

● Features

- 5A switching capability
- Creepage / clearance distance > 8mm
- 5kV dielectric strength (between coil and contacts)
- 1 Form A and 1 Form C configurations
- Subminiature, standard PCB layout
- Plastic sealed and flux proofed types available
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Dimensions: 17.6 x 10.1 x 12.7 mm



● Application

- Smart Home Solution / Home Appliance / Temperature Control / Industrial Control / Security System / Anti-Theft System, etc.

● Contact Data

| | | |
|------------------------|-------------------|-------------------|
| Contact Arrangement | 1A | 1C |
| Contact Material | Ag Alloy | |
| Contact Rating | 5A 250VAC / 30VDC | 3A 250VAC / 30VDC |
| Max. Switching Power | 1250VA / 150W | |
| Max. Switching Voltage | 250VAC / 30VDC | |
| Max. Switching Current | 5A | |
| Contact Resistance | ≤ 100mΩ (6VDC 1A) | |
| Electrical Endurance | 1x10 ⁵ | |
| Mechanical Endurance | 1x10 ⁶ | |

● Coil Parameter (at 23°C)

Standard Type

| Coil Voltage (VDC) | | Coil Resistance ($\Omega \pm 10\%$) | Pickup Voltage(max) (VDC) | Release Voltage(min) (VDC) | Coil Power Consumption (W) |
|--------------------|------|---------------------------------------|---------------------------|----------------------------|----------------------------|
| Rated | Max. | | | | |
| 3 | 3.9 | 20 | 2.25 | 0.15 | 0.45 |
| 5 | 6.5 | 55 | 3.75 | 0.25 | |
| 6 | 7.8 | 80 | 4.50 | 0.30 | |
| 9 | 11.7 | 180 | 6.75 | 0.45 | |
| 12 | 15.6 | 320 | 9.00 | 0.60 | |
| 18 | 23.4 | 720 | 13.5 | 0.90 | |
| 24 | 31.2 | 1280 | 18.0 | 1.20 | |

Sensitive Type (Only for 1 Form A)

| Coil Voltage (VDC) | | Coil Resistance ($\Omega \pm 10\%$) | Pickup Voltage(max) (VDC) | Release Voltage(min) (VDC) | Coil Power Consumption (W) |
|--------------------|------|---------------------------------------|---------------------------|----------------------------|----------------------------|
| Rated | Max. | | | | |
| 3 | 4.5 | 45 | 2.25 | 0.15 | 0.20 |
| 5 | 7.5 | 125 | 3.75 | 0.25 | |
| 6 | 9.0 | 180 | 4.50 | 0.30 | |
| 9 | 13.5 | 400 | 6.75 | 0.45 | |
| 12 | 18.0 | 720 | 9.00 | 0.60 | |
| 18 | 27.0 | 1600 | 13.5 | 0.90 | |
| 24 | 36.0 | 2800 | 18.0 | 1.20 | |

● Operation Condition

| | | |
|-----------------------|--------------------------|--------------------------------|
| Insulation Resistance | | 1000M Ω min (at 500VDC) |
| Dielectric Strength | Between Contacts | 1000VAC 1min |
| | Between Contact and Coil | 5000VAC 1min |

● Operation Condition

| | | |
|----------------------|------------|--------------------------------|
| Shock Resistance | Functional | 98m/s ² |
| | Endurance | 980m/s ² |
| Vibration Resistance | | 10~55Hz double amplitude 1.5mm |
| Ambient Temperature | | -40 ~ +85°C |
| Operate Time | | ≤ 8ms |
| Release Time | | ≤ 4ms |
| Relative Humidity | | 5%~85% |
| Weight | | Approx. 4.6g |

● Ordering Information

| | | | | | | | |
|----------------------------|--|------------|-------------|-----------|-----------|-----------|--------------|
| | | GCL | -12D | 20 | -A | -S | (XXX) |
| Model | GCL1, GCL2 | | | | | | |
| Coil Voltage | 3, 5, 6, 9, 12, 18, 24 VDC | | | | | | |
| Coil Power | Nil: 450mW 20 : 200mW (only for 1 Form A) | | | | | | |
| Contact Arrangement | A: 1 Form A C: 1 Form C | | | | | | |
| Construction | Nil: Flux tight S: Sealed | | | | | | |
| Special Code | Nil: Standard XXX: Customer special requirement | | | | | | |

