



## 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.

## CONTACT RATING

Load Type	GQ (LM)	GQ (LM1)	GQ(DM2F)
Rated Load (Resistive)	5A 250VAC	10A 250VAC	16A 277VAC (TUV)
	-	12A 125VAC	-
	5A 30VDC	10A 30VDC	-
	-	10A 277VAC	-
Contact Capacity	-	TV-5 120VAC	TV-8 (in progress)
Rated Carrying Current	5A	10A	16A
Max. Allowable Voltage	AC 250V	AC 250V	AC 277V
	DC 30V	DC 30V	-
Max. Allowable Current	5A	12A	16A
Max. Allowable Power Force	1,250VA	2,500VA	4432VA
	150W	300W	-
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 ..... 10 mSec. 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
- 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/S<sup>2</sup>
  - Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:
  - Mechanical ..... 10<sup>7</sup> Operations at no Load condition
  - Electrical ..... 10<sup>5</sup> Operations at Rated Resistive Load  
2.5x10<sup>4</sup> Operations at TV Rated Load
- Weight ..... About 9.0 g

## SAFETY STANDARD & FILE NUMBER

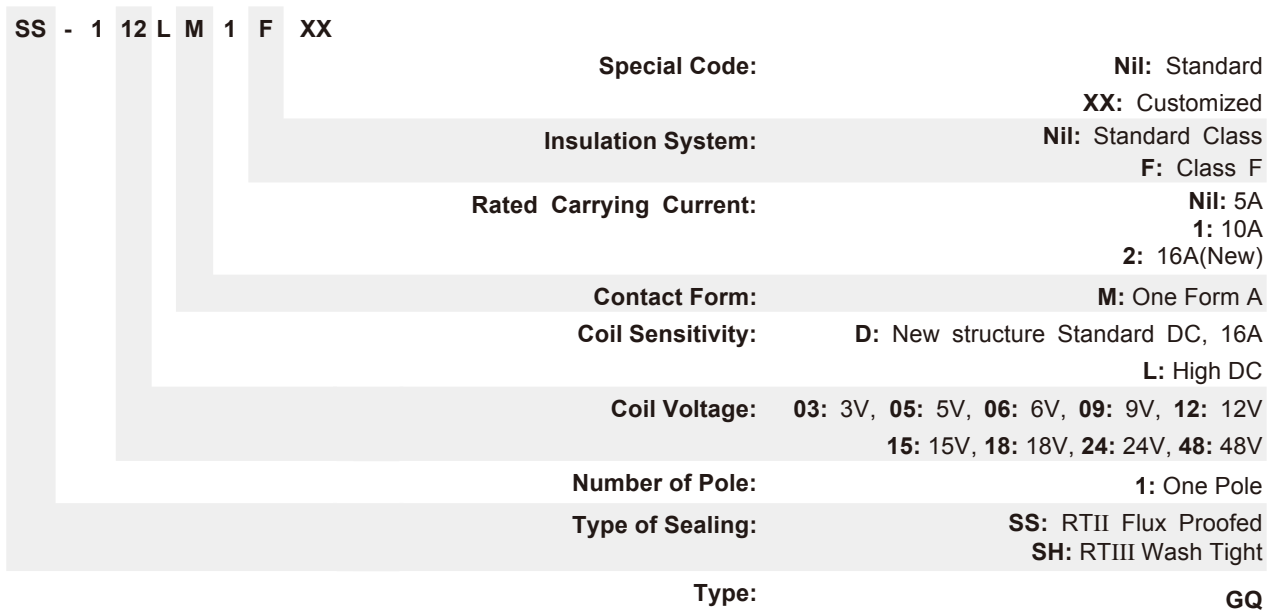
- LM:
  - UL & C-UL ..... E141060
  - TÜV ..... R50121172
  - VDE ..... 40025456
- LM1:
  - UL & C-UL ..... E141060
  - TÜV ..... R50121172
  - CQC ..... 14002112636
- DM2F:
  - UL ..... in progress
  - TUV ..... R50121172
  - VDE ..... in progress

**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 XX**



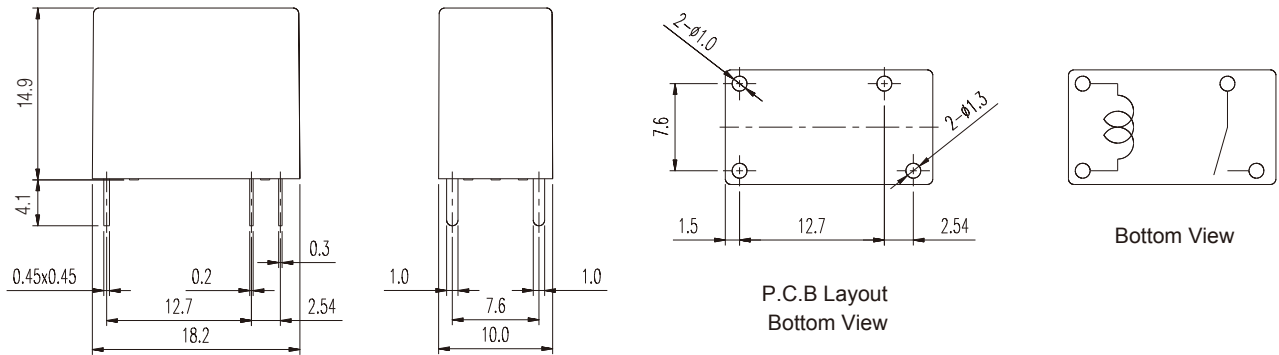
**\*\*Note: 16A comes with standard Class F insulation and the ordering part no. shall be "DM2F".**

