DG38L Series
PCB & Industrial Power Relay



- Up to 45A switching capability
- 80VDC maximum switching voltage
- Improved DG38 with magnetic arc quench
- PCB & QC terminals

E343443*

ROHS Compliant

Contacts

Contact arrangement		SPST-NO (1 Form A); SPDT (1 Form C)		
Contact material		AgSnOInO		
Max. switching voltage		28VDC, 277VAC, (optionally 80VDC, SPST-NO only)		
Min. switching current / voltage		500mA / 12VDC		
		SPST-NO	SPDT	
			NO Contact	NC Contact
Max. continuous current		45A	30A	15A
Max. switching current		45A (20A@80VDC)	30A	15A
Rating (not UL)	Motor 240VAC	3HP	2HP	0.75HP
	Motor 120VAC	1.5HP	1.5HP	0.375HP
	LRA/FLA 240VAC	120A/45A	75A/30A	30A/10.5A
	LRA/FLA 120VAC	147A/33A	75A/30A	30A/10.5A
* UL test rating		30A/28VDC 10K ops		
Initial resistance		50mΩ max. at 0.1A/6VDC		

Coil

Nominal voltage		5...110VDC
Must release voltage		≥ 0.1U
Operating range		See table 1
Rated power consumption		0.9W

Insulation

Insulation resistance		50mΩ at 500VDC, 50%RH
Dielectric strength	coil to contact	1500Vrms, 1min
	open contacts	1500Vrms, 1min (Contact Gap ≥1.2mm for P674)

General Data

Operating time	max.	15ms
Release time	max.	10ms
Electrical life	ops.	1.0 x 10^5 (24VDC/45A)
Mechanical life (no load)	ops.	1 x 10^7

Environmental

Ambient temperature	operating	-55 to +85°C
	storage	-40 to +130°C
Shock resistance	functional	10g 11ms
	destructive	100g
Vibration resistance		DA 1.5mm 10-55Hz
Dimensions	L x W x H	32.2 x 27.5 x 28mm
Weight	approx.	32g

Ordering Code

D G 3 8 L - 7 0 2 1 - 3 0 - 1 0 1 2 -

Series

Contact material
70: AgSnOInO

Contact arrangement
11: SPDT (1 C/O) not for P674
21: SPST-NO (1 NO)

Environmental protection
3: In cover, sealed - IP67*
* For optimum electrical life, sealed relays should be vented after board washing.

Mounting & terminations
0: PCB + QC Terminals for contacts

Options
P674: Increased contact gap for 80VDC

Coil code: See tables 1 & 2

* UL For DC loads only.

Specifications are subject to change without notice. E&OE.

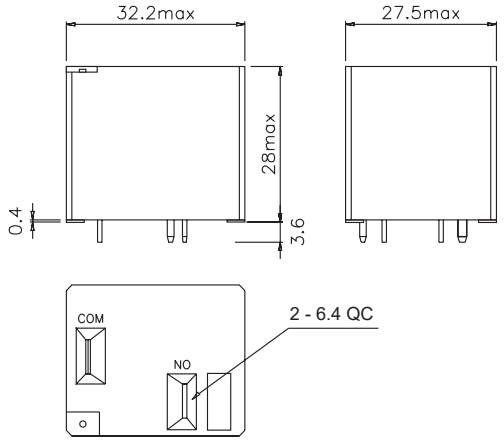
Coil Data

Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ±10% at 23°C	Must operate voltage max. at 23°C (VDC)	Must release voltage min. at 23°C (VDC)
1005	5	27	3.75	0.5
1006	6	40	4.50	0.6
1009	9	97	6.75	0.9
1012	12	155	9.00	1.2
1024	24	660	18.00	2.4
1048	48	2560 ±15%	36.00	4.8

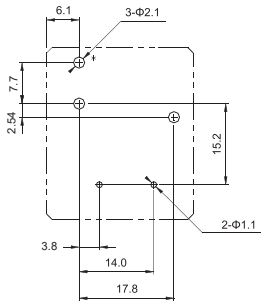
Dimensions mm

Fig. 1



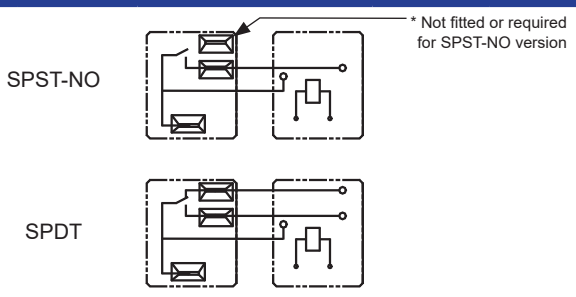
PCB Mounting Dimensions mm (bottom view)

Fig. 2



Wiring Diagrams (bottom view)

Fig. 3



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