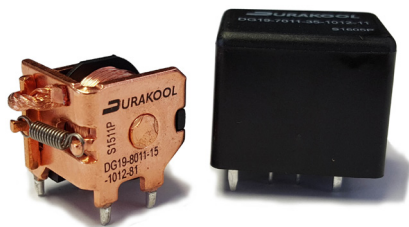


DG19

pcb automotive / industrial relay

DURAKOOL



- 30A to 45A continuous current capacity
- AgSnOInO contacts for motor & lamp loads
- open, dust cover and sealed versions
- US & European terminal configurations
- Automotive oriented design

RoHS Compliant

Contacts

Contact number & arrangement	SPST-NO (1 Form A), SPST-NC (1 Form B), SPDT (1 Form C)				
Contact material	AgNi0.15, AgNi90/10, AgSnOInO, AgSnO ₂ , AgCdO				
Max. switching voltage	DC	30VDC - Current dependent - see Fig 4			
Min. switching current / voltage	0.01A/12VDC (AgNi0.15), 0.5A/5VDC (AgSnOInO)				
		1 Form A	1 Form B	1 Form C	
				NO	NC
Max. continuous current	DC1	45A (AgSnOInO) 40A (AgSnO ₂)	30A	45A (AgSnOInO) 40A (AgSnO ₂)	30A
Max. switching current	Make	180A (AgSnOInO) 100A	30A	180A (AgSnOInO) 100A	30A
	Break	60A	30A	60A	30A
Initial resistance	100mΩ, max. at 0.1A/6VDC				

Coil

Rated voltage	DC	6, 12, 24V
Must release voltage	10% U _n	
Operating range of supply voltage	See coil table 1	
Rated power consumption	DC	1.5W approx.

Insulation

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

General Data

Operating time (typical)	ms	≤ 5
Release time (typical)	ms	≤ 3
Electrical Life	ops	2 x 10 ⁵ (see Note 2)
Mechanical life	ops	1 x 10 ⁷
Dimensions	L x W x H	various - see dimensions Fig.1
Weight	open: 18g / covered: 23g approx.	
Ambient temperature	storage	-40 to +155°C
	operating	-40 to 125°C (higher to special order)
Shock resistance	Functional: 20g 11ms; Destructive: 100g	
Vibration resistance	Functional: NO 20g; NC 10g 20-200Hz	
Drop resistance	1M height drop on concrete in final enclosure	

