

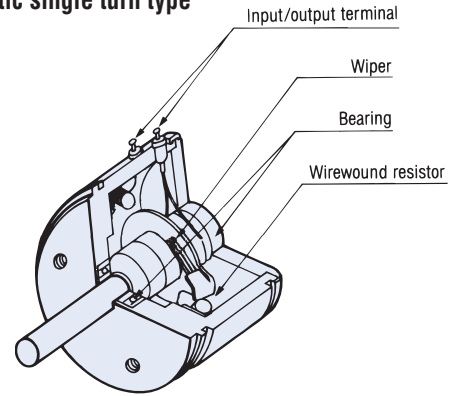
# JC series

## CONDUCTIVE PLASTIC SINGLE TURN TYPE

RoHS compliant



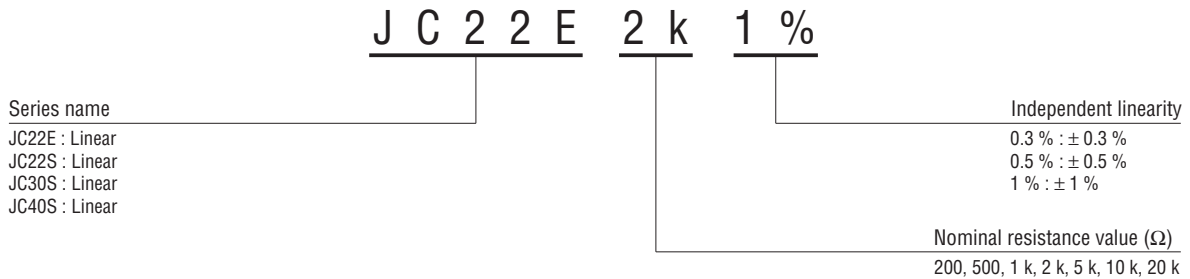
### Basic construction Conductive plastic single turn type



### FEATURES

- Compact
- Cost effective (JC22E) in house comparison
- Long life
- High following characteristics
- High resolution (Essentially infinite)

### PART NUMBER DESIGNATION



### LIST OF PART NUMBERS

| Size    | Item | Nominal resistance value | Independent linearity | Part number       |
|---------|------|--------------------------|-----------------------|-------------------|
| φ 22 mm |      | 1 kΩ                     | ± 1 %                 | JC22E 1 k 1 %     |
|         |      | 2 kΩ                     |                       | JC22E 2 k 1 %     |
|         |      | 5 kΩ                     |                       | JC22E 5 k 1 %     |
|         |      | 10 kΩ                    |                       | JC22E 10 k 1 %    |
|         |      | 200 Ω                    | ± 0.5 %               | ↻ JC22S 200 0.5 % |
|         |      | 500 Ω                    |                       | ↻ JC22S 500 0.5 % |
|         |      | 1 kΩ                     |                       | JC22S 1 k 0.5 %   |
|         |      | 2 kΩ                     |                       | JC22S 2 k 0.5 %   |
|         |      | 5 kΩ                     |                       | JC22S 5 k 0.5 %   |
|         |      | 10 kΩ                    |                       | JC22S 10 k 0.5 %  |

Verify the above part numbers when placing orders.

The products indicated by ↻ mark are manufactured upon receipt of order basis.

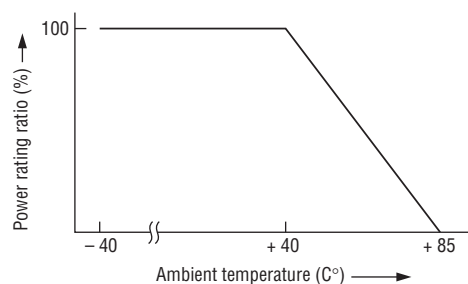
| Size    | Item             | Nominal resistance value | Independent linearity | Part number      |
|---------|------------------|--------------------------|-----------------------|------------------|
| φ 30 mm |                  | 500 Ω                    | ± 0.5 %               | JC30S 500 0.5 %  |
|         |                  | 1 kΩ                     |                       | JC30S 1 k 0.5 %  |
|         |                  | 2 kΩ                     |                       | JC30S 2 k 0.5 %  |
|         |                  | 5 kΩ                     |                       | JC30S 5 k 0.5 %  |
|         |                  | 10 kΩ                    |                       | JC30S 10 k 0.5 % |
|         |                  | 20 kΩ                    |                       | JC30S 20 k 0.5 % |
|         |                  | φ 40 mm                  |                       |                  |
| 1 kΩ    | JC40S 1 k 0.3 %  |                          |                       |                  |
| 2 kΩ    | JC40S 2 k 0.3 %  |                          |                       |                  |
| 5 kΩ    | JC40S 5 k 0.3 %  |                          |                       |                  |
| 10 kΩ   | JC40S 10 k 0.3 % |                          |                       |                  |
| 20 kΩ   | JC40S 20 k 0.3 % |                          |                       |                  |

