x 10 ⁵ , 5 x 10 ⁴ (DG85F only) (see Note 2)
Mechanical life	ops	1 x 10 ⁷ , 5 x 10 ⁵ (DG85F only)
Dimensions	L x W x H	various - see dimensional drawings
Weight		40g approx. depending on style and mounting
Ambient temperature	storage	-40 to 155°C
	operating	-40 to 125°C (at nominal coil voltage - see Coil Data, Table 1)
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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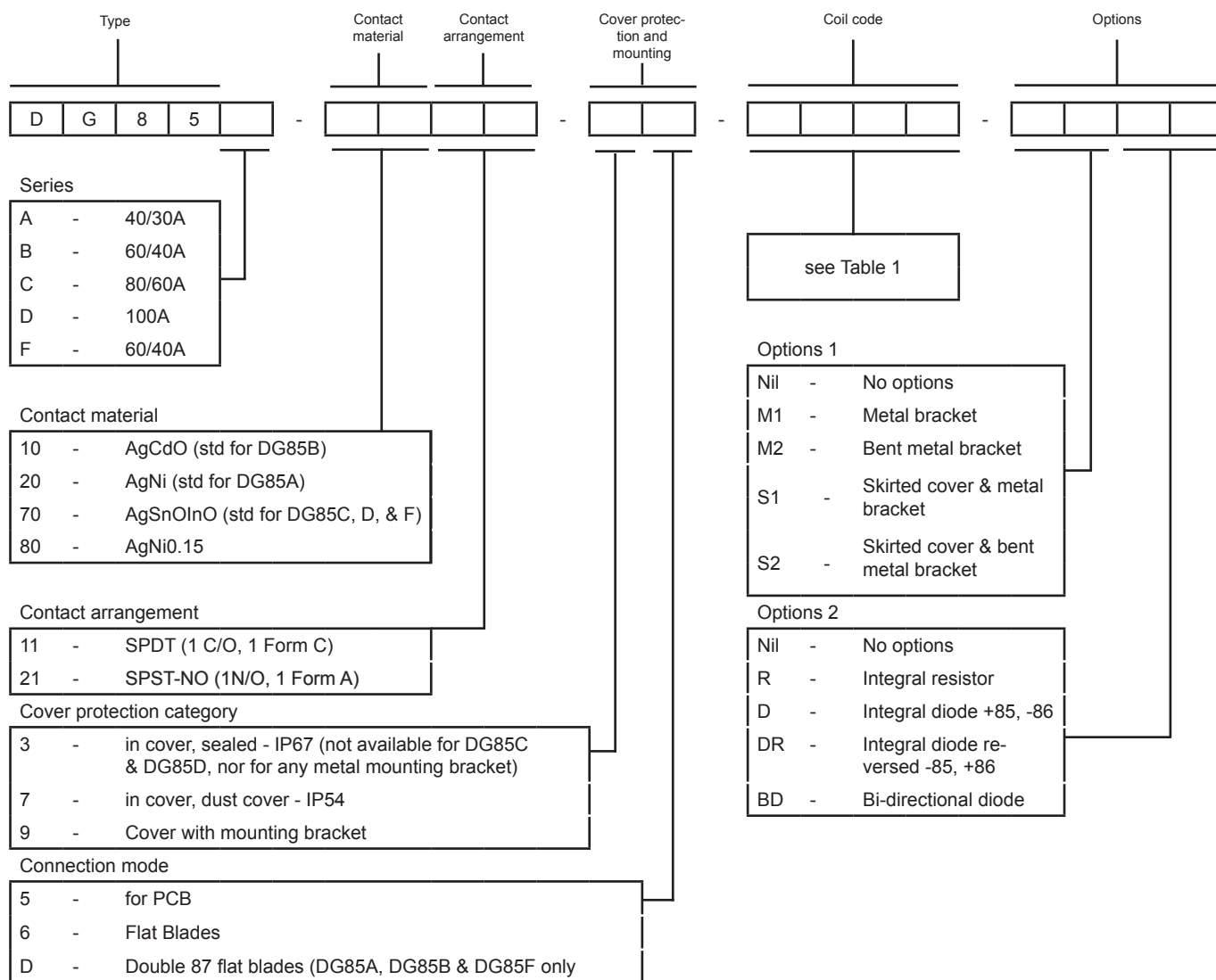
Coil Data

Table 1

Model	Coil voltage code	Nominal voltage (VDC)	Coil resistance (Ω) $\pm 10\%$	Must operate voltage Max. (VDC)	Maximum Allowable voltage (VDC)*	Must release voltage min. (VDC)
DG85A	1006	6	22	3.6	10.1	0.6
DG85B	1012	12	90	7.2	20.5	1.2
DG85C	1024	24	330	14.4	39.1	2.4
DG85D						
DG85F	1006	6	15.6	3.6	6.4	0.6
	1012	12	62.5	7.2	14.8	1.2
	1024	24	250	14.4	28.8	2.4

