



MAIN FEATURE

1. Miniature size with low power consumption for rated loading up to 16A.
2. Surge Strength up to 10,000V.
3. Operating temperature up to 105°C.
4. UL Class F insulation available.
5. Comply with RoHS and REACH regulations.
6. 3-in-1 combo available with THR reflow solderable + Halogen Free + IEC 60335-1 GWT Compliance.
7. Explosion proof version with IEC60079-15 (IECex)

CONTACT RATING

Load Type	GQ (LM)	GQ (LM1)	GQ(DM2F)
Rated Load (Resistive)	5A 250VAC	10A 250VAC	16A 277VAC
	-	12A 250VAC (VDE)	-
	5A 30VDC	10A 30VDC	16A 24VDC
Contact Capacity	-	10A 277VAC	-
	-	TV-5 120VAC (UL)	TV-8 120VAC (UL)
	-	-	1/2 HP 125VAC (UL)
Rated Carrying Current	-	-	1HP 277VAC (UL)
	5A	12A	16A
Max. Allowable Voltage	AC 250V	AC 250V	AC 277V
	DC 30V	DC 30V	DC 24V
Max. Allowable Current	5A	12A	16A
Max. Allowable Power Force	1,250VA	2,500VA	4432VA
	150W	300W	384W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPST

APPLICATION

Domestic Appliances, HVAC, Office Machines, Audio Equipment, etc.

PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance 100mΩ Max. @1A,6VDC
- Operate Time..... 10mSec. Max.
- Release Time 5 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact..... 4,000VAC at 50/60 Hz for one minute
 - Between Contacts 1,000VAC at 50/60 Hz For one minute
- Surge Strength 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute
 - Mechanical..... 300 Cycles per Minute
- Temperature Range -40~+105°C
-40~+85°C (12A)
- Humidity Range 45~85% RH.
- Coil Temperature Rise 40°C Max.
- Vibration:
 - Destruction 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5mm double amplitude)
 - Malfunction 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5mm double amplitude)
- Shock:
 - Destruction 1,000 m/S²
 - Malfunction 100 m/S²
- Life Expectancy:
 - Mechanical..... 10⁷ Operations at no Load condition
 - Electrical 10⁵ Operations at Rated Resistive Load
 - 2.5x10⁴ Operations at TV Rated Load
- Weight..... About 9.0 g

SAFETY STANDARD & FILE NUMBER

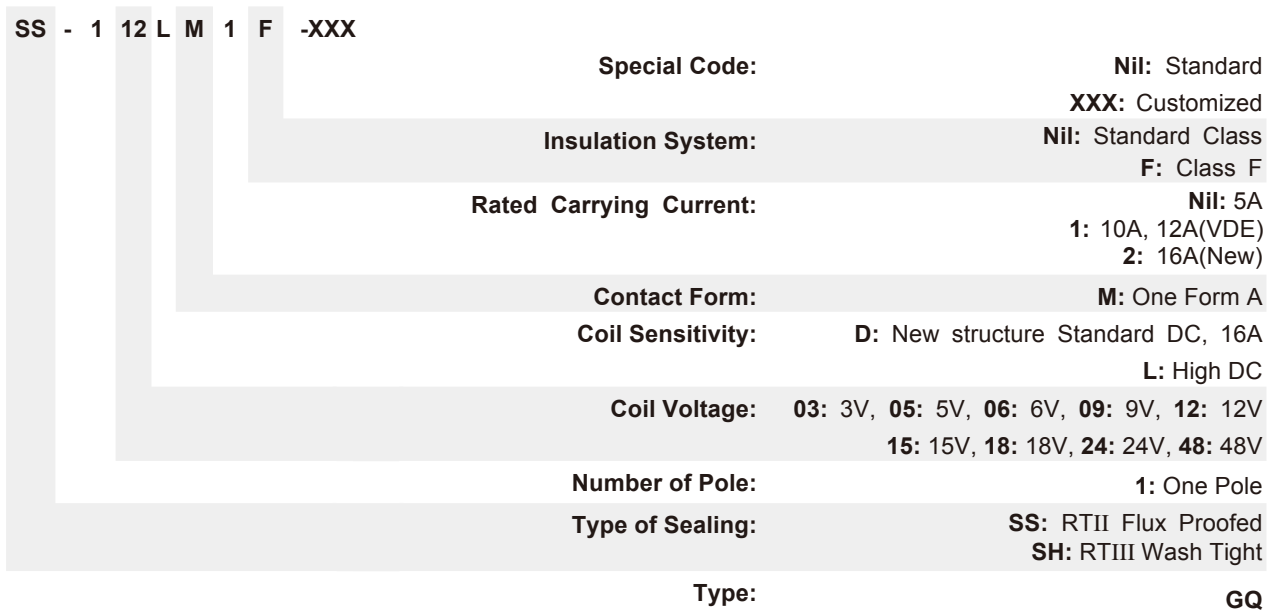
- UL & C-UL E141060
- TÜV R50121172
- VDE 40025456
- CQC..... 14002112636 (LM1 only)

COIL SPECIFICATION (AT 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GQ(LM/LM1)	3	67	45	Abt. 0.20	80% Maximum	5% Minimum	110%
	5	40	125				
	6	33.3	180				
	9	22.5	400				
	12	16.7	720				
	15	13.3	1,125				
	18	11.1	1,620				
	24	8.3	2,880				
GQ(DM2F)	48	4.2	11,520	Abt. 0.36	80% Maximum	5% Minimum	110%
	5	71.4	70				
	6	60	100				
	9	40	225				
	12	30	400				
	15	24	625				
	18	20	900				
	24	15	1,600				
	48	7.5	6,400				

