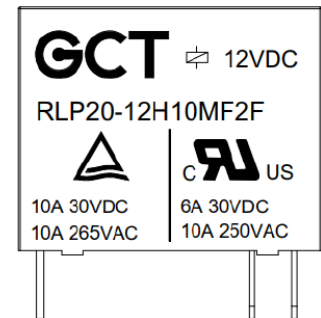


# PRODUCT SPECIFICATION

|                     |                                 |          |    |         |          |
|---------------------|---------------------------------|----------|----|---------|----------|
| Part Number         | RLP20                           | Rev      | A  | Date    | 28/04/26 |
| Product Description | PCB Mounted Relay, Through Hole |          |    | Page    | 1        |
| Doc Number          | RLP20                           | Prepared | CC | Checked | YR       |
|                     |                                 | Approved | PH |         |          |

## Features:

- 3A to 16A Load
- Contact arrangement: Form A (*SPST-NO*)
- Dielectric Voltage between coil & contacts: 4000V
- Insulation system: UL Class F
- Non latching
- Approvals: UL, TÜV
- Contact Material: Silver Alloy
- Operating Temperature: -40°C to +85°C
- Operating Humidity: 20% to 85%RH
- Storage Conditions: +5°C to +35°C, 15% to 60%RH
- Outline Dimensions: L x W x H = 18.2x10.2x14.8mm
- Weight: ~5.82g
- Packaging: 100pcs/tray, 1000 pcs/carton
- RoHS compliant



## Ordering Grid:

| Rated Coil Voltage |             | Coil Power Consumption |         | Load Current |            | Insulation System |  | Contact Material                                      |  | Enclosure      |  | Contact Arrangement           |  |
|--------------------|-------------|------------------------|---------|--------------|------------|-------------------|--|-------------------------------------------------------|--|----------------|--|-------------------------------|--|
| 03 = 3 VDC         | 12 = 12 VDC | 200 mW:                | 450 mW: | L03 = 3A     | H05 = 5A   | F = Class F       |  | 2 = AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub> |  | F = Flux Tight |  | M = Form A ( <i>SPST-NO</i> ) |  |
| 05 = 5 VDC         | 24 = 24 VDC |                        |         | L08 = 8A     | H10 = 10A  |                   |  |                                                       |  | S = Sealed     |  |                               |  |
| 06 = 6 VDC         |             |                        |         | L10 = 10A    | H16 = 16A  |                   |  |                                                       |  |                |  |                               |  |
| 09 = 9 VDC         |             |                        |         |              | HV5 = TV-5 |                   |  |                                                       |  |                |  |                               |  |

# PRODUCT SPECIFICATION

|                     |                                 |          |    |         |    |          |      |          |
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## Standard Part Numbers

| Part number     | Coil voltage | Coil power | Load current | Contact Arrangement | Enclosure  | Contact Material                                  | Insulation System |
|-----------------|--------------|------------|--------------|---------------------|------------|---------------------------------------------------|-------------------|
| RLP20-24L03MF2F | 24VDC        | 200mW      | 3A           | Form A              | Flux Tight | AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub> | Class F           |
| RLP20-05H05MF2F | 5VDC         | 450mW      | 5A           |                     |            |                                                   |                   |
| RLP20-12H05MF2F | 12VDC        |            |              |                     |            |                                                   |                   |
| RLP20-24H05MF2F | 24VDC        |            |              |                     |            |                                                   |                   |
| RLP20-05L08MF2F | 5VDC         | 200mW      | 8A           |                     |            |                                                   |                   |
| RLP20-12L08MF2F | 12VDC        |            |              |                     |            |                                                   |                   |
| RLP20-24L08MF2F | 24VDC        |            |              |                     |            |                                                   |                   |
| RLP20-05L10MF2F | 5VDC         |            | 10A          |                     |            |                                                   |                   |
| RLP20-12L10MF2F | 12VDC        |            |              |                     |            |                                                   |                   |
| RLP20-24L10MF2F | 24VDC        |            |              |                     |            |                                                   |                   |
| RLP20-05H10MF2F | 5VDC         | 450mW      | 10A          |                     |            |                                                   |                   |
| RLP20-12H10MF2F | 12VDC        |            |              |                     |            |                                                   |                   |
| RLP20-24H10MF2F | 24VDC        |            |              |                     |            |                                                   |                   |
| RLP20-12H16MF2F | 12VDC        |            | 16A          |                     |            |                                                   |                   |

