DG85CM Series
Automotive / Industrial Relay

- 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 arrangement		SPST-NO (1 Form A)
Contact material		$AgSnO_2$
Max. switching voltage	DC	145VDC
Contact rating (through N/O & N/C contacts)		60A @ 36VDC
		50A @ 48VDC
		40A @ 60VDC
		25A @ 72VDC
		10A @ 110VDC
		5A @ 145VDC
Max. switching current (3 sec)		150A@12.8VDC
Min. switching current		100mA / 12 VDC
Initial contact resistance		<100mΩ at 0.1A/6VDC

Coil

Nominal voltage	DC	6...110V
Must release voltage		See coil table 1
Operating range of supply voltage		See coil table 1
Rated power consumption	DC	1.92W

Insulation

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

General Data

Operate time		≤ 15ms (Excl. bounce & without coil suppression)
Release time		≤ 15ms (Excl. bounce & without coil suppression)
Electrical Life	ops.	$1x10^5$ (at rated load, 10 ops./minute)
Mechanical life	ops.	1×10^6

Environmental

Ambient temperature	operating	-40 to +85°C (max. = 155°C)
	storage	-40 to +85°C (at nominal coil voltage - see table 1)
Shock resistance	destructive	100g
	functional	30g 8ms
Vibration resistance		10 to 50Hz 4.4g
Dimensions	L x W x H	35 x 30.5 x 27mm
Weight	approx.	65g approx depending on mounting

Ordering Code

D G 8 5 C M - 5 0 2 1 - 9 6 - 1 0 1 2 - D R

Series

Coil code:
See table 1

Contact material
50: $AgSnO_2$

Contact arrangement
21: SPST-NO (1 N/O, 1 Form A)

Mounting & terminations IP54
7: Dust cover
9: Cover with plastic mounting bracket

Connection mode
6: Flat blades

Options
Blank: No options
R: Integral resistor
D: Integral diode +85, -86
DR: Integral diode reversed -85, +86 standard

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

Coil Data

Table 1

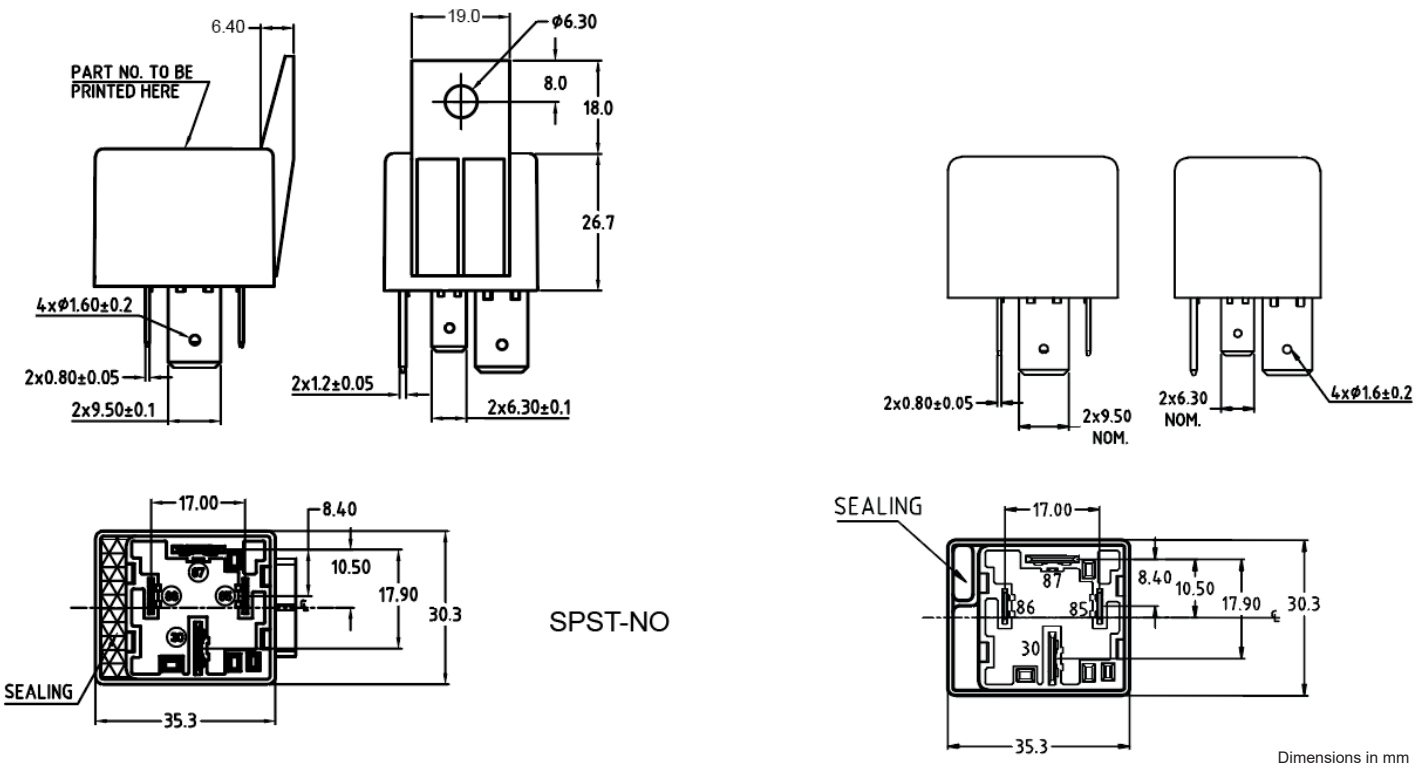
Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10%	Must operate voltage max (VDC)	Must release voltage min. (VDC)	Parallel resistor (option) (Ω) ±10%
1006	6	20	4.0	0.6	*
1009	9	45	6.0	0.9	*
1012	12	75	8.0	1.2	500
1024	24	250	16.0	2.4	*
1036	36	650	24.0	3.6	*
1048	48	1100	32.0	4.8	*
1110	110	5500	73.2	11.0	not available

All specifications at 23°C ambient

* Contact factory for availability

Dimensions

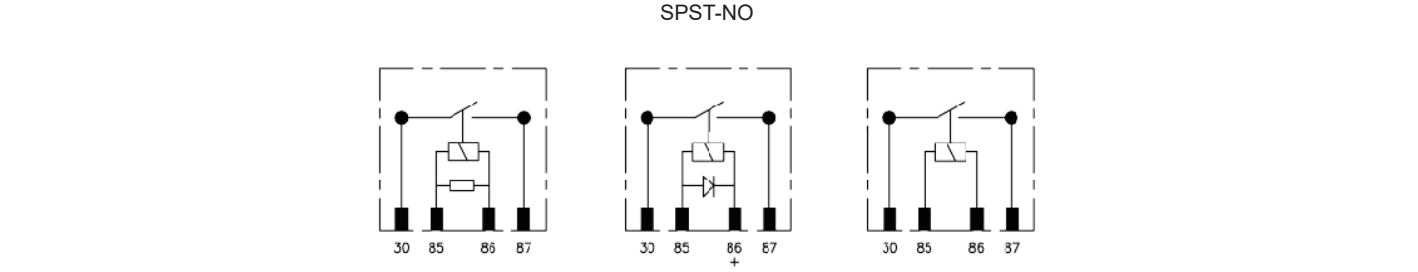
Fig. 1



Dimensions in mm

Connection diagrams

Fig. 2



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