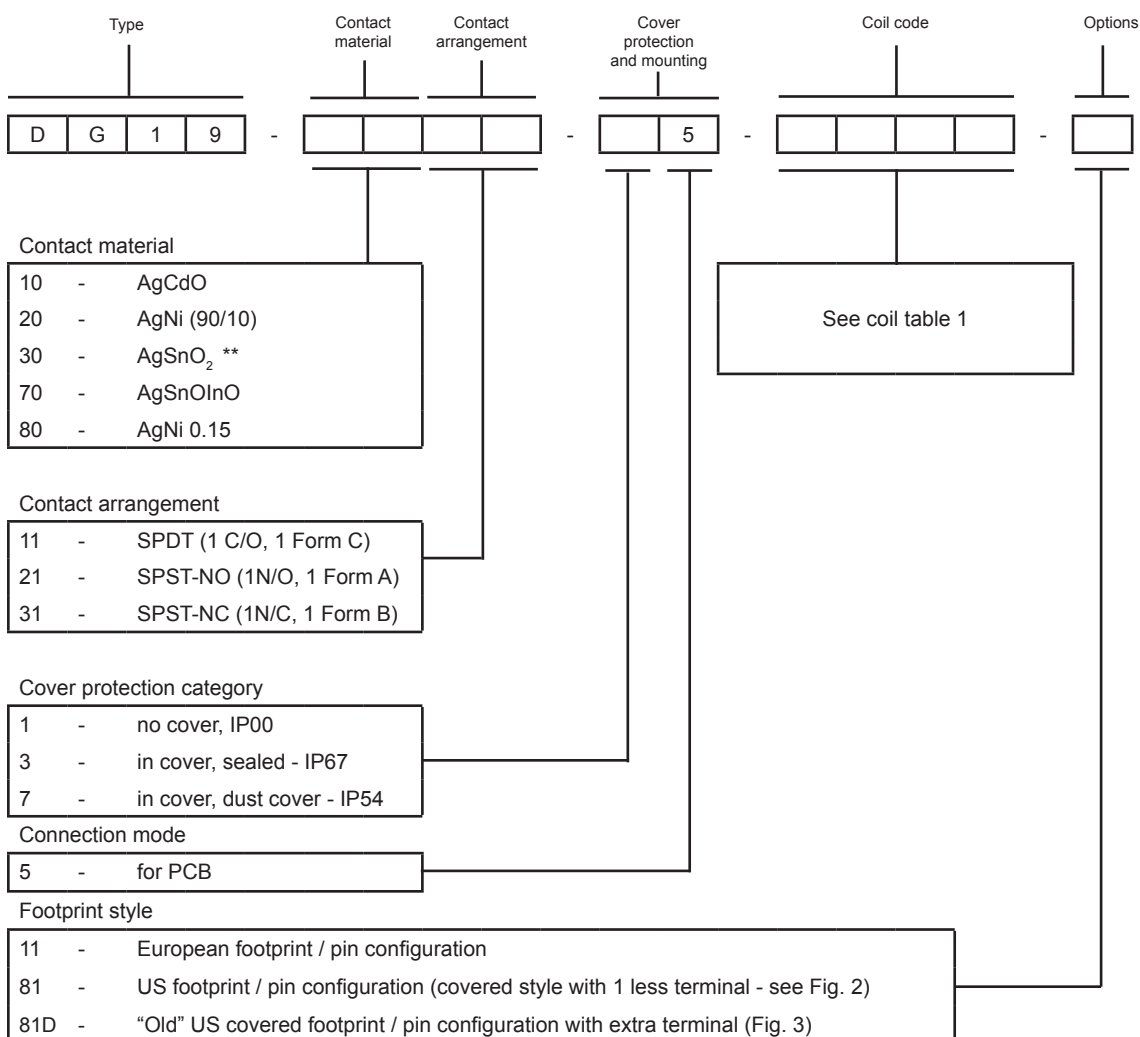
Coil Data

Table 1

Coil Voltage Code	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$ at 20°C	Must Operate Voltage Max. (VDC)	Max. Allowable Voltage (VDC)*	Must Release Voltage min. (VDC)
1006	6	19	3.3	8	0.6
1012	12	90	6.8	16	1.2
1024	24	362	13.9	31	2.4

* At ambient temperature of 85°C, maximum allowable voltage should be reduced to 72%

Ordering codes



Notes:

** Contact rating for SPDT DG19-3011-*5-*5-*5 is 40A for the normally open contact and 30A for the normally closed contact, but is marked 30A 14VDC to avoid inadvertent application of too much current on the normally closed contact.