ORDERING INFORMATION

GQ - SS - 1 12 L M 1 F -XXX



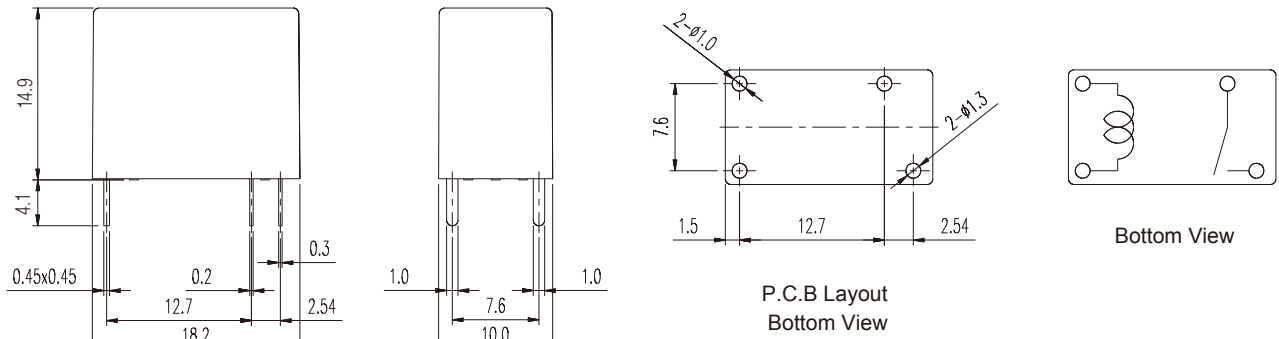
****Note: 16A comes with standard Class F insulation and the ordering part no. shall be "DM2F".**

CLASSIFICATION

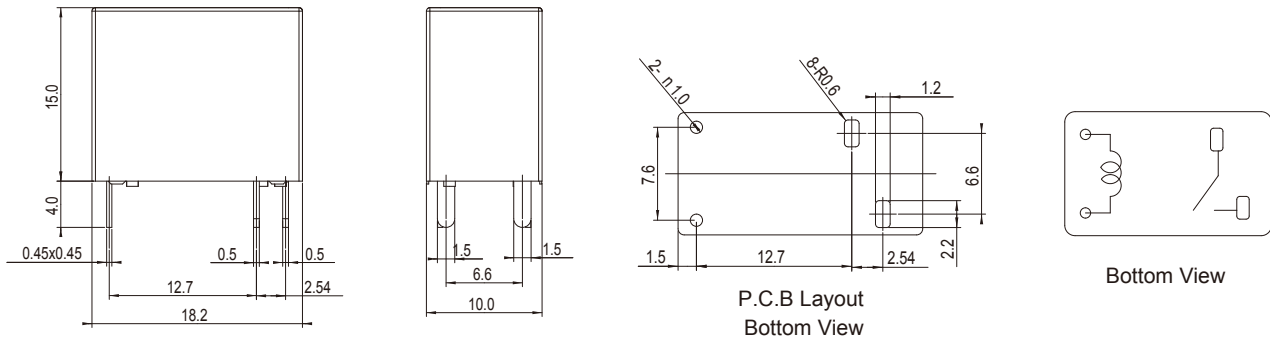
Model	GQ		
	5A	10A/12A	16A
Rated Carrying Current			
Flux Proofed	GQ-SS-1□□LM	GQ-SS-1□□LM1/F	GQ-SS-1□□DM2F
Wash Tight	GQ-SH-1□□LM	GQ-SH-1□□LM1/F	GQ-SH-1□□DM2F

DIMENSION (≤ 5mm ± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)

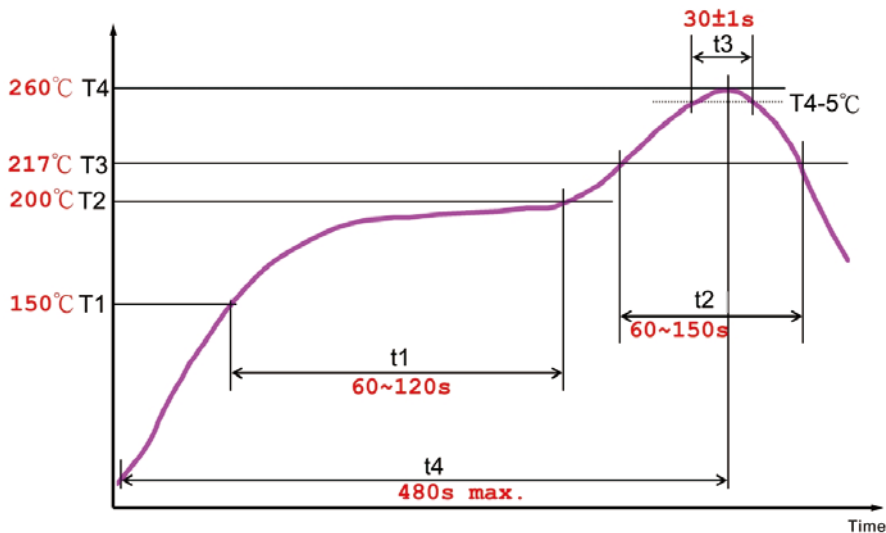
GQ-LM/LM1



GQ-DM2F



Reflow soldering condition: According to IEC 60068-2-58.



- T1** Minimum preheat temperature
- T2** Maximum preheat temperature
- T3** Liquidus temperature
- T4** Peak temperature
- t1** Preheat duration
- t2** Time above liquidus temperature
- t3** Time above (T4 - 5°C)
- t4** Time to T4

Note: we recommend that you confirm your actual solder conditions.