DG38
pcb & industrial power relay

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

TÜV c UL us E325835

Contacts

Contact number & arrangement		SPST-NO (1 Normally Open); SPDT (1 Changeover)
Contact material		$AgSnO_2$ (standard), AgCdO
Max. switching voltage		$AgSnO_2$: 250VAC / 110VDC AgCdO : 250VAC / 30VDC
Min. switching current / voltage		500mA/12VDC (AgCdO, $AgSnO_2$)
Max. continuous current		$AgSnO_2$: SPST-NO: 40A / SPDT: 40A (NO), 30A (NC) AgCdO : SPST-NO: 30A / SPDT: 30A (NO), 20A (NC)
Max. switching current		$AgSnO_2$: SPST-NO: 40A / SPDT: 40A (NO), 30A (NC)
Max. switching power		$AgSnO_2$: 7200VA / 1100W :: AgCdO: 6000VA / 560W
Initial resistance		≤ 100mΩ, max. at 0.1A/6VDC
Coil		
Rated voltage		3...110VDC; 12...220VAC
Must release voltage		DC ≥ $0.1U_n$; AC ≥ $0.3U_n$
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 10^5 (1 sec ON / 1 sec OFF)
Mechanical life	ops	1 x 10^6
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

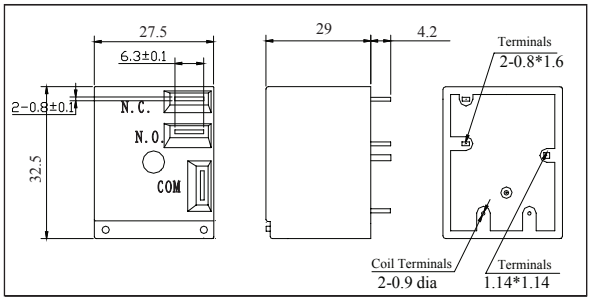
DC Coil

Coil Voltage Code	Nominal Voltage (VDC)	Coil Resistance (Ω) ±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

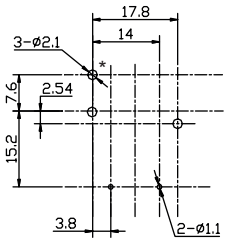
Coil Voltage Code	Nominal Voltage (VAC)	Coil Resistance (Ω) ±10%	Nominal Operating Power	Must operate voltage max. (VAC)	Max. allowable voltage (VAC)	Must release voltage min. (VAC)
5012	12	27	1.2VA	9.00	130% of nominal	3.60
5024	24	120		18.00		7.20
5110	110	2,360		82.50		33.00
5120	120	3,040		90.00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

Overall Dimensions — Fig. 1



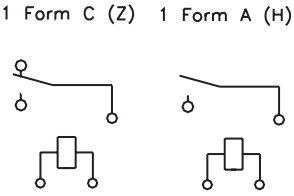
All dimensions in mm

PCB Mounting Dimensions — Fig. 2



Bottom View (* see note 2)

Wiring Diagrams — Fig. 3



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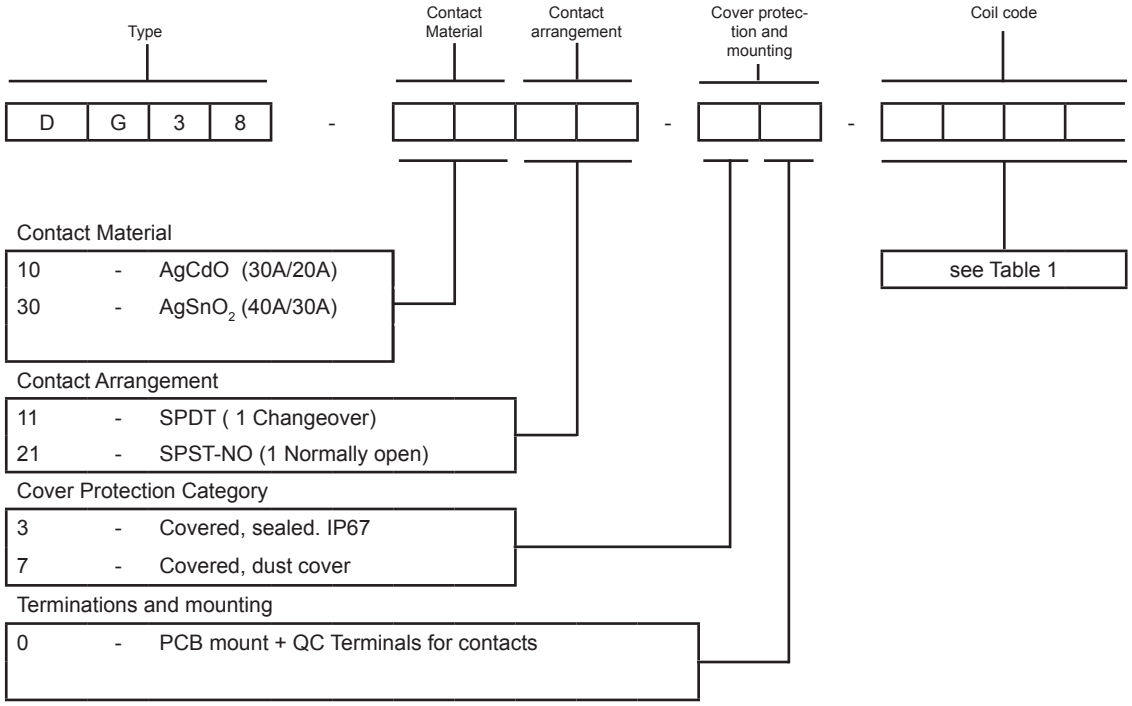
Ordering codes



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.

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