Notes: Standard part numbers are more widely available, please contact GCT if non-standard is needed

## Coil Rating

| Coil Voltage VDC | Rated Current mA |                  | Must Operate Voltage VDC | Must Release Voltage VDC | Rated Power mW                      | Resistance $\Omega(\pm 10\%)$ |                  | Max. Continuous Voltage VDC | Insulation System |
|------------------|------------------|------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------|------------------|-----------------------------|-------------------|
|                  | Standard: 450mW  | Sensitive: 200mW |                          |                          |                                     | Standard: 450mW               | Sensitive: 200mW |                             |                   |
| 3                | 150              | 66.6             | 2.25                     | 0.15                     | Standard: 450mW<br>Sensitive: 200mW | 20                            | 45               | 130% of rated Voltage       | Class F           |
| 5                | 90               | 40               | 3.75                     | 0.25                     |                                     | 56                            | 125              |                             |                   |
| 6                | 75               | 33.3             | 4.50                     | 0.30                     |                                     | 80                            | 180              |                             |                   |
| 9                | 50               | 22.2             | 6.75                     | 0.45                     |                                     | 180                           | 405              |                             |                   |
| 12               | 37.5             | 16.6             | 9.00                     | 0.60                     |                                     | 320                           | 720              |                             |                   |
| 24               | 18.75            | 8.33             | 18.0                     | 1.20                     |                                     | 1280                          | 2880             |                             |                   |
| 48               | 9.375            | 4.16             | 36.0                     | 2.40                     |                                     | 5120                          | 11538            |                             |                   |



# PRODUCT SPECIFICATION

|                     |                                 |          |    |         |    |          |      |          |
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## Contact Data

| Load Current           | Electrical Endurance     | Mechanical Endurance    | Max. Switching Voltage | Max. Switching Current | Max. Switching Power | Operate Time                                                   | Release time      |
|------------------------|--------------------------|-------------------------|------------------------|------------------------|----------------------|----------------------------------------------------------------|-------------------|
| 10A at 125VAC          | 10x10 <sup>4</sup> ops.  | 10x10 <sup>6</sup> ops. | 277VAC<br>or<br>30VDC  | 16A                    | 4432VA<br>(480W)     | $\leq 10\text{ms}$<br>(450mW)<br>$\leq 15\text{ms}$<br>(200mW) | $\leq 4\text{ms}$ |
| 3A/5A/8A/10A at 250VAC |                          |                         |                        |                        |                      |                                                                |                   |
| 3A/5A/8A/10A at 30VDC  |                          |                         |                        |                        |                      |                                                                |                   |
| 10A at 277VAC          | 5x10 <sup>4</sup> ops.   |                         |                        |                        |                      |                                                                |                   |
| 16A at 277VAC          | 3x10 <sup>4</sup> ops.   |                         |                        |                        |                      |                                                                |                   |
| TV-5                   | 2.5x10 <sup>4</sup> ops. |                         |                        |                        |                      |                                                                |                   |

## Characteristics

| Insulation Resistance | Contact Resistance          | Dielectric Strength   |                           | Vibration                                | Shock      |             | Impulse Withstanding Voltage |
|-----------------------|-----------------------------|-----------------------|---------------------------|------------------------------------------|------------|-------------|------------------------------|
|                       |                             | Between Open contacts | Between coil and contacts |                                          | Functional | Destructive |                              |
| 1000M $\Omega$        | 100m $\Omega$<br>(1A, 5VDC) | 750V rms<br>1 min.    | 4000V rms<br>1 min.       | 10Hz-55Hz,<br>at double amplitude<br>1mm | 10G        | 100G        | 10KV                         |

