

# DG38

pcb & industrial power relay

# DURAKOOL



- Up to 40A /240VAC continuous rating
- 110VDC maximum switching voltage
- Industry standard style
- Cost effective
- RoHS Compliant



## Contacts

Contact number & arrangement	SPST-NO (1 Normally Open); SPDT ( 1 Changeover)
Contact material	AgSnO <sub>2</sub> (standard), AgCdO
Max. switching voltage	AgSnO <sub>2</sub> : 250VAC / 110VDC AgCdO : 250VAC / 30VDC
Min. switching current / voltage	500mA/12VDC (AgCdO, AgSnO <sub>2</sub> )
Max. continuous current	AgSnO <sub>2</sub> : SPST-NO: 40A / SPDT: 40A (NO), 30A (NC) AgCdO : SPST-NO: 30A / SPDT: 30A (NO), 20A (NC)
Max. switching current	AgSnO <sub>2</sub> : SPST-NO: 40A / SPDT: 40A (NO), 30A (NC)
Max. switching power	AgSnO <sub>2</sub> : 7200VA / 1100W :: AgCdO: 6000VA / 560W
Initial resistance	≤ 100mΩ, max. at 0.1A/6VDC

## Coil

Rated voltage	3...110VDC; 12...220VAC
Must release voltage	DC ≥ 0.1U <sub>n</sub> ; AC ≥ 0.3U <sub>n</sub>
Operating range of supply voltage	See coil tables 1 & 2
Rated power consumption	0.93W (DC), 1.2VA (AC)

## Insulation

Insulation resistance	>100MΩ at 500VDC, 50%RH
Dielectric strength	
coil to contact	4000Vrms, 1min (50Hz)
between open contacts	1500Vrms, 1min (50Hz)

## General Data

Operating time (max)	ms	15
Release time (max)	ms	10
Electrical Life	ops	1 x 10 <sup>5</sup> (1 sec ON / 1 sec OFF)
Mechanical life	ops	1 x 10 <sup>6</sup>
Dimensions	L x W x H	32.5 x 27.5 x 29mm (excluding pins)
Weight		≤ 36g
Ambient temperature	storage	-40 to 155°C
	operating	-40 to 125°C
Shock resistance		Functional: 10g; Destructive: 100g
Drop resistance		1M height drop on to concrete (sealed type only)
Vibration resistance		10-55Hz: DA 1.5mm

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## Coil Data

Table 1

### DC Coil

Coil Voltage Code	Nominal Voltage (VDC)	Coil Resistance ( $\Omega$ ) $\pm 10\%$	Nominal Operating Power	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)
1003	3	10	0.93W	2.25	130% of nominal	0.30
1005	5	28		3.75		0.50
1006	6	40		4.50		0.60
1009	9	90		6.75		0.90
1012	12	160		9.00		1.20
1018	18	360		13.50		1.80
1024	24	640		18.00		2.40
1048	48	2,560		36.00		4.80
1110	110	13,445		82.50		11.00

UL Class F insulation standard

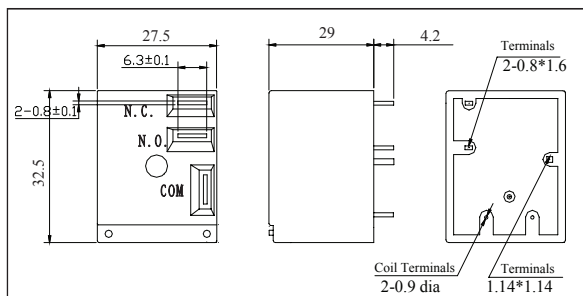
### AC Coil

Coil Voltage Code	Nominal Voltage (VAC)	Coil Resistance ( $\Omega$ ) $\pm 10\%$	Nominal Operating Power	Must operate voltage max. (VAC)	Max. allowable voltage (VAC)	Must release voltage min. (VAC)
5012	12	27	1.2VA	9.00	130% of nominal	3.60
5024	24	120		18.00		7.20
5110	110	2,360		82.50		33.00
5120	120	3,040		90.00		36.00
5220	220	13,490		165.00		66.00

