



**INDUSTRIAL RELAYS**

UL & CUL File #E256619

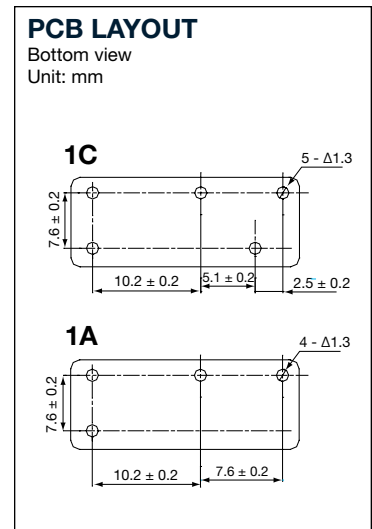
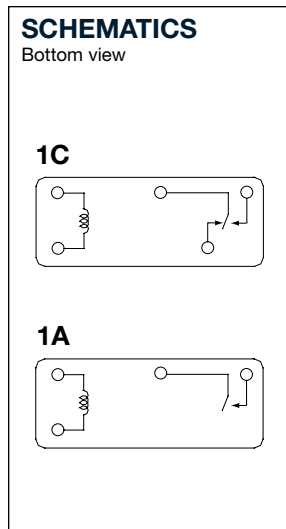
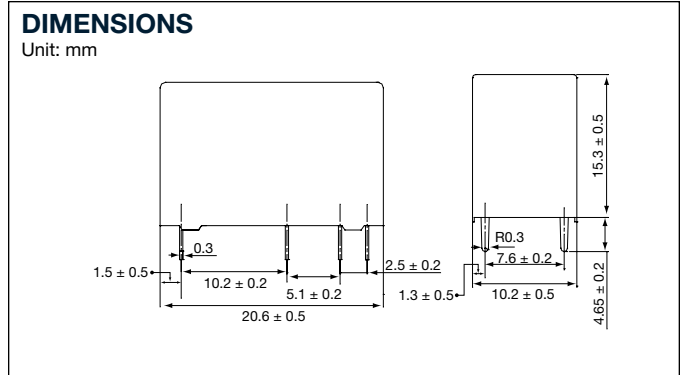
**FEATURES**

1. Small size (10.2 x 20.6 x 15.3mm) at 10A switching capacity.
2. Surge resistiveness of 5000V.
3. Sealed or unsealed types available.

**ORDERING INFORMATION**

**RK 1C - 12 H S F**  
**(1) (2) (3) (4) (5) (6)**

- |                                                                                                                                                                                            |                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>(1) Basic Designation</b><br/>RK = RK Series</p> <p><b>(2) Contact Arrangement</b><br/>1A = 1 Form A (SPST-NO)<br/>1C = 1 Form C (SPDT)</p> <p><b>(3) Coil Voltage</b><br/>3~48V</p> | <p><b>(4) Coil Sensitivity</b><br/>Nil = 0.45W<br/>H = 0.20W</p> <p><b>(5) Enclosure</b><br/>Nil = Unsealed type<br/>S = Sealed type</p> <p><b>(6) Insulation</b><br/>Nil = Standard<br/>B = Class B<br/>F = Class F</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



**COIL RATINGS (AT 20°C)**

| Power Consumption/<br>Coil Sensitivity | Coil Nominal Voltage<br>(VDC) | Coil Resistance<br>$\Omega(\pm 10\%)$ | Pick-Up Voltage<br>(VDC) max. | Nominal Current<br>(mA) | Drop-Out Voltage<br>(VDC) min. | Max. Allowable<br>Voltage  |
|----------------------------------------|-------------------------------|---------------------------------------|-------------------------------|-------------------------|--------------------------------|----------------------------|
| Coil Sensitivity<br>Nil = 0.45W        | 3                             | 20.0                                  | 75%                           | 150                     | 5%                             | 130% of nominal<br>voltage |
|                                        | 5                             | 55.0                                  |                               | 91                      |                                |                            |
|                                        | 6                             | 80.0                                  |                               | 75                      |                                |                            |
|                                        | 9                             | 180                                   |                               | 50                      |                                |                            |
|                                        | 12                            | 320                                   |                               | 37.5                    |                                |                            |
|                                        | 18                            | 720                                   |                               | 25.0                    |                                |                            |
|                                        | 24                            | 1280                                  |                               | 18.8                    |                                |                            |
|                                        | 48                            | 5120                                  |                               | 9.4                     |                                |                            |
| Coil Sensitivity<br>H = 0.20W          | 3                             | 45.0                                  | 75%                           | 66.7                    | 5%                             | 130% of nominal<br>voltage |
|                                        | 5                             | 125                                   |                               | 40                      |                                |                            |
|                                        | 6                             | 180                                   |                               | 33.3                    |                                |                            |
|                                        | 9                             | 405                                   |                               | 22.2                    |                                |                            |
|                                        | 12                            | 720                                   |                               | 16.7                    |                                |                            |
|                                        | 18                            | 1620                                  |                               | 11.1                    |                                |                            |
|                                        | 24                            | 2880                                  |                               | 8.3                     |                                |                            |
|                                        | 48                            | 11520                                 |                               | 4.2                     |                                |                            |





