



- Ultra miniature - only 12 x 12.9 x 9.9 mm
- Optimised for DC switching up to 30A
- Twin version available (DG27)
- High temp version for through hole reflow
- RoHS Compliant. IMDS listed

ROHS Compliant

Contacts				
Contact arrangement	SPST-NO (1 Form A), SPDT (1 Form C)			
Contact material	AgSnOInO, AgNi0.15			
Max. switching voltage	DC	16V		
			SPST-NO	SPDT
			NO	NC
Max. continuous current	DC	30A @12VDC	30A @ 12VDC	25A @ 12VDC
Max switching current ² (AgSnOInO)	make	50A	50A	25A
	break	30A	30A	25A
Min. switching current / voltage	AgNi0.15: 0.1A, 12VDC / AgSnOInO: 0.5A, 12VDC			
Initial contact resistance	≤100mΩ, max. at 0.1A, 6VDC			

Coil	
Rated voltage	DC 10V, 12V
Must release voltage	≥0.1 (≥0.125 6VDC coil)
Operating range	See Table 1
Rated power consumption	DC 0.55W - see coil table 1

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

General Data	
Operating time	typ. 3ms
Release time	typ. 1.5ms
Electrical Life ³	ops. 1 x 10 ⁵
Mechanical life	ops. 1 x 10 ⁷

Environmental		
Ambient temperature	operating	-40 to +105°C
	storage	-40 to +155°C
Shock resistance	30g, 6ms	
Vibration resistance	6g, 10Hz-500Hz	
Dimensions	L x W x H	12.9 x 12 x 9.9mm
Weight	approx.	4g
Packing	Plastic tube, 25 relays per tube.	

Ordering Code

D G 2 0 B - 7 0 2 1 - 2 5 - 1 0 1 2

Series	Coil code:
Blank: Standard	See table 1
B: High temp. reflow suitable (contact factory)	
Contact material	
70: AgSnOInO	
80: AgNi0.15	
Contact arrangement	
11: SPDT (1 C/O, 1 Form C)	
21: SPST-NO (1 N/O, 1 Form A)	
Environmental protection	
2: Flux free	
3: Fully sealed to IP67 (DG20B is vented on top of case, but flux sealed around terminals.)	
Mounting & terminations	
5: PCB Mounting	

Coil Data

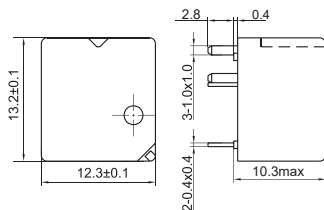
Table 1

Coil code	Nominal voltage (VDC)	Coil Resistance (Ω) ±10%	Must operate voltage max. (VDC)	Must operate voltage max. (VDC)	Max. allowable overdrive * VDC (23°C)
1010	10	181	5.7	1.00	22.0
1012	12	254	6.9	1.20	26.0

* Above 85°C, maximum allowable voltage should be reduced to 72%

Overall Dimensions

Fig. 1



Dimensions in mm

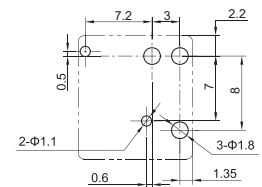
PCB Mounting Dimensions and Schematic

Fig. 2

1 Form A (H)



1 Form C (Z)



Mounting Holes (Bottom View)

Wiring Diagrams (Bottom View)

Dimensions in mm

Notes:

- 1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.
- 2: Maximum make current refers to inrush current of motor load.
- 3: Electrical life is strongly dependent of switching frequency, On/Off ratio and environmental conditions.