DURAKOOL
A WT/AEC Brand

DG57BM Series
automotive / electric vehicle relay

- General Purpose automotive or industrial relay
- Good inrush current resistance
- Ideal for DC motor control
- High continuous DC current capability
- Optimised for up to 110VDC switching
- Magnet arc blowout feature
- Industry standard terminal layout

ROHS Compliant

Contacts

Contact arrangement		SPST-NO (1 Form A), SPDT (1 Form C)
Contact material		$AgSnO_2$
Max. switching voltage	DC	110VDC
Min. switching current / voltage		100mA / 12VDC
Rated load - see Fig. 1	DC1	60A @ 12VDC, 25A @ 36VDC, 20A @ 48VDC
		15A @ 72VDC, 7A @ 110VDC
Max. switching current	make	120A @ 12.8VDC (3secs)
Initial Contact resistance		<100mΩ, at 0.1A / 6VDC

Coil

Rated voltage	DC	6 ... 50V
Must release voltage		≥0.1U_n
Operating range		See Table 1
Rated power consumption		1.6W; 1.8W with resistor

Insulation

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

General Data

Operating time	typ.	7ms
Release time	typ.	2ms
Electrical life	ops.	1 x 10^5
Mechanical life	ops.	1 x 10^7

Environmental

Ambient temperature	operating	-40 to +125°C (above 85°C - consult factory)
	storage	-40 to +155°C
Shock resistance	functional	20g, 11ms
	destructive	100g
Vibration resistance		DA 1.27mm 10-40Hz / 40-70Hz:5g
		DA 0.5mm 100-500Hz: 10g
Dimensions	L x W x H	39.1 x 28 x 26mm (excluding terminals)
Weight	approx.	46g

Ordering Code

D G 5 7 B M - 5 0 1 1 - 7 6 - 1 0 1 2 - D R

Series

Coil code:
See table 1

Contact material
50: $AgSnO_2$

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

Environmental protection
7: In cover, dust cover - IP54
9: Cover with mounting bracket

Connection Mode
5: PCB Terminals
6: Flat Blades

Options 1 (metal mounting bracket)
Nil: No option
M1: Metal mounting bracket fitted

Options 2 (parallel components)
Nil: No option
R: Integral resistor
DR: Integral diode -85, +86 (standard)
D: Integral diode +85, -86 (special order)

Coil Data

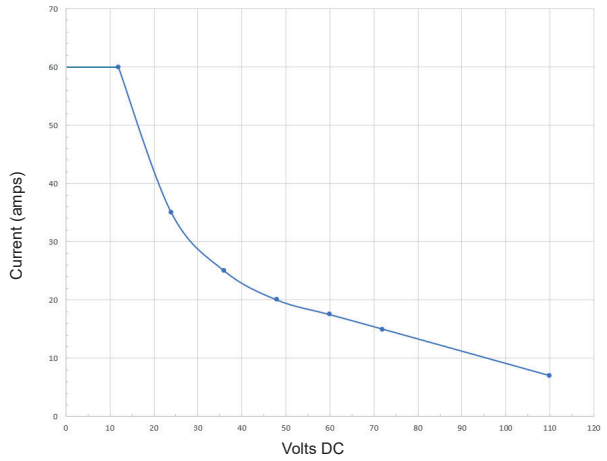
Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10%	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)
1006	6	22	3.6	10.1	0.6
1012	12	90	7.2	20.5	1.2
1024	24	330	14.4	39.1	2.4
1048	48	1440	28.8	80.0	4.8
1050	50	1565	30.0	83.0	5.0

Performance

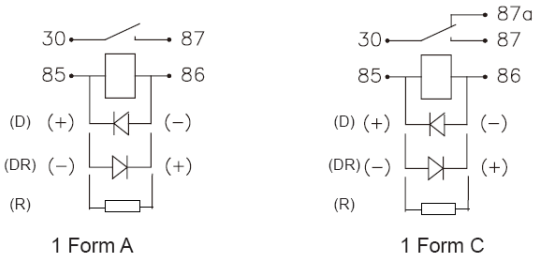
Fig. 1

Max. DC resistive load breaking capacity



Circuit Diagram

Fig. 2

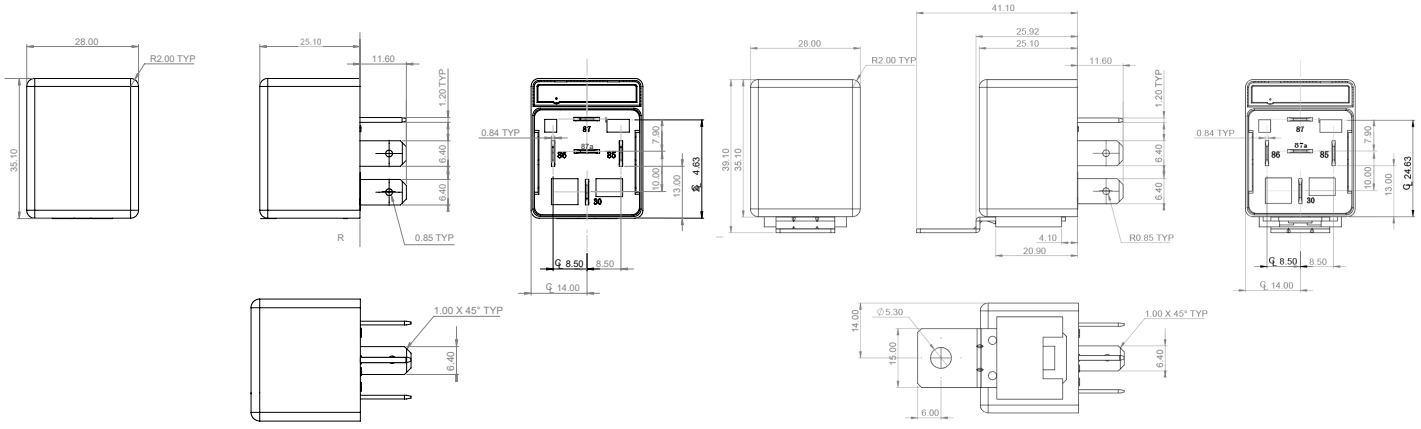


Dimensions

Fig. 3

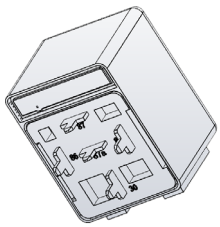
Plug-in

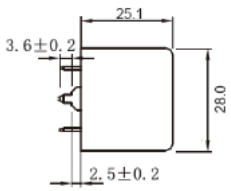
Plug-in with metal mounting bracket

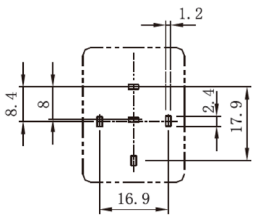


Terminal 87a omitted for SPST-NO type

PCB Mounting







Dimensions in mm