**CLASSIFICATION**

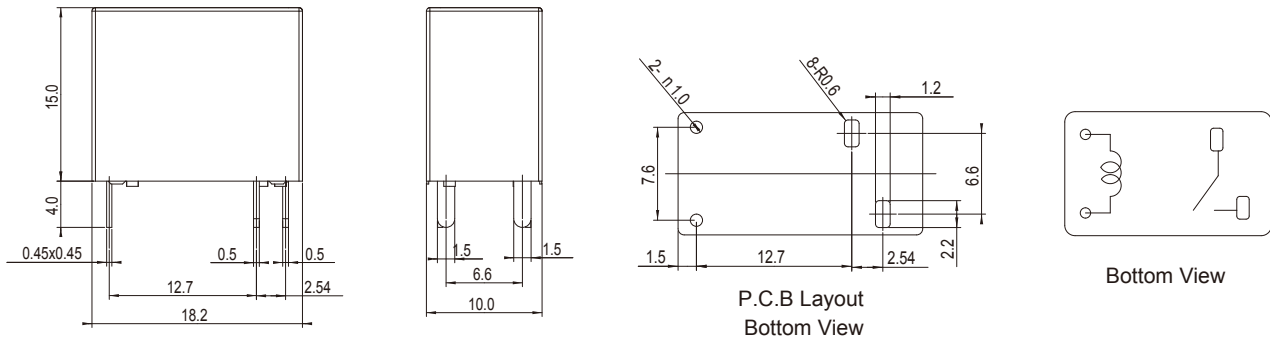
Model	GQ		
	5A	10A	16A
Rated Carrying Current			
Flux Proofed	GQ-SS-1□□LM	GQ-SS-1□□LM1/F	GQ-SS-1□□DM2F
Wash Tight	GQ-SH-1□□LM	GQ-SH-1□□LM1/F	GQ-SH-1□□DM2F

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

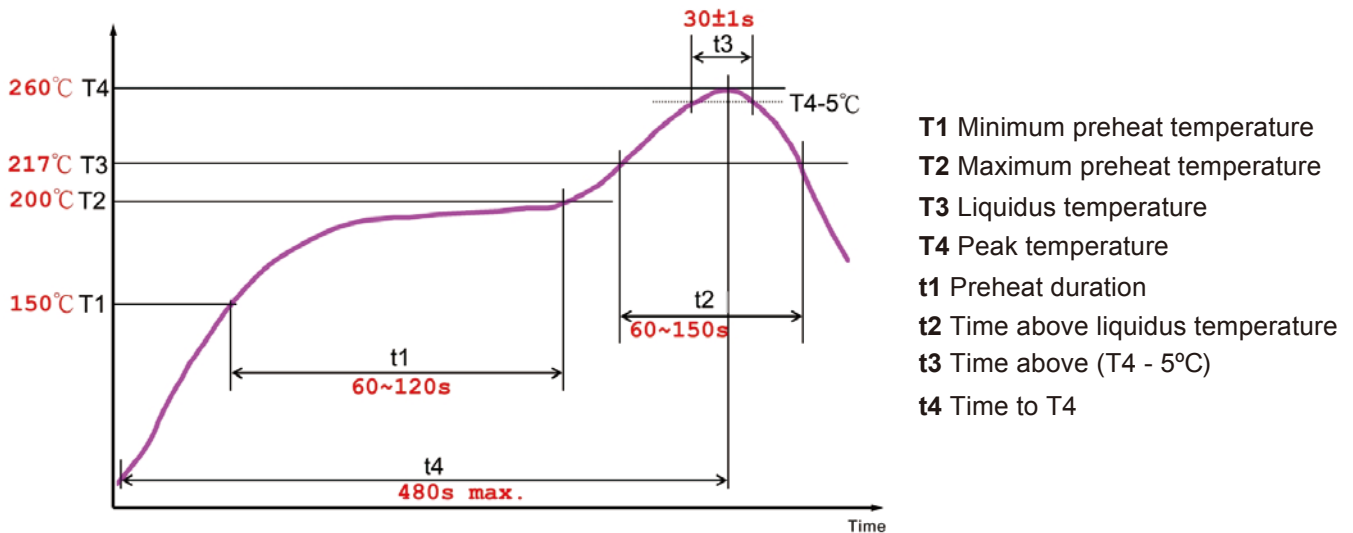
## GQ-LM/LM1



## GQ-DM2F



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



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