

## Main Feature

1. Single contact Form (SPST) series Relay offers switching capacity 30A in small size.
2. Dust cover, sealed & unclosed cover types are available.
3. UL Class F insulation available.
4. Halogen Free series available.
5. Comply with RoHS and REACH regulations

## Contact Rating

| Load Type                  |    | GU (DM)        | GU (DB)      | GU (D)         | GU (D1)        |
|----------------------------|----|----------------|--------------|----------------|----------------|
| Rated Load (Resistive)     |    | 30A 120VAC     | 10A 240VAC   | NC: 20A 240VAC | NC: 10A 240VAC |
|                            |    | 30A 240VAC     | 10A 30VDC    | 10A 30VDC      | 10A 30VDC      |
|                            |    | 30A 30VDC      | -            | NO: 30A 240VAC | NO: 20A 240VAC |
|                            |    | -              | -            | 20A 30VDC      | 20A 30VDC      |
| Contact Capacity           | NO | TV-8 120VAC    | -            | TV-8 120VAC    | TV-8 120VAC    |
|                            |    | 1-1/2HP 240VAC | -            | 1-1/2HP 240VAC | 1-1/2HP 240VAC |
|                            | NC | -              | 1/2HP 240VAC | 1/2HP 240VAC   | 1/2HP 240VAC   |
| Rated Carrying Current     |    | 30A            | 10A          | 30A            | 20A            |
| Max. Allowable Voltage     |    | AC 240V        | AC 240V      | AC 240V        | AC 240V        |
| Max. Allowable Current     |    | 30A            | 10A          | 30A            | 20A            |
| Max. Allowable Power Force |    | 7,200VA        | 2,400VA      | 7,200VA        | 4,800VA        |
|                            |    | 900W           | 300W         | 600W           | 600W           |
| Contact Material           |    | Ag Alloy       | Ag Alloy     | Ag Alloy       | Ag Alloy       |
| Contact Form               |    | SPST           | SPST         | SPDT           | SPDT           |

## Application

Domestic Appliances, Heating, Ventilating and Conditioning System, Car Control Switching Box, General Power Switching Applications.

## Performance (at Initial Value)

- Contact Resistance ..... 100mΩMax. @1A, 6VDC
- Operate Time..... 15 mSec. Max.
- Release Time ..... 10 mSec. Max.
- Dielectric Strength:
  - Between Coil & Contact..... 1,500VAC at 50/60 Hz for one minute
  - Between Contacts ..... 1,500VAC at 50/60 Hz for one minute
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
  - Electrical..... 6 Cycles per Minute
  - Mechanical ..... 300 Cycles per Minute

- Temperature Range ..... -25~+55°C
- Humidity Range ..... 45~85% RH.
- Coil Temperature Rise..... 60°C Max.
- Vibration:
  - Endurance ..... 10 to 55 Hz dual amplitude width 1.5 mm
  - Error Operation..... 10 to 55 Hz dual amplitude width 1.5 mm
- Shock:
  - Endurance ..... 1,000 m/S<sup>2</sup>
  - Error Operation..... 50 m/S<sup>2</sup>
- Life Expectancy:
  - Mechanical ..... 10<sup>7</sup> Operations at No Load condition
  - Electrical ..... 10<sup>5</sup> Operations at Resistive Load
- Weight ..... Flow Solder Type: 27.2g  
Open Type: 21.6g

## Safety Standard & File Number

- UL & C-UL ..... E141060

| 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)           |
|------------------|-----------------------|----------------------|---------------------------------------|-----------------------|-----------------------|------------------------|-------------------------------------------|
| GU-D             | 5                     | 185                  | 27                                    | Abt. 0.93             | 80% Maximum           | 5% Minimum             | 150%<br>(for short time carrying current) |
|                  | 6                     | 150                  | 40                                    |                       |                       |                        |                                           |
|                  | 9                     | 93                   | 97                                    |                       |                       |                        |                                           |
|                  | 12                    | 77                   | 155                                   |                       |                       |                        |                                           |
|                  | 15                    | 59                   | 255                                   |                       |                       |                        |                                           |
|                  | 18                    | 47                   | 380                                   |                       |                       |                        |                                           |
|                  | 24                    | 36                   | 660                                   |                       |                       |                        |                                           |
|                  | 36                    | 25.8                 | 1,390                                 |                       |                       |                        |                                           |
|                  | 48                    | 19.4                 | 2,480                                 |                       |                       |                        |                                           |
|                  | 110                   | 8.5                  | 13,000                                |                       |                       |                        |                                           |

## Ordering Information

GU - SS - 1 12 D M CF 1 - S

**Terminal Type:** Nil: 2 Common.  
S: 1 Common.

**Load rated(For GU-D Series only):** Nil: NO:30A/NC:20A.  
1: NO:20A/NC:10A.

Insulation System: Nil: Standard Class

|                      |  |                        |
|----------------------|--|------------------------|
|                      |  | <b>CF:</b> Class F     |
| <b>Contact Form:</b> |  | <b>Nil:</b> One Form C |
|                      |  | <b>M:</b> One Form A   |
|                      |  | <b>B:</b> One Form B   |

**Coil Type:** D: Standard DC Coil

**Coil Voltage:** 05: 5V, 06: 6V, 09: 9V, 12: 12V, 15: 15V, 18: 18V, 24: 24V, 36: 36V, 48: 48V, 110: 110V

**Number of Pole:** 1: One Pole

|                         |                               |
|-------------------------|-------------------------------|
| <b>Type of Sealing:</b> | <b>Nil:</b> RT 0 Unclosed     |
|                         | <b>SS:</b> RT II Flux Proofed |
|                         | <b>SH:</b> RT III Wash Tight  |