UL Class F insulation standard

## Overall Dimensions

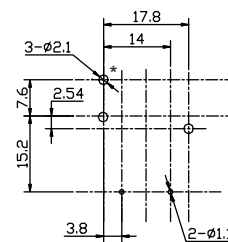
Fig. 1



All dimensions in mm

## PCB Mounting Dimensions

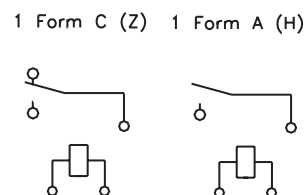
Fig. 2



Bottom View (\* see note 2)

## Wiring Diagrams

Fig. 3

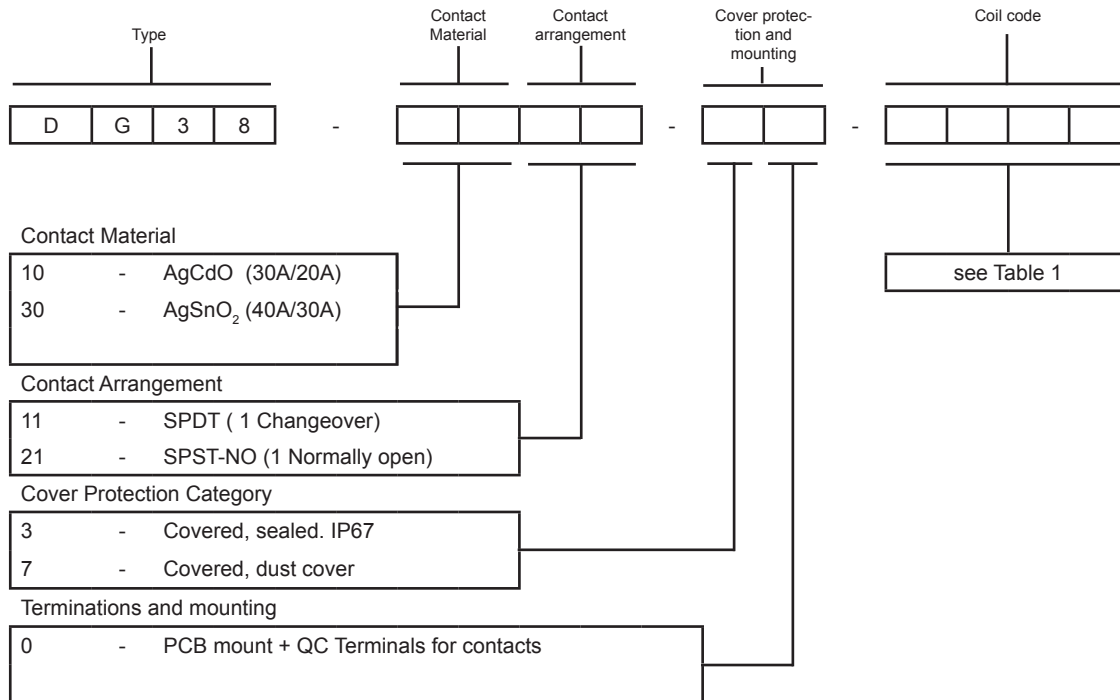


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### Ordering codes



#### Notes:

- 1) All parameters, unless otherwise specified, are measured at an ambient temperature of 23°C.
- 2) PCB Mounting Holes - the "\*" hole is not needed for the SPST-NO version.
- 3) At an ambient temperature of 85°C, the maximum allowable coil voltage should be reduced to 72%
- 4) Electrical life obtained at resistive or inductive load at 30A/15VDC with suitable arc suppression attached and with an operating frequency of 1 op/sec.