

# DG31H

miniature hi-temp pcb power relay

# DURAKOOL



- miniature - only 19 x 15.4 x 15mm
- 12A @ 250VAC, 15A @ 125VAC
- 105°C Operating Temperature
- RoHS Compliant
- Domestic appliances, office equipment etc.



## Contacts

Contact number & arrangement	SPST-NO (1 Form A); SPDT (1 Form C)	
Contact material	AgSnO <sub>2</sub> (standard)	
Max. switching voltage	DC	28V
	AC	250V
Min. switching current / voltage	100mA / 12VDC	
Rated load	TUV	12A / 250VAC, 15A / 125VAC;
	UL	15A / 125VAC TV-5
	VDE	10A / 250VAC (NO Contact), 7A / 250VAC (NC Contact)
Max. switching current	15A	
Max. switching power	3000VA / 280W	
Initial resistance	<50mΩ, max. at 1A/6VDC	
<b>Coil</b>		
Rated voltage	DC	3...48V (3V not UL)
Must release voltage	≥0.1Un	
Operating range of supply voltage	See coil table 1	
Rated power consumption	DC	360mW
<b>Insulation</b>		
Insulation resistance (min.)	1000MΩ at 500VDC, 50%RH	
Insulation Category (creepage resistance)	CTI250	
UL Insulation system	Class F (155°C)	
Dielectric strength	coil to contact	1500Vrms, 1min (50/60Hz)
	contact to contact	1000Vrms, 1min (50/60Hz)
Surge resistance	3000V (between coil & contact, 1.2 x 50μs)	
<b>General Data</b>		
Operating time (max.)	mS	10
Release time (max.)	mS	5
Electrical Life	ops	1 x 10 <sup>5</sup> (at rated resistive load - 1,800 ops/hr)
Mechanical life	ops	1 x 10 <sup>7</sup> (no load, 18,000 ops/hr)
Dimensions	L x W x H	19 x 15.4 x 15mm
Weight	9g approx.	
Ambient temperature	storage	-40 to 105°C
	operating	-40 to 105°C (-40 to 85°C VDE)
Shock resistance	Functional: 10g 11mS; Destructive: 100g	
Vibration resistance	DA 1.5mm 10-55Hz	

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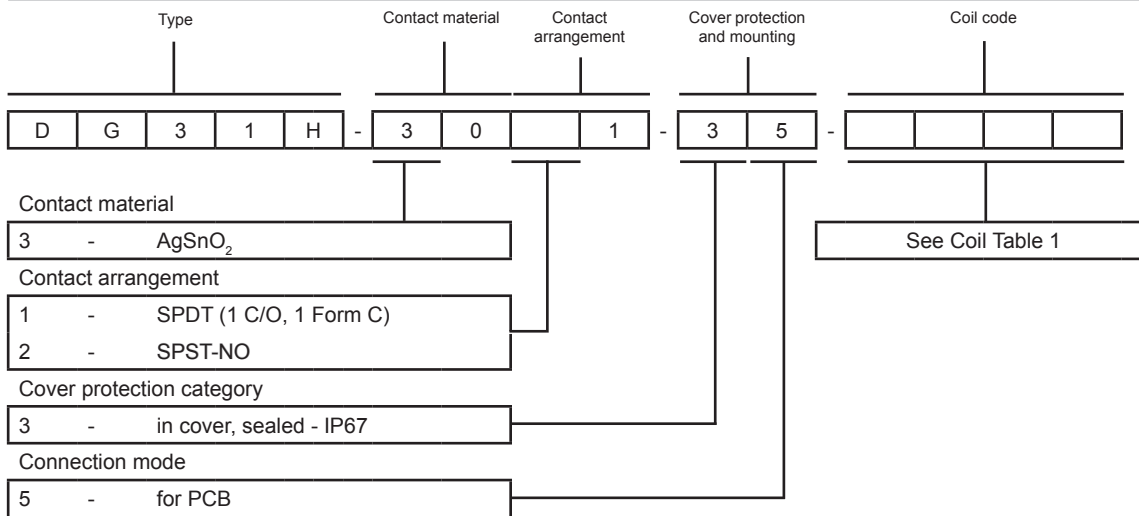
Coil Data (360mW)

Table 1

Coil Voltage Code	Nominal Voltage (VDC)	Coil Resistance ( $\Omega$ ) $\pm 10\%$	Must operate voltage max. (V DC)	Must release voltage min. (V DC)	Max. allowable voltage (V DC)
1003 <sup>1</sup>	3	25	2.25	0.30	3.9
1005	5	70	3.75	0.50	6.5
1006	6	100	4.50	0.60	7.8
1009	9	225	6.75	0.90	11.7
1012	12	400	9.00	1.20	15.6
1024	24	1600	18.00	2.40	31.2
1048	48	6400	36.00	4.80	62.4

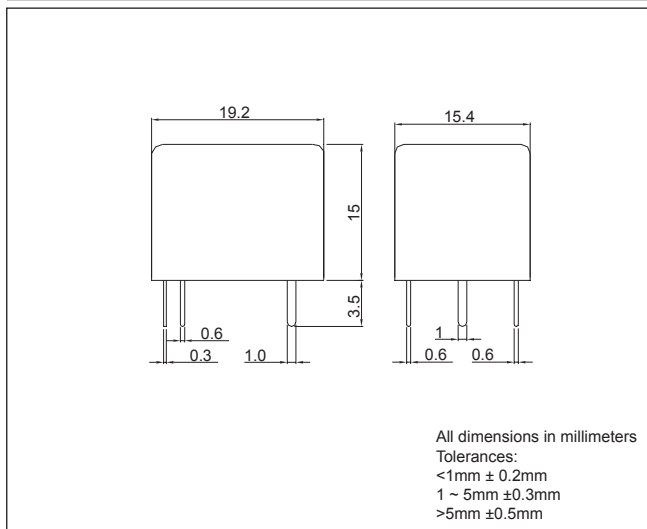
<sup>1</sup> 3VDC Coil not UL approved

### Ordering codes



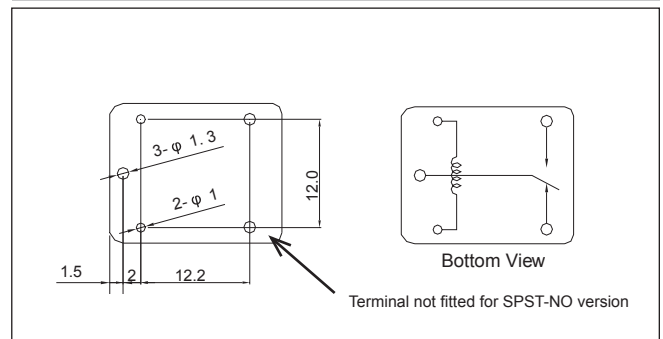
Overall Dimensions

Fig. 1



PCB Mounting Dimensions

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.