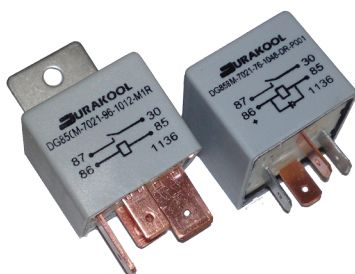


DG85*M series

automotive / industrial relays

DURAKOOL



- General purpose automotive or industrial relays
- High inrush capabilities
- Ideal for DC Motor Control
- High continuous DC current capacity
- Industry standard terminal arrangement
- Optimised for up to 145VDC switching with magnetic arc blowout
- RoHS Compliant

Contacts

Contact number & arrangement	SPST-NO (1 Form A); SPDT (1 Form C)		
Contact material	AgSnO ²		
Max. switching voltage	DC	145VDC (DG85CM)	
		DG85BM (SPST-NO & SPDT)	DG85CM (SPST-NO only)
Contact rating (through normally open and normally closed contacts)		25A @ 36VDC 20A @ 48VDC 15A @ 72VDC 7A @ 110VDC	60A @ 36VDC 50A @ 48VDC 40A @ 60VDC 25A @ 72VDC 10A @ 110VDC 5A @ 145VDC
Max. switching current (3sec)		120A @ 12.8VDC	150A @ 12.8VDC
Min. switching current		100mA / 12VDC	100mA / 12VDC
Initial contact resistance		<100mΩ, max. at 0.1A/6VDC	

Coil

Rated voltage	DC	6...110V
Must release voltage		See coil table 1
Operating range of supply voltage		See coil table 1
Rated power consumption	DC	1.7W / 1.8W (DG85BM) / 1.92W (DG85CM)

Insulation

Insulation resistance	100MΩ at 500VDC, 50%RH, 25°C	
Dielectric strength		
	coil to contact	750Vrms, 1min
	contact to contact	500Vrms, 1min

General Data

Operating time (typical)	mS	≤ 15mS (excluding bounce and without coil suppression)
Release time (typical)	mS	≤ 15 mS (excluding bounce and without coil suppression)
Electrical Life	ops	1 x 10 ⁵
Mechanical life	ops	1 x 10 ⁶
Dimensions	L x W x H	35 x 30.5 x 27mm (25mm for DG85BM)
Weight		65g approx. depending on style and mounting
Ambient temperature	storage	-40 to 85°C (Maximum = 155°C)
	operating	-40 to 85°C (at nominal coil voltage - see Coil Data, Table 1)
Shock resistance		Functional: 30g 8mS; Destructive: 100g
Vibration resistance		10 - 2000Hz, 4.4g (DG85BM) / 10 - 50Hz, 4.4g (DG85CM)

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Coil Data

Table 1

Coil voltage code	Nominal voltage (VDC)	Coil resistance (Ω) $\pm 10\%$		Must operate voltage Max. (VDC)	Must release voltage min. (VDC)	Parallel resistor (option) (Ω) $\pm 10\%$	
		SPST-NO (DG85BM & DG85CM)	SPDT (DG85BM)			SPST-NO (DG85BM & DG85CM)	SPDT (DG85BM)
1006	6	20	*	4.0	0.6	150	*
1009	9	45	*	6.0	0.9	330	*
1012	12	75	85	8.0	1.2	1000	1000
1024	24	250	305	16.0	2.4	2200	2200
1036	36	650	*	24.0	3.6	4700	*
1048	48	1100	*	32.0	4.8	10000	*
1110	110	5500	*	73.2	11.0	not available	not available

All specifications at 23°C ambient

* Contact factory for availability.

Ordering codes

Type	Contact material	Contact arrangement	Cover protection and mounting	Coil code	Options
D G 8 5 M	5 0				
Series B - 25A @ 36VDC C - 60A @ 36VDC					
Contact material 50 - AgSnO₂					
Contact arrangement 11 - SPDT (1C/O, 1 Form C) DG85BM only 21 - SPST-NO (1N/O, 1 Form A)					
Cover protection category 7 - in cover, dust cover - IP54 9 - Cover with plastic mounting bracket					
Connection mode 5 - PCB Terminals (DG85BM only) 6 - Flat Blades					
				see Table 1	
				Options 1 Nil - No options	
				Options 2 Nil - No options R - Integral resistor D - Integral diode +85, -86 DR - Integral diode reversed -85, +86	

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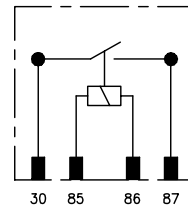
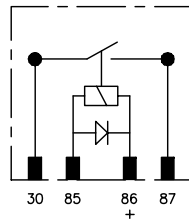
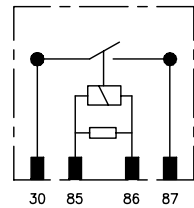
DURAKOOL

Fig. 1

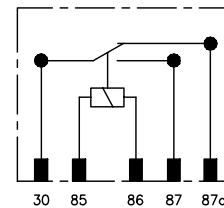
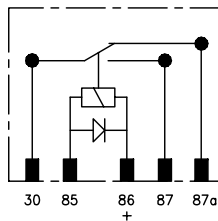
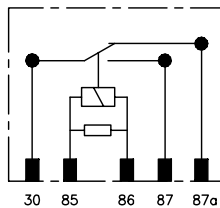


Connection diagrams

Fig. 2



SPST-NO



SPDT