* At ambient temperature of 85°C and above, up to maximum ambient temperature of 125°C, maximum allowable voltage should be reduced by 28%

Ordering codes



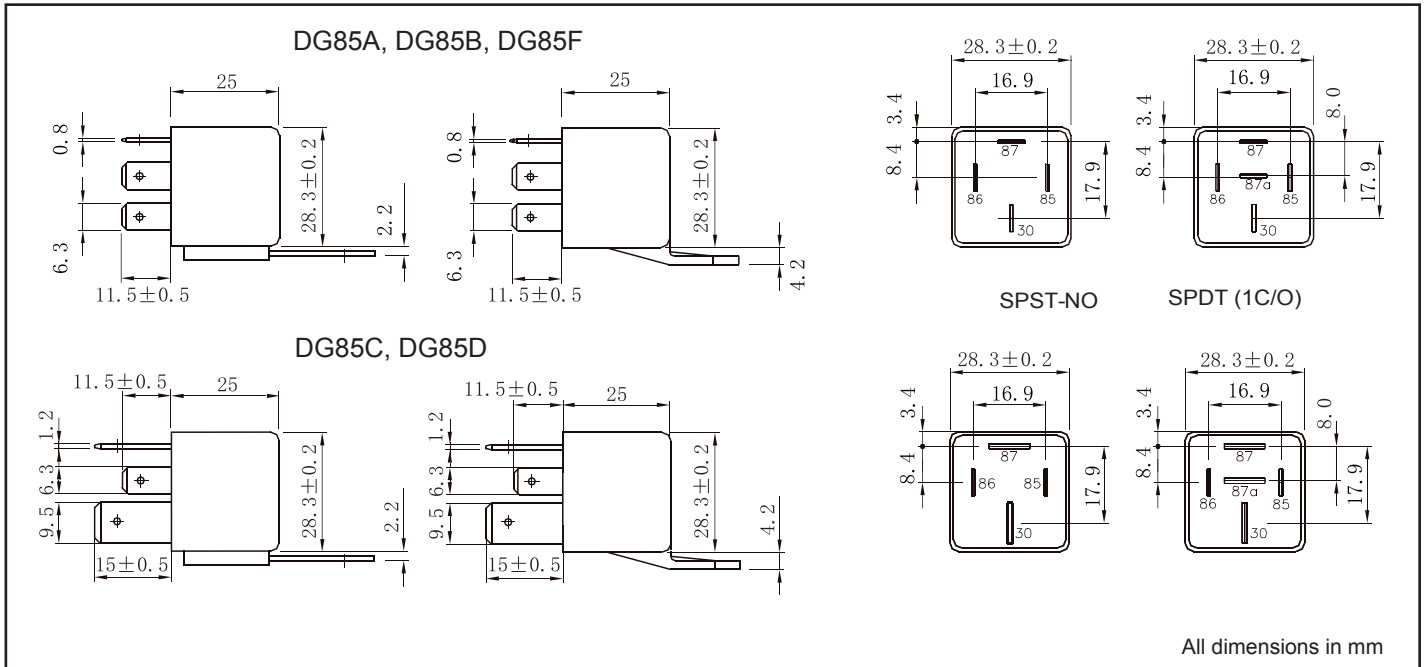
DG85 series

automotive / industrial relays



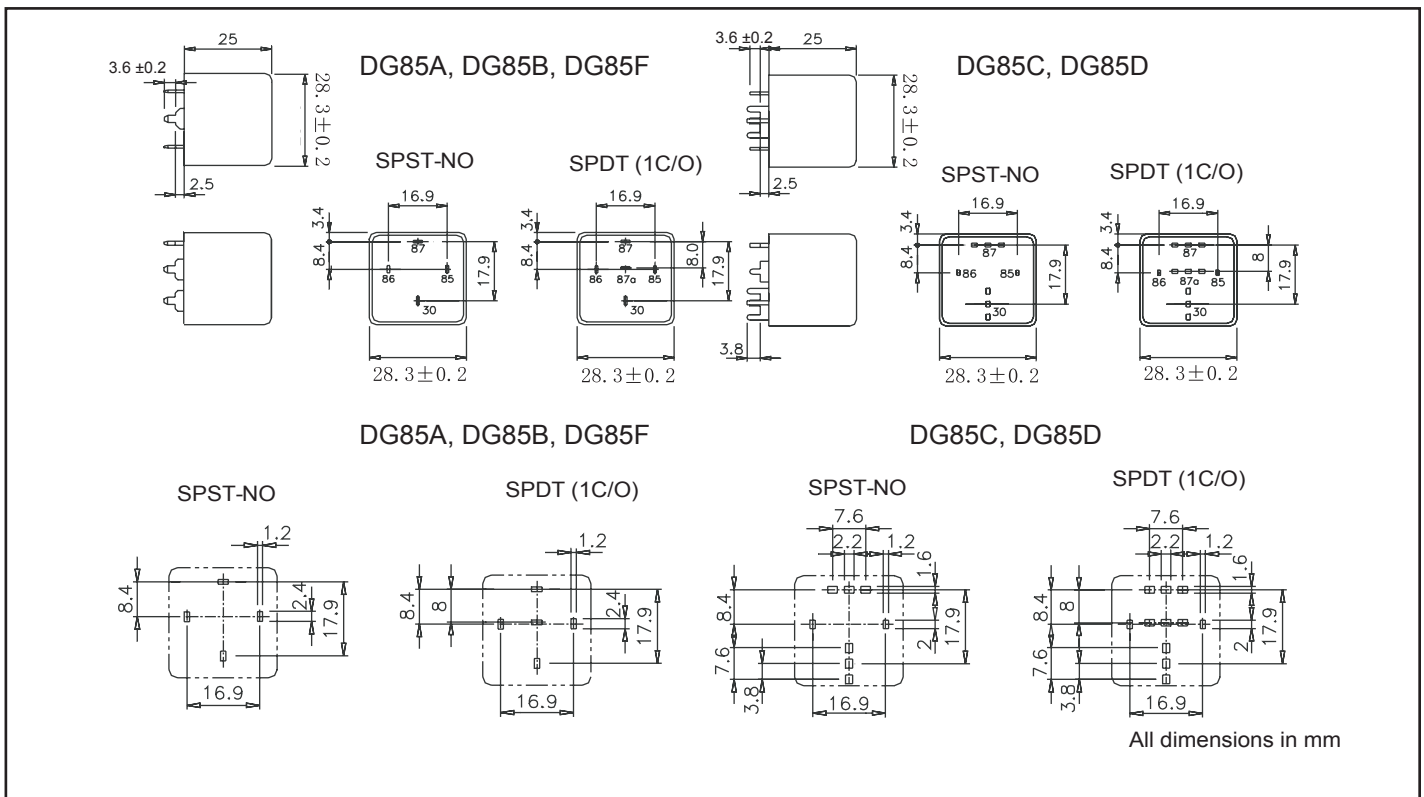
Overall Dimensions - Plug-in Types