## Other Data

| UL Certification | TÜV Certification | Creepage Distance | Clearance Distance | Pollution Degree |
|------------------|-------------------|-------------------|--------------------|------------------|
| E550899          | R507113320001     | 11mm              | 7mm                | 3                |

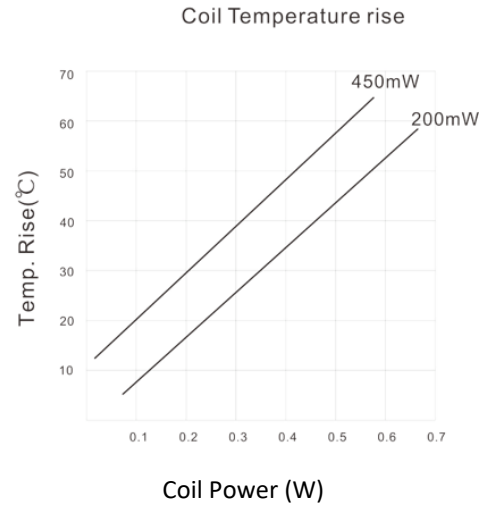
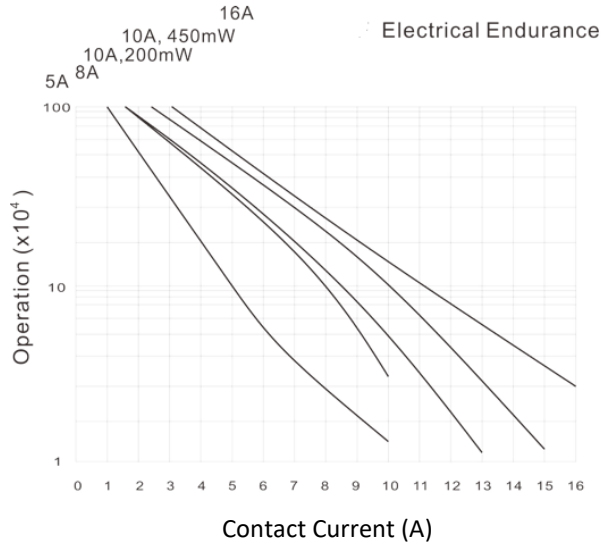
## Notes

1. All the performance data are measured at a coil temperature of 23°C.
2. All the performance data are initial values.

# PRODUCT SPECIFICATION

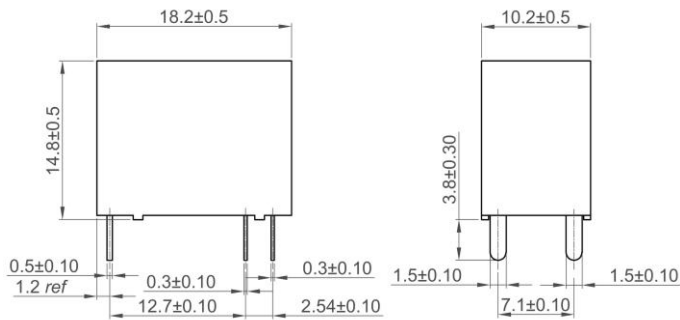
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|---------------------|---------------------------------|----------|----|---------|----|----------|------|----------|
| Part Number         | RLP20                           |          |    | Rev     | A  |          | Date | 28/04/26 |
| Product Description | PCB Mounted Relay, Through Hole |          |    |         |    |          | Page | 4        |
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## Derating Diagram