**CONTACT RATINGS**

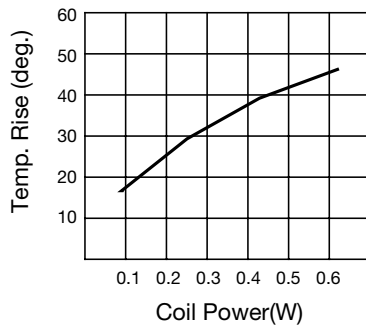
|                                            |                                                                              |                           |
|--------------------------------------------|------------------------------------------------------------------------------|---------------------------|
| Coil Sensitivity / Nominal Operating Power | <b>Nil = 0.45W</b>                                                           | <b>H = 0.20W</b>          |
| Contact Arrangement                        | 1C:1A                                                                        |                           |
| Max. Switching Power                       | 1250VA 150W                                                                  | 600VA 90W                 |
| Max. Switching Voltage                     | 265VAC 30VDC                                                                 |                           |
| Max. Switching Current                     | 10A                                                                          | 5A                        |
| Contact Resistance (By voltage drop 6V 1A) | 50mΩ max.                                                                    |                           |
| UL/ C-UL Rating                            | <b>1A</b>                                                                    | <b>1A</b>                 |
| Resistive Load (cos Ø = 1)                 | 10A / 120VAC<br>5A / 250VAC<br>5A / 30VDC                                    | 3A / 250VAC<br>3A / 30VDC |
|                                            | <b>1C</b>                                                                    |                           |
|                                            | <b>NC:</b> 3A / 250VAC<br>3A / 30VDC<br><b>NO:</b> 5A / 250VAC<br>5A / 30VDC |                           |
| Inductive Load (cos Ø = 0.75 ~ 0.8)        | 1.5A / 250VAC<br>1.5A / 30VDC                                                | 1A / 250VAC<br>1A / 30VDC |
| Contact Material                           | silver alloy                                                                 |                           |

**CHARACTERISTICS**

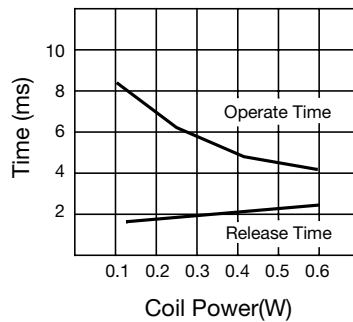
|                               |                                                                                                             |
|-------------------------------|-------------------------------------------------------------------------------------------------------------|
| Electrical Life (at 20cpm)    | 1 x 10 <sup>5</sup>                                                                                         |
| Mechanical Life (at 120cpm)   | 1 x 10 <sup>7</sup>                                                                                         |
| Initial Insulation Resistance | Min. 1000MΩ 500VDC                                                                                          |
| Operate Time                  | 0.45W = 10ms max., 0.20W = 15ms max.                                                                        |
| Release Time                  | 4ms max.                                                                                                    |
| Initial Breakdown Voltage     | 50/60Hz 1000VAC 1 min. (between open contacts)<br>50/60Hz 5000VAC 1 min. (between coil & contact)           |
| Vibration Resistance          | Functional: 10 to 55Hz at double Amplitude of 1.5mm<br>Destructive: 10 to 55Hz at double Amplitude of 1.5mm |
| Shock Resistance              | Functional: Min. 10G<br>Destructive: Min. 100G                                                              |
| Insulation Withstand Voltage  | 5000V 1.2 x 50ms (between coil and contacts)                                                                |
| Ambient Temperature           | -40°C ~ +85°C                                                                                               |
| Operating Humidity            | 45 to 85% RH                                                                                                |
| Unit Weight                   | Approx. 9.5 g                                                                                               |

**REFERENCE DATA**

**Coil Temperature Rise**



**Operate Time/ Release Time**



**Life Expectancy**

