



- General Purpose automotive or industrial relay
- Good inrush current resistance
- Ideal for DC motor control
- High continuous DC current capability
- Optimised for up to 145VDC switching
- Magnet arc blowout feature
- Industry standard terminal layout

RoHS
Compliant ✓

Contacts

Contact arrangement	SPST-NO (1 Form A)
Contact material	AgSnO ₂
Max. switching voltage	DC 145VDC
Min. switching current / voltage	100mA / 12VDC
Rated load - see Fig. 1	DC1 80A @ 12VDC, 60A @ 36VDC, 50A @ 48VDC 30A @ 72VDC, 5A @ 145VDC
Max. switching current	make 150A @ 12.8VDC (3secs)
Initial Contact resistance	<100mΩ, at 0.1A / 6VDC

Coil

Nominal voltage	DC 6 ... 60V
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 500Vrms, 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 C M - 5 0 2 1 - 9 6 - 1 0 1 2 - M 3 D R

Series

Contact material

50: AgSnO₂

Coil code:

See table 1

Contact arrangement

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

Environmental protection

3: In cover, sealed - IP67

7: In cover, dust cover - IP54

9: Cover with mounting bracket slot

Connection Mode

5: PCB Terminals

6: Flat Blades

Options 1 (metal mounting bracket)

Blank: No bracket

M1: Metal mounting bracket fitted (5.3mm dia hole)

M3: Metal mounting bracket fitted (6.3mm dia hole)

Options 2 (parallel components)

Nil: No option

R: Integral resistor

D: Integral diode +85, -86 (special order)

DR: Integral diode -85, +86 (standard)

Order code examples (many other combinations possible)

DG57CM-5021-75-1012 = unsealed, pcb, no bracket

DG57CM-5021-76-1012 = unsealed, no bracket (standard)

DG57CM-5021-36-1012-R = sealed, no bracket, resistor

DG57CM-5021-36-1012-M1R = sealed, metal bracket, resistor

DG57CM-5021-96-1024 = unsealed, cover with slot, no bracket

DG57CM-5021-96-1012-M3 = unsealed, metal bracket

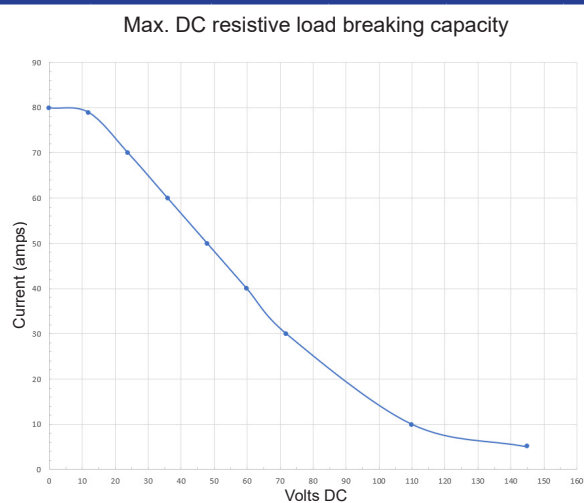
Coil Data

Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10% (at 23°C)	Must operate voltage max. at 23°C (VDC)	Max. allowable voltage at 23°C (VDC)	Max. allowable voltage at 85°C (VDC)	Must release voltage min. at 23°C (VDC)
1006	6	22	3.6	8.7	6.3	0.6
1012	12	90	7.2	17.4	12.5	1.2
1024	24	330	14.4	34.8	25.0	2.4
1036	36	690	21.5	52.2	37.5	3.6
1048	48	1440	28.8	69.6	50.0	4.8
1050	50	1565	30.0	72.5	52.0	5.0
1060	60	1950	36.0	87.0	62.6	6.0

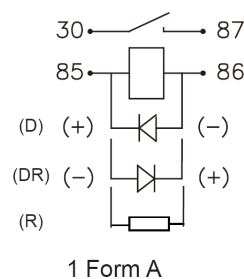
Performance

Fig. 1



Circuit Diagram

Fig. 2



Dimensions

Fig. 3

