

# R3F (17A) Series

Power relay

## Feature explanation

- Maximum 25A contact switching capability.
- The medium between the coil and the contact can withstand a voltage of 2.8KV.
- Options include plastic-sealed and anti-solder formulations.
- Dimensions:(20.4\*16.6\*20.5)mm



## ■ Performance Overview

| Specifications            |                                              | project                           |                                                                                                    |
|---------------------------|----------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------|
| Contact point parameters. | Contact configuration.                       |                                   | 1A、1B、1C                                                                                           |
|                           | Contact resistance (initial value)           |                                   | ≤100mΩ(6VDC1A)                                                                                     |
|                           | Contact material.                            |                                   | AgNi、AgSnO <sub>2</sub>                                                                            |
| Rated load.               | Load control (resistance-based).             |                                   | NO:17A 250VAC/30VDC(标准品) 20A 250VAC/30VDC 25A 250VAC/30VDC<br>NC:15A 250VAC/30VDC 10A 250VAC/30VDC |
|                           | Maximum switching voltage.                   |                                   | 250VAC                                                                                             |
|                           | Maximum switching current.                   |                                   | 25A                                                                                                |
|                           | Maximum conversion power.                    |                                   | 4700VA/510W                                                                                        |
|                           |                                              |                                   |                                                                                                    |
| Electrical performance.   | Insulation resistance (initial value)        |                                   | 100MΩ(500VDC),1min                                                                                 |
|                           | Medium withstand voltage.<br>(Initial value) | Disconnect the contacts.          | 1000VAC,1 min                                                                                      |
|                           |                                              | Between the contact and the coil. | 2500VAC,1 min                                                                                      |
|                           | Closing time.                                |                                   | ≤10ms                                                                                              |
|                           | Release time.                                |                                   | ≤5ms                                                                                               |
| Mechanical properties     | to attack                                    | stability                         | 98m/s <sup>2</sup> (10G)                                                                           |
|                           |                                              | strength                          | 980m/s <sup>2</sup> (100G)                                                                         |
|                           | vibration                                    |                                   | 10Hz～55Hz1.5mm Double amplitude.                                                                   |
| Durability.               | Mechanics                                    |                                   | 1×10 <sup>6</sup> 次                                                                                |
|                           | Electrical (room temperature).               |                                   | 17A 250VAC 5×10 <sup>4</sup> 次(ON/OFF=1s/1s)                                                       |
|                           |                                              |                                   | 25A 250VAC 3×10 <sup>4</sup> 次(ON/OFF=1s/1s)                                                       |
| Conditions of Use         | environmental temperature                    |                                   | -40℃～85℃                                                                                           |
|                           | humidity                                     |                                   | 5% to 90%                                                                                          |
| Termination method.       |                                              |                                   | Printed board type.                                                                                |
| weight                    |                                              |                                   | Approximately15g                                                                                   |
| Packaging method.         |                                              |                                   | Plastic-coated type, anti-soldering formulation.                                                   |

## ■ Coil specifications (23°C)

| Rated voltage. | Closing voltage VDC | Release voltage VDC | Rated current (±10%) | Coil resistance (±10%) | Rated power. | Maximum permissible voltage. |
|----------------|---------------------|---------------------|----------------------|------------------------|--------------|------------------------------|
| DC 5V          | ≤3.75               | ≥0.3                | 72mA                 | 69.4Ω                  | 约0.36W       | DC 6.5V                      |
| DC 6V          | ≤4.50               | ≥0.36               | 60mA                 | 100Ω                   |              | DC 7.8V                      |
| DC 9V          | ≤6.75               | ≥0.54               | 40mA                 | 225Ω                   |              | DC 11.7V                     |
| DC 12V         | ≤9.00               | ≥0.72               | 30mA                 | 400Ω                   |              | DC 15.6V                     |
| DC 15V         | ≤11.25              | ≥0.9                | 24mA                 | 625Ω                   |              | DC 19.5V                     |
| DC 18V         | ≤13.50              | ≥1.08               | 20mA                 | 900Ω                   |              | DC 23.4V                     |
| DC 24V         | ≤18.00              | ≥1.44               | 15mA                 | 1600Ω                  |              | DC 31.2V                     |
| DC 36V         | ≤27.00              | ≥2.16               | 10mA                 | 3600Ω                  |              | DC 46.8V                     |
| DC 48V         | ≤36.00              | ≥2.88               | 7.5mA                | 6400Ω                  |              | DC 62.4V                     |
|                |                     |                     |                      |                        |              |                              |

## ■ Order information.

|                                                                          |     |     |     |   |   |    |     |
|--------------------------------------------------------------------------|-----|-----|-----|---|---|----|-----|
|                                                                          | R3F | - X | - X | X | X | -X | -XX |
| · Product model.                                                         |     |     |     |   |   |    |     |
| · Sealing configuration: SS-Open type. SH -Sealed type.                  |     |     |     |   |   |    |     |
| · Number of contact groups.: Contact Pole 1—1 pole                       |     |     |     |   |   |    |     |
| · Coil specifications (V DC) : 05 09 12 18 24 36 48                      |     |     |     |   |   |    |     |
| · Rated power: D standard power.                                         |     |     |     |   |   |    |     |
| · Contact configuration.: Z—1 Form Z type M—1 Form A type B-1Form B type |     |     |     |   |   |    |     |
| · Unique identifier: U-17A                                               |     |     |     |   |   |    |     |

- (1)When used in a clean environment (free from pollutants such as H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, and dust), it is recommended to choose the anti-soldering formulation. For use in polluted environments (containing H<sub>2</sub>S, SO<sub>2</sub>,NO<sub>2</sub>, and dust), it is suggested to opt for the plastic-sealed type. Please contact our company if you need to perform a comprehensive cleaning or surface treatment.
- (2)In situations where relays generate significant surge currents upon the activation of their contacts, it is recommended to use AgSnO<sub>2</sub> contact materials.