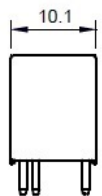
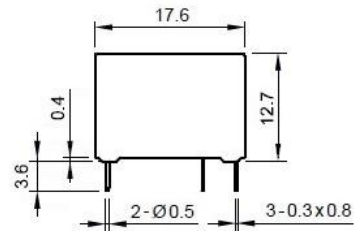
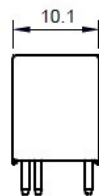
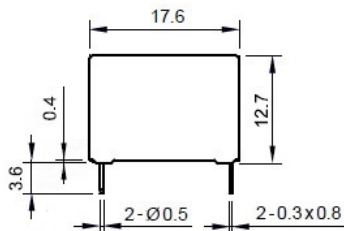
● Dimensions (UNIT: mm)

Outline Dimensions

1 Form A

1 Form C

GCL1 type



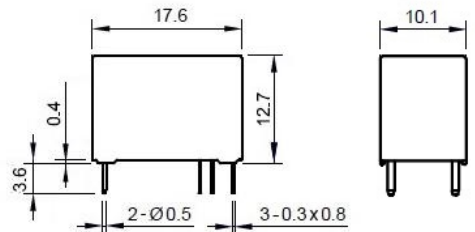
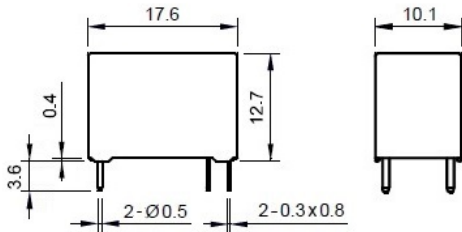
● Dimensions (UNIT: mm)

Outline Dimensions

1 Form A

1 Form C

GCL2 type

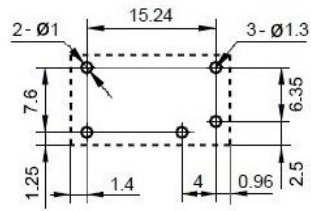
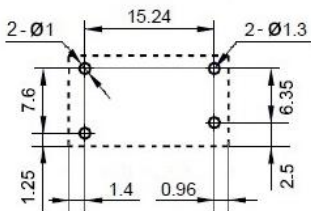


Mounting (Bottom views)

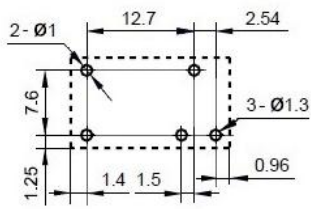
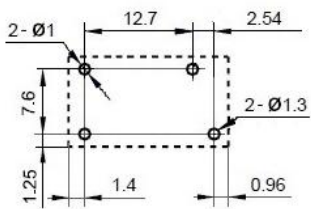
1 Form A

1 Form C

GCL1 type



GCL2 type

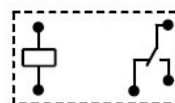
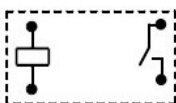


Wiring Diagram (Bottom views)

1 Form A

1 Form C

GCL1 type



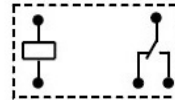
- Dimensions (UNIT: mm)

Wiring Diagram (Bottom views)

1 Form A

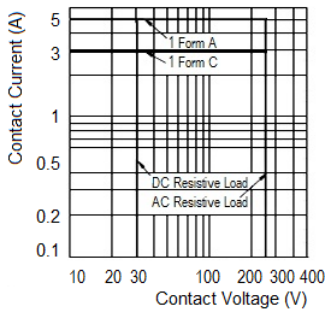
1 Form C

GCL2 type

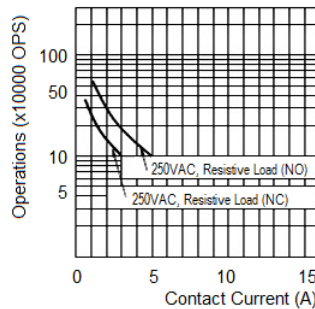


- Engineering Data

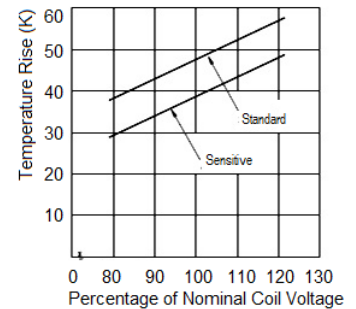
Max. Switching Power



Endurance Curve



Temperature Rise



Notes:

Test conditions: Flux proofed,
Room temp., 1.5s on 1.5s off.

Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $>1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $>5\text{mm}$, tolerance should be $\pm 0.5\text{mm}$.

2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact IOEC for the technical service. However, it is the user's responsibility to determine which product should be used only.

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