Fig. 1



Overall Dimensions and PCB Mounting Hole Dimensions - PCB Types

Fig. 2



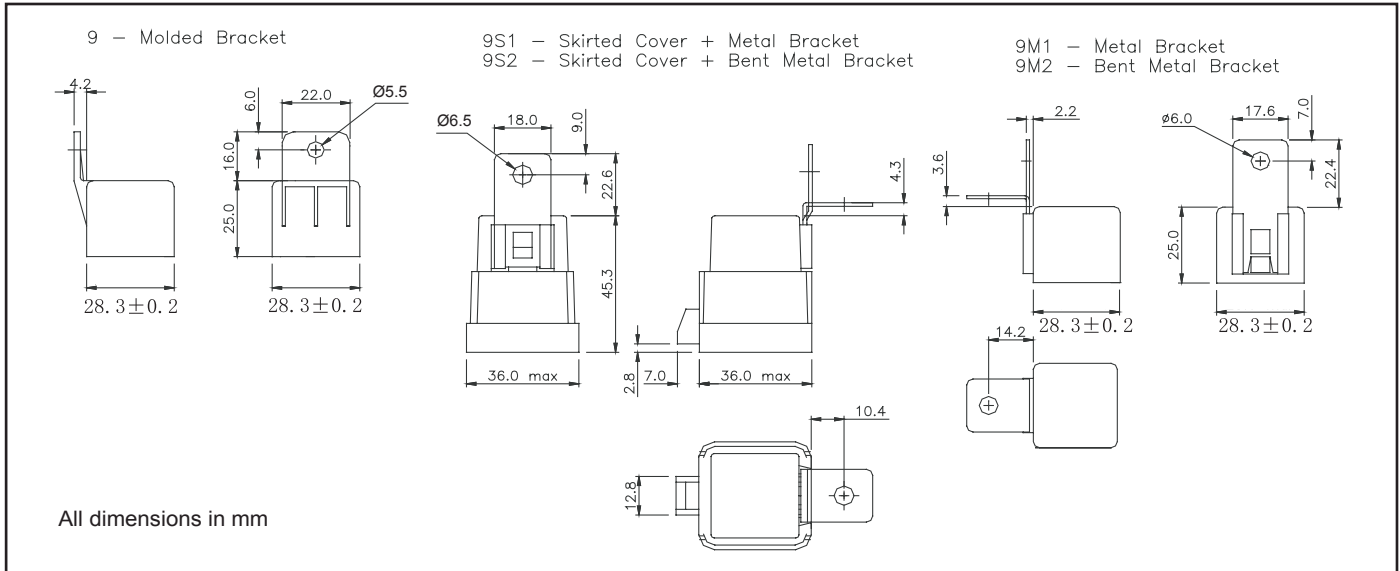
DG85 series

automotive / industrial relays



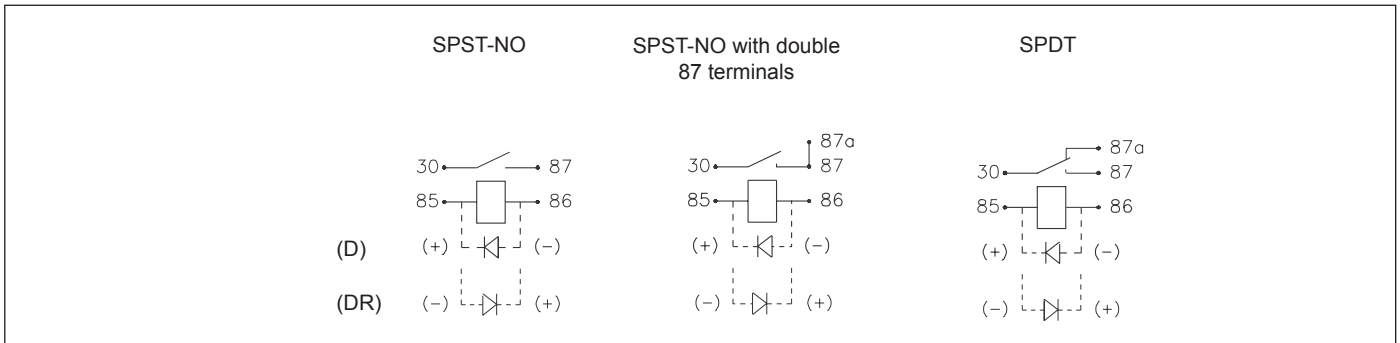
Overall Dimensions - Plug-in types with optional brackets & skirts

Fig. 3



Wiring Diagrams