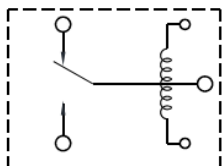
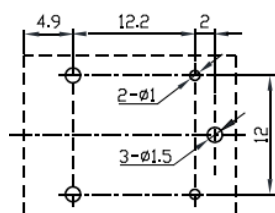
## ■ Dimensions, wiring, and installation specifications (unit: mm).

安装孔位图 (底视图)

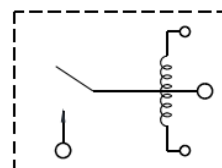
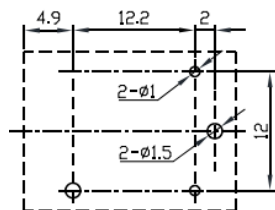
PCB Layout ( Bottom View )

接线图 (底视图)

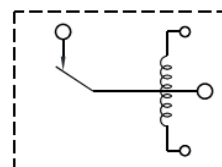
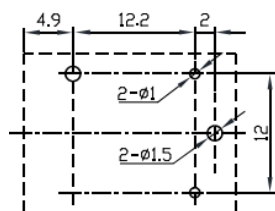
Wiring Diagram ( Bottom View )



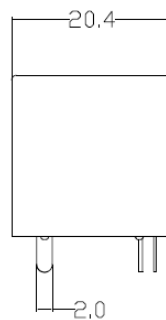
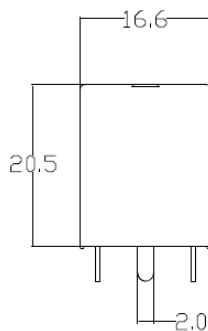
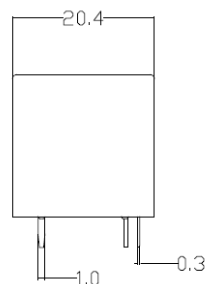
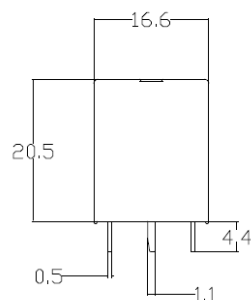
转换型  
1 Form C



常开型  
1 Form A



常闭型  
1 Form B



Note: (1) The tolerance of size is  $\pm 0.2\text{mm}$  when the size is  $\leq 1\text{mm}$ ; When the external dimension is  $1\text{mm} \sim 5\text{mm}$ , the tolerance is  $\pm 0.3\text{mm}$ ; When the external dimension  $\geq 5\text{mm}$ , the tolerance is  $\pm 0.5\text{mm}$ .

(2) The installation dimensions do not specify any tolerance, which is  $\pm 0.1\text{ mm}$ .

## ■ Security authentication.

| Type of certification. | Certification number. | Contact configuration. | Contact material.       | Authentication load. |              |     |
|------------------------|-----------------------|------------------------|-------------------------|----------------------|--------------|-----|
| UL                     |                       | 1A、1C(NO)              | AgNi、AgSnO <sub>2</sub> | 20A                  | 125VAC       | 85℃ |
|                        |                       |                        |                         | 17A                  | 125VAC       | 85℃ |
|                        |                       | 1B、1C(NC)              | AgNi、AgSnO <sub>2</sub> | 15A                  | 125VAC       | 85℃ |
| TUV                    | R50602639             | 1A(NO)                 | AgNi、AgSnO <sub>2</sub> | 25A                  | 250VAC/30VDC | 85℃ |
|                        |                       |                        |                         | 20A                  | 250VAC/30VDC | 85℃ |
|                        |                       | 1B(NC)                 |                         | 17A                  | 250VAC/30VDC | 85℃ |
|                        |                       |                        |                         | 15A                  | 250VAC/30VDC | 85℃ |
|                        |                       |                        |                         | 10A                  | 250VAC/30VDC | 85℃ |
| CQC                    | CQC23002387163        | 1A、1C(NO)              | AgNi、AgSnO <sub>2</sub> | 25A                  | 250VAC/30VDC | 85℃ |
|                        |                       |                        |                         | 20A                  | 250VAC/30VDC | 85℃ |
|                        |                       | 1B、1C(NC)              |                         | 17A                  | 250VAC/30VDC | 85℃ |
|                        |                       |                        |                         | 15A                  | 250VAC/30VDC | 85℃ |
|                        |                       |                        |                         | 10A                  | 250VAC/30VDC | 85℃ |

## ■ Note

2. In environments where harmful gases such as H<sub>2</sub>S, SO<sub>2</sub>, or NO<sub>2</sub> are present, it is recommended to use fully sealed products.
3. When feasible, opt for products that are resistant to soldering paste.
4. If customers need to use ultrasonic equipment to clean PCBs and relays, they must opt for fully sealed products.
5. To maintain the initial performance parameters of the relays, please be careful not to drop the product.
6. This product specification sheet is provided solely for customer selection purposes. Any changes will not be notified in advance.