DG31A
miniature automotive pcb power relay

- miniature - only 19 x 15.5 x 15mm
- optimised for DC switching
- Cost effective
- RoHS Compliant

Contacts		
Contact number & arrangement		SPST-NO (1 Form A); SPDT (1 Form C)
Contact material		AgSnOInO, AgCdO, AgNi0.15, AgNi 90/10
Max. switching voltage	DC	16V
Min. switching current / voltage		100mA / 12VDC
Rated load (Max. continuous current)		20A @ 16VDC
Max. switching current[2] (AgSnOInO)	Make	20A
	Break	12A
Initial resistance		<100mΩ, max. at 0.1A/6VDC
Coil		
Rated voltage	DC	6, 12, 24V
Must release voltage		≥0.1Un
Operating range of supply voltage		See coil table 1
Rated power consumption	DC	800mW
Insulation		
Insulation resistance		100MΩ at 500VDC, 50%RH
Dielectric strength		
	coil to contact	1000Vrms, 1min
	contact to contact	750Vrms, 1min
General Data		
Operating time (typical)	ms	10
Release time (typical)	ms	5
Electrical Life	ops	1×10^5
Mechanical life	ops	1×10^7
Dimensions	L x W x H	19 x 15.5 x 15mm
Weight		10g approx.
Ambient temperature	storage	-40 to 85°C
	operating	-40 to 85°C
Shock resistance		Functional: 10g 11mS; Destructive: 100g
Vibration resistance		DA 1.5mm 20-220Hz

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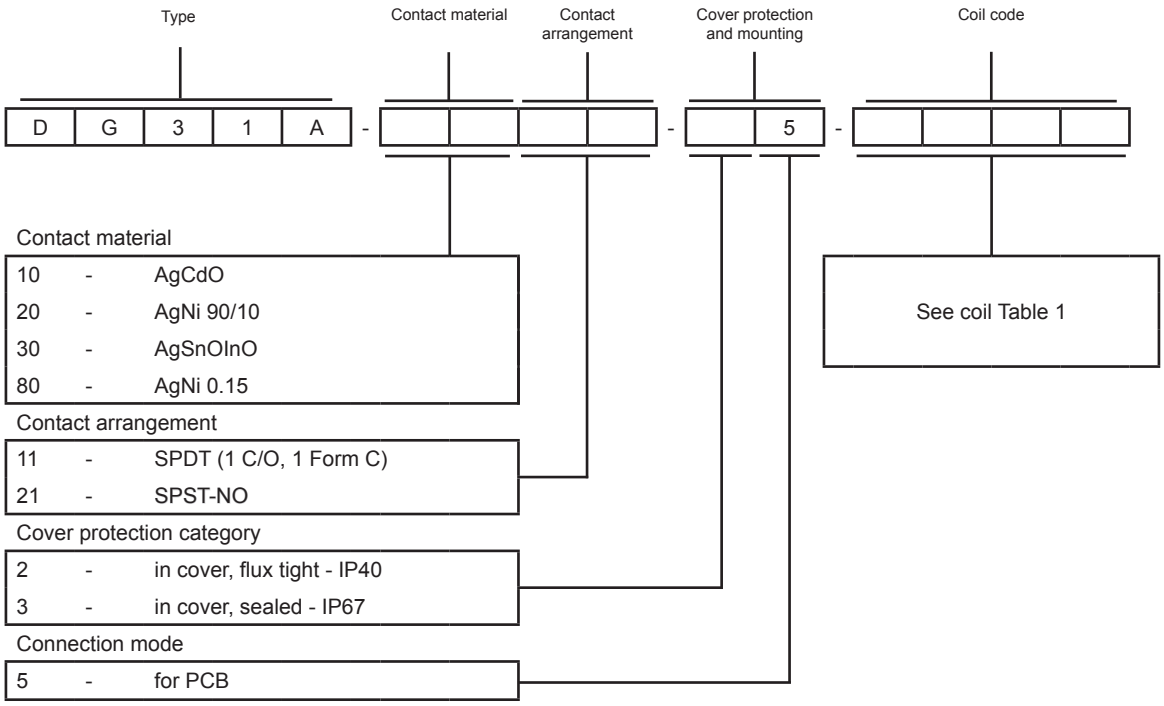
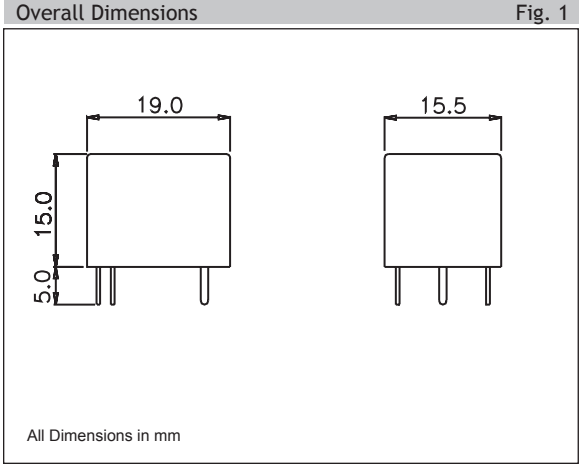
Coil Data — Table 1

Coil Voltage Code	Nominal Voltage (VDC)	Coil Resistance (Ω) ±10%	Must operate voltage max. (V DC)	Must release voltage min. (V DC)
1006	6	45	3.2	0.6
1012	12	180	6.3	1.2
1024	24	720	12.6	2.4

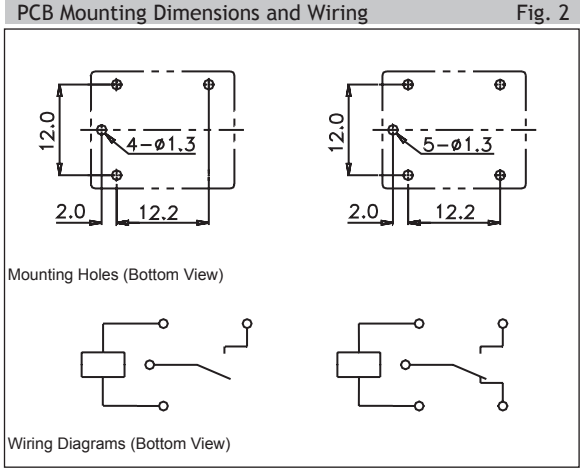
Ordering codes



Overall Dimensions — Fig. 1



PCB Mounting Dimensions and Wiring — Fig. 2



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.