



Image is for illustrative purposes. Please refer to datasheet for detail.

- 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 110VDC switching with magnetic arc blowout
- RoHS Compliant

Contacts

Contact arrangement	SPDT (1Form C), SPST-NO (1 Form A)
Contact material	AgSnO ₂
Max. switching voltage	110VDC
Rated load at 23°C	25A / 36VDC
	20A / 48VDC
	15A / 72VDC
	7A / 110VDC
Max. switching current	120A / 12VDC (inrush)
Minimum load	0.5A / 12VDC
Contact voltage drop	max. 60mV / 20A

Coil

Nominal voltage	12...48VDC
Power consumption (approx.)	DC 1.7W / 1.8W

Insulation

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

General data

Operating time	typ. 15ms
Release time	typ. 15ms
Electrical life (1s on/ 1s off)	ops. ≥1 x 10 ⁵ (12VDC / 40A)
Mechanical life	ops. 1 x 10 ⁶

Environmental

Environmental protection	IP67, IP54
Ambient temperature	operating -40 to +85°C (Derate above 85°C - consult factory)
	storage -40 to +105°C
Shock resistance	functional 30g, 8ms
	destructive 100g
Vibration resistance	functional 10 to 2000Hz 4.4g
Dimensions	L x W x H 35.0 x 30.5 x 26.5 mm
Weight	approx. 65g (depending on mounting)

Order code

D G 8 5 B M - 5 0 2 1 - 7 6 - 1 0 1 2 - P 3 D R

Series

Contact material

50: AgSnO₂

Contact arrangement

11: SPDT (1 Form C)

21: SPST-NO (1 Form A)

Environmental protection

3: IP67 sealed cover

7: IP54 dust cover

Connection mode

5: PCB pins

6: Flat blades

Coil code:

see table 1

Mounting & terminations

Blank: No option

P3: Plastic bracket (6.3mm diameter hole)

Optional coil suppression

Blank: no optional components

R: resistor in parallel with coil

DR: diode in parallel with coil (-85/+86) ... standard format

D: diode in parallel with coil (+85/-86)

Coil code

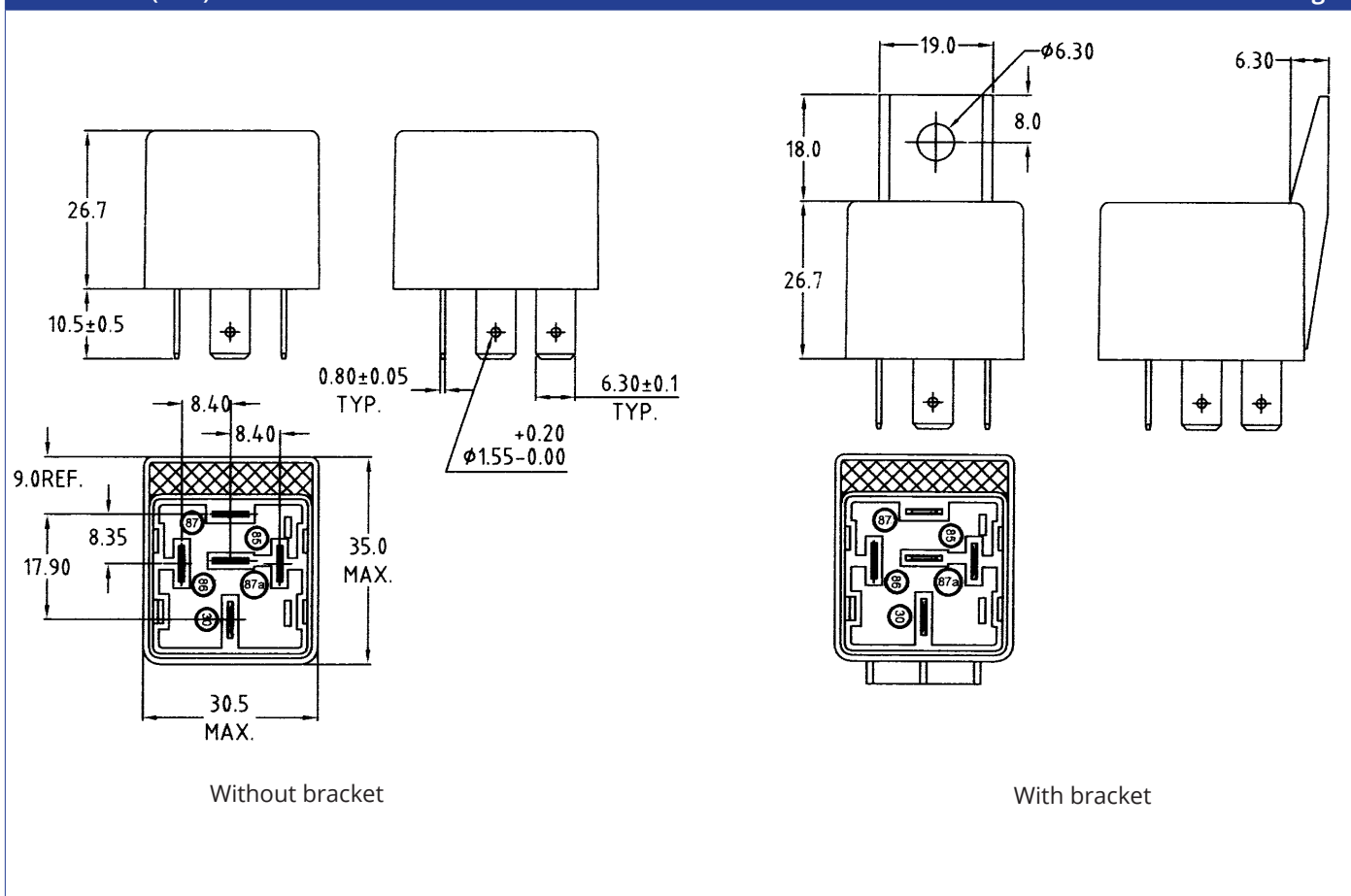
table 1

Coil code	Nominal coil voltage (VDC)	Coil resistance (Ω) ±10%	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Parallel resistor option (Ω) ±10%
1012	12.0	85.0	8.0	1.2	1000.0
1024	24.0	305.0	16.0	2.4	2200.0
1036	36.0	750.0	24.0	3.6	4700.0
1048	48.0	1200.0	32.0	4.8	10000.0

At ambient temperature of 23°C.

Dimensions (mm)

fig. 1



Wiring diagram

fig. 2

