DG08 Series
Miniature Automotive Twin Power Relay

- Miniature - only 24.3 x 15.8 x 14mm
- 2 Relays in one package
- Simplified coil connections
- Up to 60A 12VDC switching
- Special option for motor loads

ROHS Compliant

Contacts

Contact arrangement		2 x SPDT (2 x 1 Form C)
Contact material		AgNi0.15; AgNi90/10; AgSnOInO
Max. switching voltage	DC	16VDC (consult factory for 24VDC)
Min. switching current / voltage		100mA /5VDC (AgNi0.15); 500mA /5VDC (AgSnOInO)
Rated load	DC1	20A/12VDC
Max. continuous current	DC1	35A (10 mins) / 25A (1hr)
Max. switching current[2]	Make	60A
	break	20A
Initial contact resistance		100mΩ max. at 0.1A/6VDC

Coil

Rated voltage	DC	6...24V
Must release voltage		≥0.1Un
Operating range of supply voltage		See coil table 1 and coil table 2
Rated power consumption	DC	0.6W (table 1) /0.8W (table 2 increased contact gap)

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.	10
Release time	typ.	5
Electrical Life[3]	typ.	1 x 10^5
Mechanical life	cycles	1 x 10^7

Environmental

Ambient temperature	operating	-30 to +85°C
	storage	-40 to +100°C
Shock resistance	Functional	10g 11ms
	Destructive	100g
Vibration resistance		DA 1.5mm 10-55Hz
Dimensions	L x W x H	24.3 x 15.8 x 14.0mm (excluding terminal pins)
Weight	approx.	13g

Ordering Code

D G 0 8 - 7 0 1 1 - 3 5 - S 0 0 9 - G H

Series

Contact material
- 20: AgNI (90/10)
- 70: AgSnOInO
- 80: AgNI 0.15

Contact arrangement
- 11: 2 x SPDT (2 x 1 Form C)

Environmental protection
- 2: In cover, flux tight - IP40
- 3: In cover, sealed - IP67

Mounting & terminations
- 5: PCB Mounting

Coil code:
See tables 1 or 2

Options
- Blank: No options.
- G: Increased contact gap (may be specified with standard, Class F or Class H insulation).
- F: UL Class F insulation for higher ambient temperatures.
- H: UL Class H insulation for high ambient temperatures.
- M: Suitable for reflow soldering.

Coil Data (600mW - standard version) — Table 1

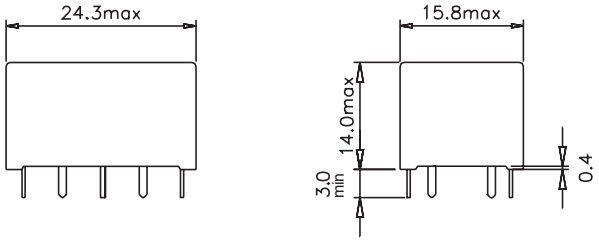
Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10%	Must operate voltage max. (VDC)	Must release voltage min. (VDC)
S006	6	60	3.6	0.6
S009	9	135	5.4	0.9
S010	10	167	6.3	1.0
S012	12	240	7.3	1.2
S024	24	960	14.4	2.4

Coil Data (800mW - increased contact gap version) * — Table 2

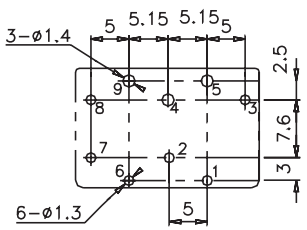
Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10%	Must operate voltage max. (VDC)	Must release voltage min. (VDC)
1006	6	45	3.6	0.6
1009	9	100	5.4	0.9
1010	10	123	6.3	1.0
1012	12	180	7.3	1.2
1024	24	720	14.4	2.4

* Contact gap increased to 0.45mm

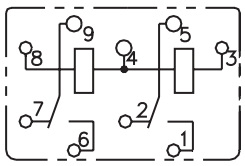
Overall Dimensions mm — Fig. 1



PCB Mounting Dimensions mm — Fig. 2

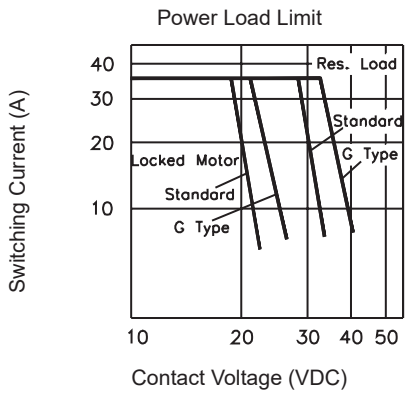


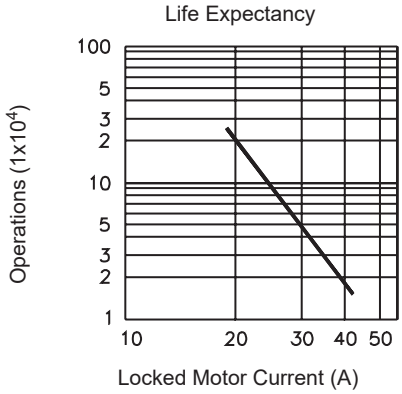
Mounting Holes (Bottom View)



Wiring Diagrams (Bottom View)

Reference Curves — Fig. 3





Notes:
1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.
2: Maximum make current refers to inrush current of lamp load.
3: Electrical life of obtained at motor load of locked rotor at 25A, 13.5VDC, with operating frequency of 6 ops/sec.
4: Electrical life is strongly dependent of switching frequency, On/Off ratio and environmental conditions