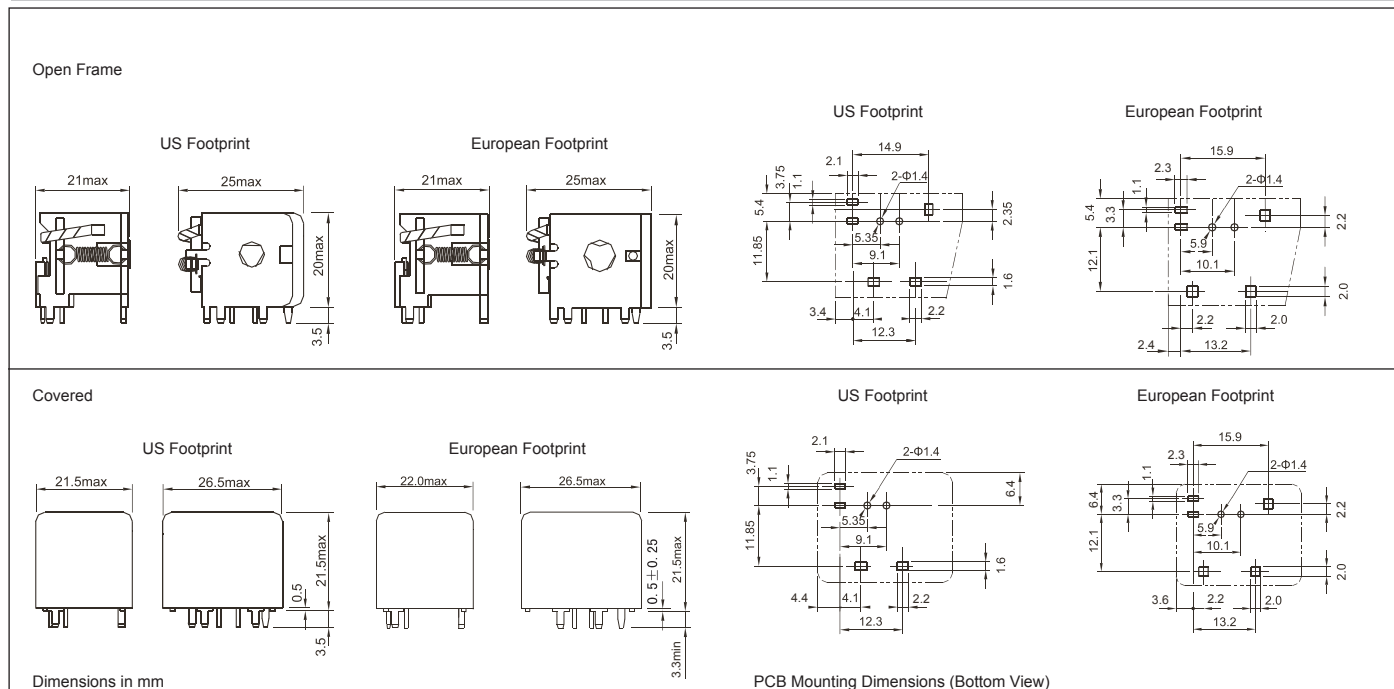
DG19

pcb automotive relay

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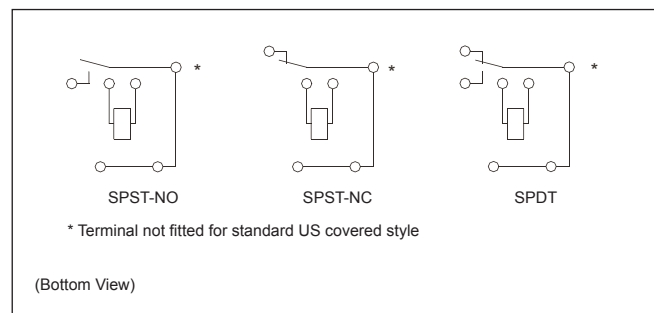
Overall Dimensions

Fig. 1



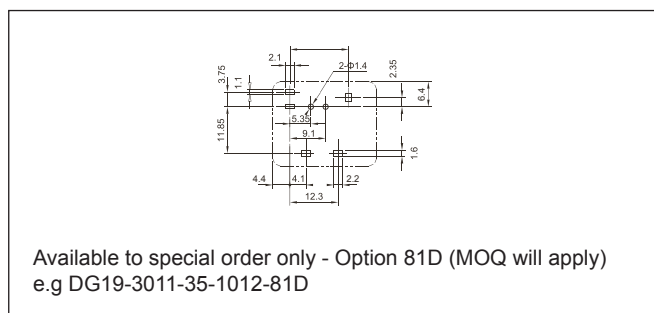
Wiring Diagrams

Fig. 2



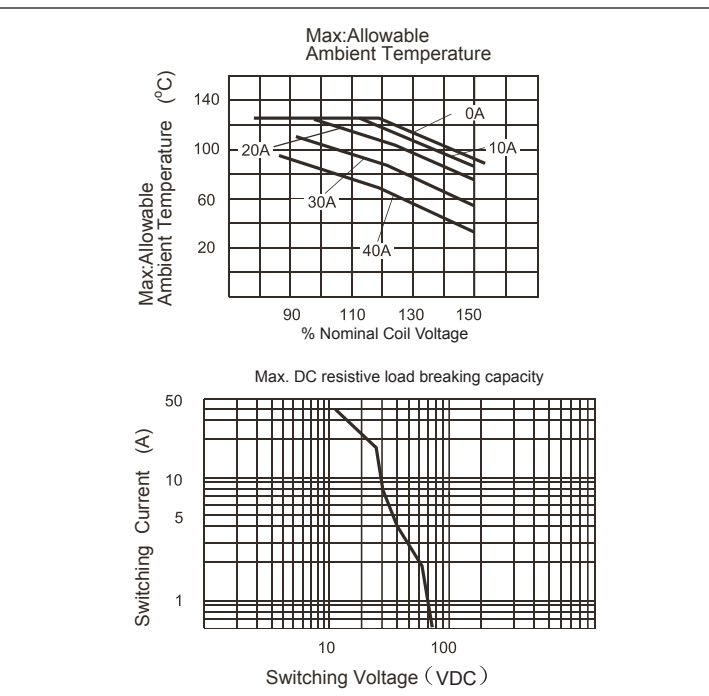
“Old” US Style Covered

Fig. 3



Reference Curves

Fig. 4



Notes:

- 1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.
- 2: Electrical life obtained at resistive or inductive load at 40A, 13.5VDC, with suitable arc suppression circuit attached and with operating frequency of 1 op/sec.
- 3: Maximum make current refers to lamp load inrush current. Consult factory for motor and capacitive loads.
- 4: For optimum electrical life, please remove the knock off nib of the sealed version after cleaning process.