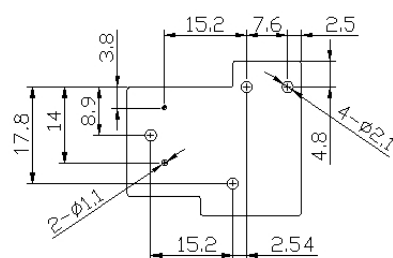
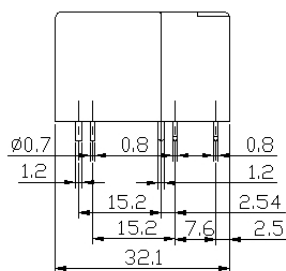
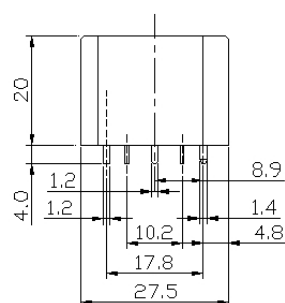
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|-------|----|
| Type: | GU |
|-------|----|

## Classification

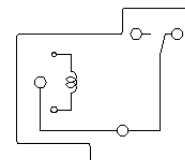
| Model             | GU                                |                    |                    |
|-------------------|-----------------------------------|--------------------|--------------------|
| Insulation System | Nil: Standard Class / CF: Class F |                    |                    |
| Contact Form      | 1C                                | 1A                 | 1B                 |
| Unclosed Relay    | GU-1□□D(CF)(1)                    | GU-1□□DM(CF)       | GU-1□□DB(CF)       |
| Flux Proofed Type | GU-SS/SH-1□□D(CF)(1)              | GU-SS/SH-1□□DM(CF) | GU-SS/SH-1□□DB(CF) |

**Dimension ( $\leq 5\text{mm} \pm 0.2\text{mm}$ ,  $> 5\text{mm} \pm 0.3\text{mm}$ , the tolerance of PCB thru hole:  $+0.1\text{mm}$ )**

GU-D : 2 Common terminals : 6 PIN

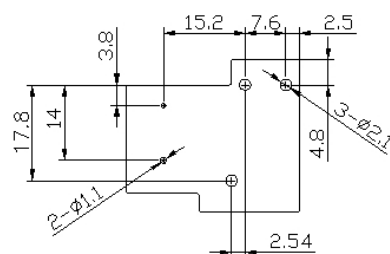
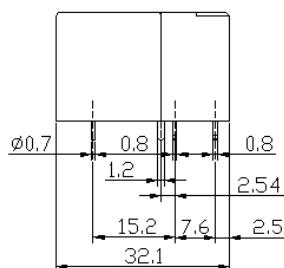
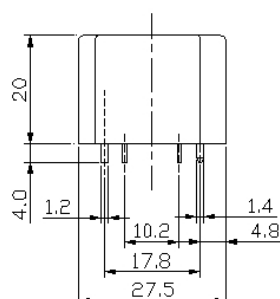


P.C.B. Layout

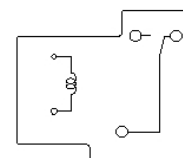


Bottom View

GU-D : 1 Common terminal : 5 PIN

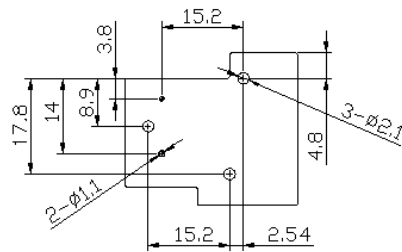
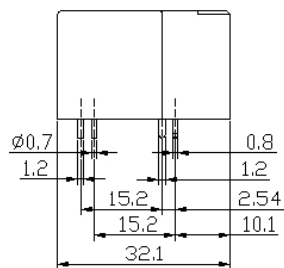
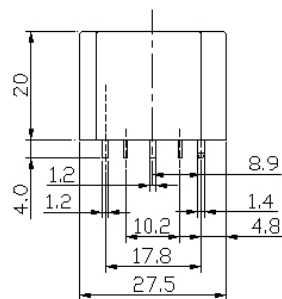


P.C.B. Layout

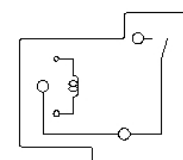


Bottom View

GU-DM : 2 Common terminals : 5 PIN

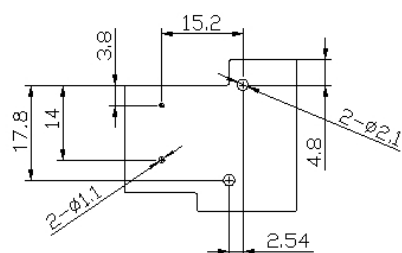
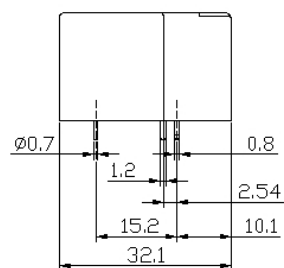
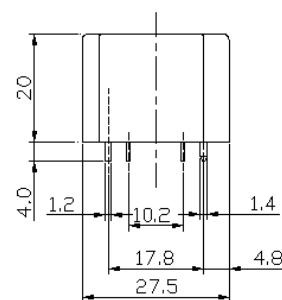


P.C.B. Layout

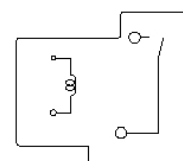


Bottom View

GU-DM : 1 Common terminal : 4 PIN



P.C.B. Layout



Bottom View

