



SEMAPHORE INDICATOR

# SPSR TYPE, SPSL TYPE



A SWITCH

B PILOT LAMP &  
INDICATORC CONNECTING  
DEVICESD ELECTRONIC  
DEVICESE CONTROL  
CENTER PARTS

## SPECIFICATIONS (RATINGS, PERFORMANCE)

| Specification                 | Type | SPSR/SPSL  |
|-------------------------------|------|--|
| Rated insulation voltage (Ui) |      | 250V   |
| Rated operational voltage     |      | 24V, 30V, 48V, 100 / 110V, 125V, 200 / 220V DC           |
| Voltage fluctuation range     |      | ±15% (24V, 48V, 200 / 220V)                              |
|                               |      | -20 to 30% (100 / 110V, 125V)                            |
| Rated current                 |      | 11mA   |
| Insulation resistance         |      | 1,000MΩ or more (between live parts and mounting panel)  |
| Withstand voltage             |      | 2,000V AC / 1min.  |
| Lightning impulse             |      | ±4.5kV, 3 times for each pole (1.2 / 50μs)               |
| Shock resistance              |      | 490m/s <sup>2</sup> , in 6-axis directions, 3 times each |
| Service life                  |      | 100,000 times or more                                    |
| Degree of protection          |      | IP52   |
| Operating temperature         |      | -20 to 60°C  |
| Storing temperature           |      | -30 to 75°C  |
| Relative humidity             |      | 45 to 85%  |
| Altitude                      |      | 2,000 m max.   |
| Applicable wire size          |      | AWG 20 to 14   |
| Screw size                    |      | M3.5 x 8, with square washer                             |
| Panel thickness               |      | 1 to 6mm   |
| Weight                        |      | Approx. 30g  |

\* For the overseas standard conformable ratings, refer to B47.



# SPSR TYPE, SPSL TYPE

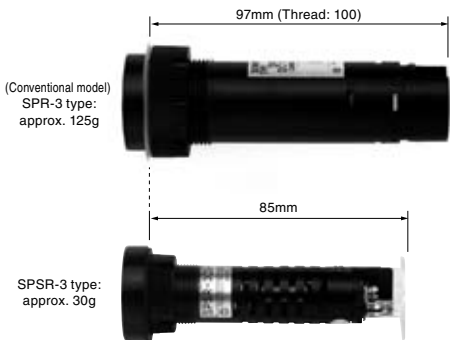
## FEATURES

**1** The SPS type indicators have acquired TÜV and CCC certification, and conform to the EN (IEC) standard.  
Thus, these products have been certified as global standard products conformable with international standards.  
(TUV and CE marks are attached to the product body.)

**5** To enhance safety, the terminal cover for wiring screw live parts is provided as a standard feature.

**2** With the compact design, the SPS type indicator meets the requirements for size and weight reduction.

**6** The round and square types can be selected as the face shape of the indicator. Indication can be differentiated by the face shape, which enhances the panel design easily.



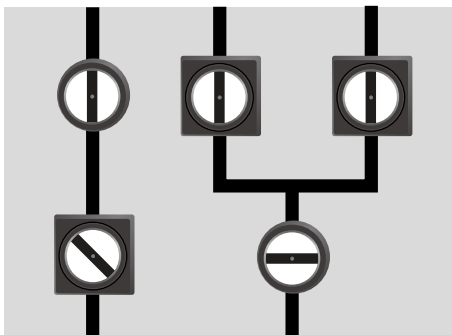
**3** With the energy-saving design, power consumption can be reduced to approx. one fourth that of conventional models.

\* Rated operating current at 24 V DC:  
(Conventional) SPR/L: approx. 37 mA  
SPSR/L: approx. 9 mA

**7** Since the circuit status is indicated by the flag shape, erroneous recognition is prevented. The circuit ON/OFF status can be recognized at a glance.

**4** Twisted wires up to AWG14 size (equivalent to 2.5 mm<sup>2</sup>) can be connected.

(Conceptual image)



## HOW TO ORDER

# SPSR-20S-DC110-BBA

Basic type

Face shape

| Code | Shape  |
|------|--------|
| R    | Round  |
| L    | Square |

Face dimensions

| Code | Dimension | Flag width |
|------|-----------|------------|
| 2    | φ25mm     | 4mm        |
|      | □28mm     |            |
| 3    | φ32mm     | 6mm        |
|      | □35mm     |            |

Terminal

| Code | Shape          |
|------|----------------|
| S    | Screw terminal |

Rated operational voltage

| Code  | Voltage       |
|-------|---------------|
| DC024 | 24V DC        |
| DC030 | 30V DC        |
| DC048 | 48V DC        |
| DC110 | 100 / 110V DC |
| DC125 | 125V DC       |
| DC220 | 200 / 220V DC |

Mounting hole size

| Code    | Mounting hole diameter |
|---------|------------------------|
| No code | φ20.5                  |
| A       | φ22.3                  |

\*A is special spec.