### ■ STANDARD SPECIFICATIONS

| Item                         | Output<br>Part number | Single turn                   |                       |            |                            |
|------------------------------|-----------------------|-------------------------------|-----------------------|------------|----------------------------|
|                              |                       | JC22E                         | JC22S                 | JC30S      | JC40S                      |
| Nominal resistance value     |                       | Refer to LIST OF PART NUMBERS |                       |            |                            |
| Resistance tolerance         | %                     | ± 20                          | ± 15                  |            |                            |
| Resolution                   |                       | Essentially infinite          |                       |            |                            |
| Independent linearity        | %                     | ± 1                           | ± 0.5 (± 0.3, ± 0.1)* |            | ± 0.3<br>(± 0.15, ± 0.05)* |
| Effective electrical angle   |                       | 320° ± 5°                     | 340° ± 5°             | 343° ± 5°  | 345° ± 5°                  |
| Mechanical angle             |                       | 360° continuous               |                       |            |                            |
| Power rating (at 40 °C)      | W                     | 0.5                           |                       | 0.7        | 1.5                        |
| Dielectric strength          | Vrms                  | 1000 1 min                    |                       |            |                            |
| Insulation resistance        | MΩ minimum            | 1000 (at DC500 V)             |                       |            |                            |
| Rotational torque            | mN·m {gf·cm} maximum  | 4.9 {50}                      | 0.98 {10}             | 1.18 {12}  | 1.47 {15}                  |
| Strength of tighten screw    | N·m {kgf·cm} maximum  | 0.98 {10}                     | —                     |            |                            |
| Temp. coefficient resistance | ppm/°C                | ± 400                         |                       |            |                            |
| Operating temp. range        | °C                    | -40 ~ 85                      |                       |            |                            |
| Maximum rotational speed     | min <sup>-1</sup>     | 100                           | 300                   |            |                            |
| Rotational life (cycles)     |                       | 10 million                    | 20 million            | 30 million |                            |
| Output smoothness            |                       | 0.1 % maximum                 |                       |            |                            |
| Net weight                   | g                     | Approx. 15                    | Approx. 17            | Approx. 24 | Approx. 56                 |

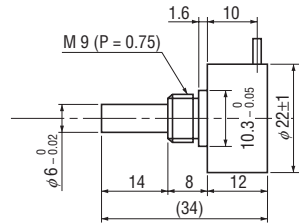
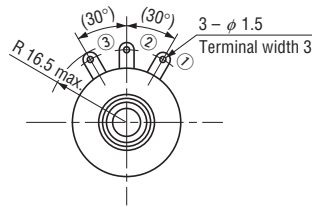
\* : ( ) are made after the receipt of order basis. The availability of the ± 0.05 % linearity is limited to those resistance values that are greater than or equal to 5 kΩ.

### ■ RATED POWER DERATING CURVE



### OUTLINE DIMENSIONS

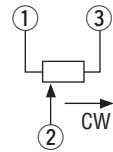
#### JC22E



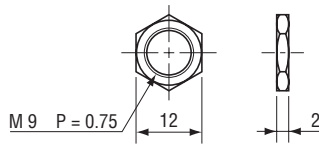
(Unit : mm)

JC22E, JC22S  
JC30S, JC40S

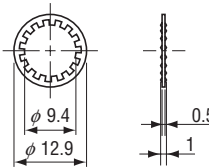
Wiring diagram



#### (JC22E Accessories)

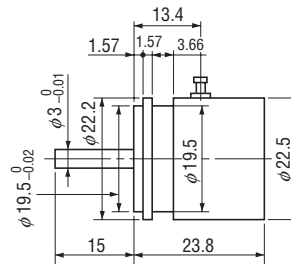
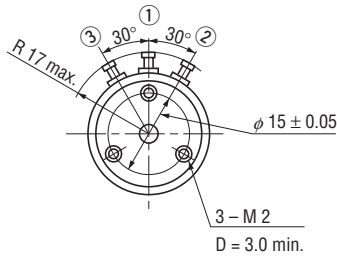


1. Nut

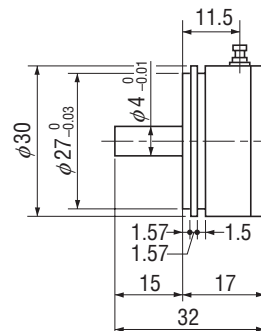
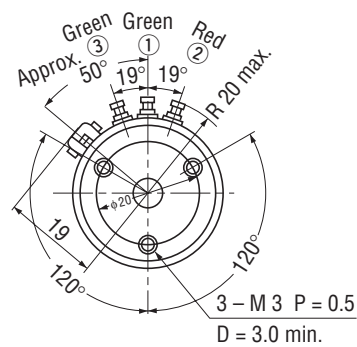


2. Washer

#### JC22S



#### JC30S



#### JC40S

