



- Miniature - only 19.5 x 15.5 x 16mm
- 12A @ 120VAC / 10A @ 250VAC
- Cost effective



ROHS Compliant ✓

Contacts

Contact arrangement	SPST-NO (1 Form A); SPDT (1 Form C)
Contact material	AgSnO ₂ (standard), AgNi0.15
Max. switching voltage	AC/DC 250VAC, 28VDC
Min. switching current / voltage	100mA / 12VDC
Rated load	AgSnO ₂ 10A / 250VAC; 12A / 120VAC; 10A / 28VDC
	AgNi0.15 5A / 250VAC, 5A / 28VDC
Max. continuous current	12A
Max. switching current	12A
Max. switching power	2500VA / 280W
Initial resistance	<50mΩ at 0.1A/6VDC

Coil

Rated voltage	DC 3...48V
Must release voltage	≥0.1Un
Operating range	See table 1
Rated power consumption	DC 360mW

Insulation

Insulation resistance	100MΩ at 500VDC, 50%RH
Insulation category (creepage resistance)	CTI250
UL Insulation system	Class F (standard)
Dielectric strength	coil to contact 1800Vrms, 1min
	contact to contact 1100Vrms, 1min

General Data

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

Environmental

Ambient temperature	operating -40 to +85°C
	storage -40 to +85°C
Shock resistance	functional 10g 11ms
	destructive 100g
Vibration resistance	DA 1.5mm 10-55Hz
Dimensions	L x W x H 19.5 x 15.5 x 16mm
Weight	approx. 10g approx.

Ordering Code

D G 3 1 - 3 0 1 1 - 3 5 - 1 0 1 2

Series

Coil code:

See table 1

Contact material

30: AgSnO₂

80: AgNi0.15

Contact arrangement

11: SPDT (1C/O, 1 form C)

21: SPST-NO

Environmental protection

2: In cover, flux tight - IP40

3: In cover, sealed - IP67

Mounting & terminations

5: For PCB

* Standard options are in bold.

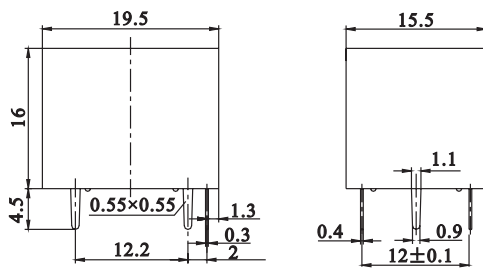
Coil Data

Table 1

Coil code	Nominal voltage (VDC)	Coil resistance Ω $\pm 10\%$	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Max. allowable voltage (VDC)
1003	3	25	2.25	0.15	3.9
1005	5	69	3.75	0.25	6.5
1006	6	100	4.50	0.30	7.8
1009	9	225	6.75	0.45	11.7
1012	12	400	9.00	0.60	15.6
1024	24	1600	18.00	1.20	31.2
1048	48	6400	36.00	2.40	62.4

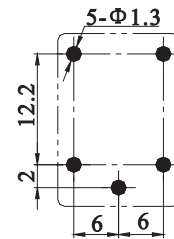
Dimensions mm

Fig. 1



PCB Mounting Dimensions mm

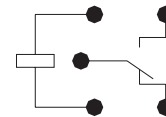
Fig. 2



Mounting Holes (Bottom View)

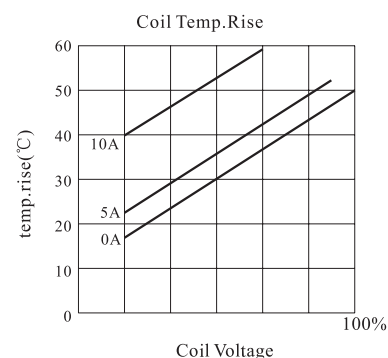
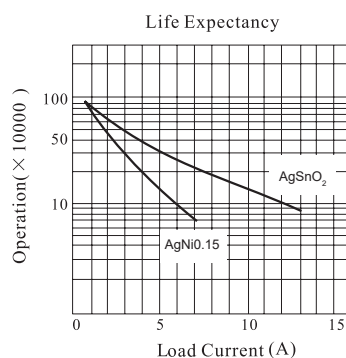
Wiring Diagrams (bottom view)

Fig. 3



Reference Curves

Fig. 4



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.