Frame color

| Code | Color        |
|------|--------------|
| B    | Black (N1.5) |

Flag color

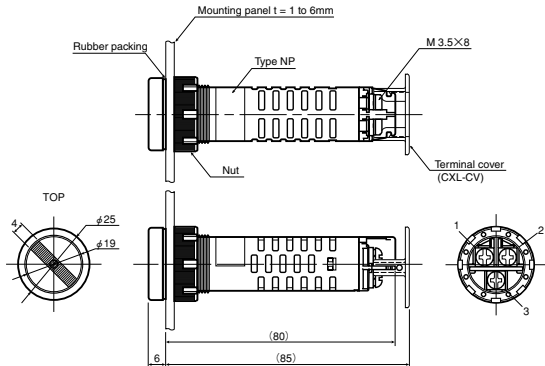
| Code | Color        |
|------|--------------|
| B    | Black (N1.5) |

Flag shape

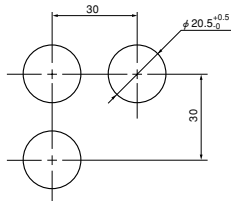
| Code | ① Input | ② Input | No input |
|------|---------|---------|----------|
| 0    | ⊖       | ⊕       | ⊘        |
| 1    | ⊕       | ⊖       | ⊘        |
| 2    | ⊕       | ⊖       | ⊙        |

## STANDARD PRODUCTS

### SPSR-2□S



● Mounting hole



● Applicable accessories

|                 |        |
|-----------------|--------|
| Terminal cover  | CXL-CV |
| Tightening tool | SPS-Q  |

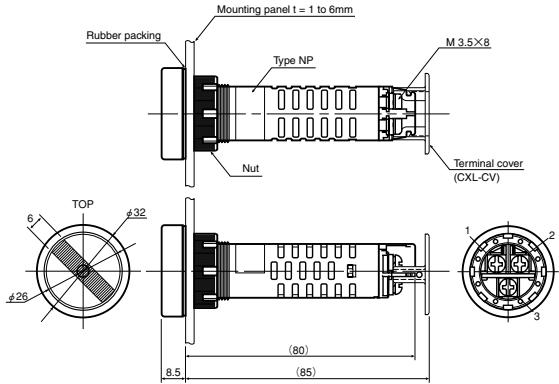


SEMAPHORE INDICATOR

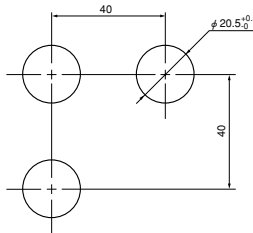
# SPSR TYPE, SPSL TYPE

## STANDARD PRODUCTS

### SPSR-3 S



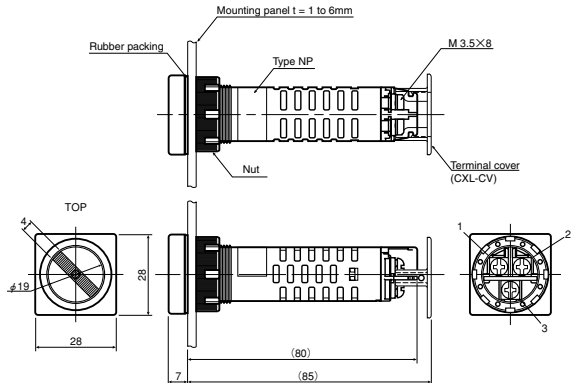
● Mounting hole



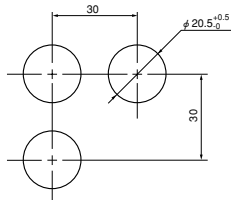
● Applicable accessories

|                 |        |
|-----------------|--------|
| Terminal cover  | CXL-CV |
| Tightening tool | SPS-Q  |

### SPSL-2 S



● Mounting hole

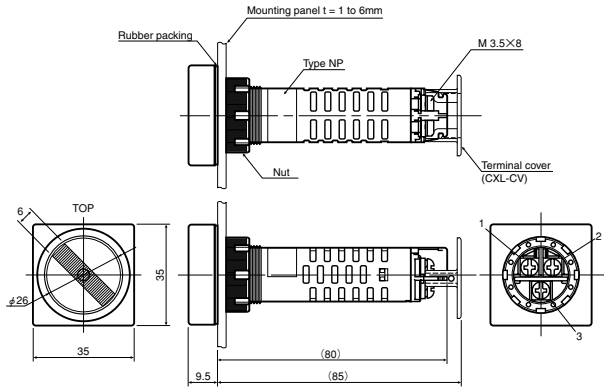


● Applicable accessories

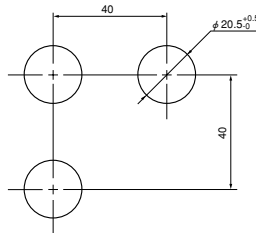
|                 |        |
|-----------------|--------|
| Terminal cover  | CXL-CV |
| Tightening tool | SPS-Q  |