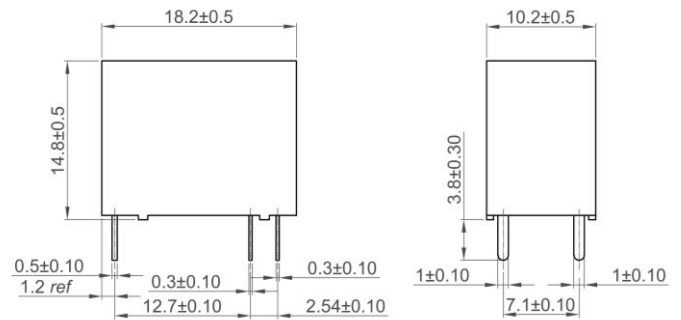


## Outline Dimensions

### 16A

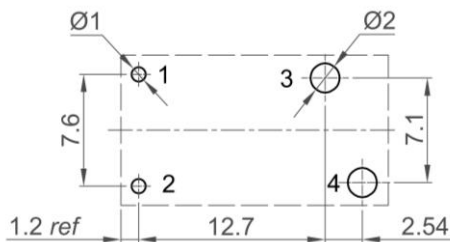


### 3A to 10A



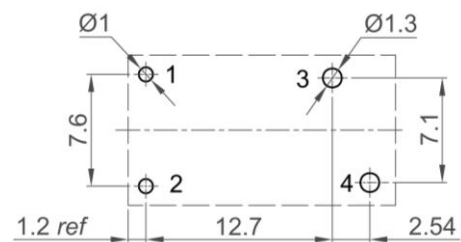
## PCB Layout

### 16A



**Recommended PCB Layout**  
Bottom View  
Tolerance:  $\pm 0.10\text{mm}$   
□ Component Outline

### 3A to 10A

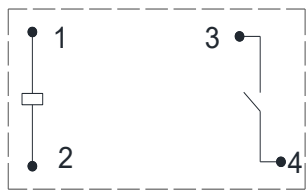


**Recommended PCB Layout**  
Bottom View  
Tolerance:  $\pm 0.10\text{mm}$   
□ Component Outline

# PRODUCT SPECIFICATION

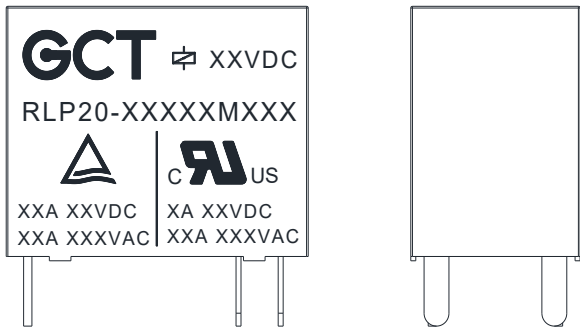
|                     |                                 |          |    |         |    |          |      |          |
|---------------------|---------------------------------|----------|----|---------|----|----------|------|----------|
| Part Number         | RLP20                           |          |    | Rev     | A  |          | Date | 28/04/26 |
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## Diagram: Form A



Bottom View

## Logo and marking on product (Reference only)



# PRODUCT SPECIFICATION

|                     |                                 |          |    |         |    |          |      |          |
|---------------------|---------------------------------|----------|----|---------|----|----------|------|----------|
| Part Number         | RLP20                           |          |    | Rev     | A  |          | Date | 28/04/26 |
| Product Description | PCB Mounted Relay, Through Hole |          |    |         |    |          | Page | 6        |
| Doc Number          | RLP20                           | Prepared | CC | Checked | YR | Approved | PH   |          |

Revision details:

| Revision | Information      | Page | Release Date |
|----------|------------------|------|--------------|
| 0.8      | Draft for review | -    | 10/04/2026   |
| A        | First Release    | -    | 28/04/2026   |
|          |                  |      |              |
|          |                  |      |              |
|          |                  |      |              |
|          |                  |      |              |
|          |                  |      |              |
|          |                  |      |              |