Fig. 4

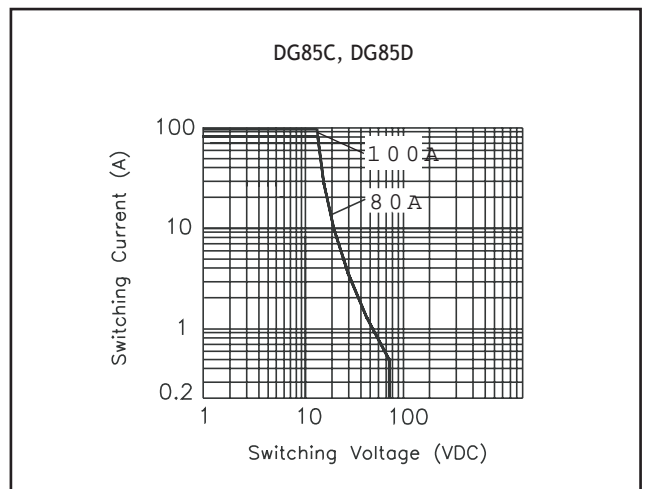
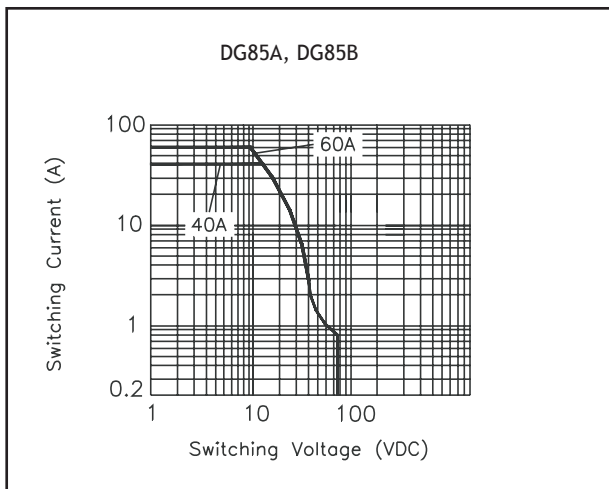


Max. DC resistive load breaking capacity

Fig. 5

Max. DC resistive load breaking capacity

Fig. 6



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.

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