# PILOT LAMP & INDICATOR

## SPSL-3□S



### ● Mounting hole



### ● Applicable accessories

|                 |        |
|-----------------|--------|
| Terminal cover  | CXL-CV |
| Tightening tool | SPS-Q  |

## ACCESSORIES

### Terminal cover

(Order unit: 10)

#### ● CXL-CV



\* The terminal cover is provided as standard equipment.

### Tightening tool

#### ● SPS-Q



\* Tightening tool for a nut.

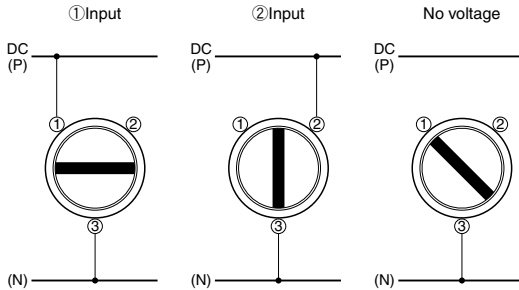


SEMAPHORE INDICATOR

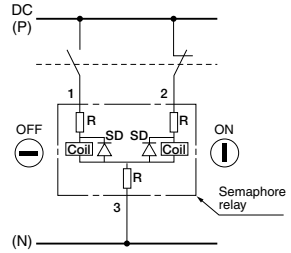
# SPSR TYPE, SPSL TYPE

## OPERATION AND CIRCUIT SPECIFICATIONS

### ● Operation chart



### ● Circuit diagram



## OVERSEAS STANDARD CONFORMABLE RATINGS (EN60947/IEC60947)

### (1) Basic ratings and applications

| No. | Item                          | Basic rating and application              | IEC standard No.    |
|-----|-------------------------------|---|---------------------|
| 1   | Rated operational voltage     | 24V, 48V, 100 / 110V, 125V, 200 / 220V DC | IEC60947-5-1; 5.1-d |
| 2   | Rated operational current     | 11mA max.                                 | IEC60947-5-1; 5.1-e |
| 3   | Rated insulation voltage (Ui) | 250V                                      | IEC60947-5-1; 5.1-f |
| 4   | IP code                       | IP 52                                     | IEC60947-5-1; 5.1-l |

### (2) Normal operating conditions

| No. | Item  | Normal operating condition  | IEC standard No.      |
|-----|---|---|-----------------------|
| 1   | Ambient temperature                                 | -5°C to 40°C  | IEC60947-1; 6.1.1     |
| 2   | Altitude  | 2,000 m max.  | IEC60947-1; 6.1.2     |
| 3   | Atmospheric condition                               | Humidity: 90% max. (at 20°C), 50% (at 40°C)<br>Microscopic environment: Pollution degree: 3 | IEC60947-1; 6.1.3     |
| 4   | Conditions during transport and storage             | -25°C to 55°C<br>+70°C for short periods (within 24 hours)                                  | IEC60947-1; 6.2       |
| 5   | Mounting of single hole mounted devices             | φ 20.5mm  | IEC60947-5-1; 6.3.1   |
| 6   | Range of panel thickness                            | 1 to 6mm  | IEC60947-5-1; 6.3.1.2 |
| 7   | Minimum distances between centres of mounting holes | SPSR/L-2□   | 30mm                  |
|     |   | SPSR/L-3□   | 40mm                  |

### (3) Structure and performance

| No. | Item                | Structure and performance                            | IEC standard No.     |
|-----|---------------------|--|----------------------|
| 1   | Connecting capacity | Twisted wire: AWG20 (2 pieces max.)                  | IEC60947-1; 7.1.7    |
|     |                     | Round crimp terminal: AWG14 to 20 (2 pieces max.)    | IEC60947-1; AnnexD   |
| 2   | Withstand voltage   | Power-frequency withstand voltage: 2,000V AC / 1min. | IEC60947-5-1; 7.2.3  |
| 3   | Durability          | Mechanical durability: 100,000 operations            | IEC60947-5-1; AnnexC |

Remarks: The SPS type indicators have acquired TÜV certification for the above items. For detailed information, contact Fuji Electric Industry.