



SEMAPHORE INDICATOR

SPS TYPE

PILOT LAMP &
INDICATOR

SPECIFICATIONS (RATINGS, PERFORMANCE)

Specification	Type	SPSR / SPSL
Rated insulation voltage (Ui)		250 V AC / DC
Rated operational voltage		24 V, 30 V, 48 V, 100 / 110 V, 125 V, 200 / 220 V DC
Voltage fluctuation range		±15% (24 V, 48 V, 200 / 220 V)
		-20 to 30% (100 / 110 V, 125 V)
Rated current		11 mA
Insulation resistance		1,000 MΩ or more (between live parts and mounting panel)
Withstand voltage		2,000 V AC for one minute
Lightning impulse		±4,500 V, 3 times for each pole (1.2 / 50 μs)
Shock resistance		490 m/s ² , 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 6 mm
Weight		Approx. 30 g

* For the overseas standard conformable ratings, refer to p. 181.

FEATURES

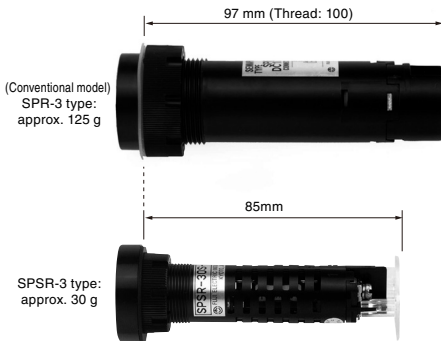
1

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.)

2

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



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

4

Twisted wires up to AWG14 size (equivalent to 2.5 mm²) can be connected.

5

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

6

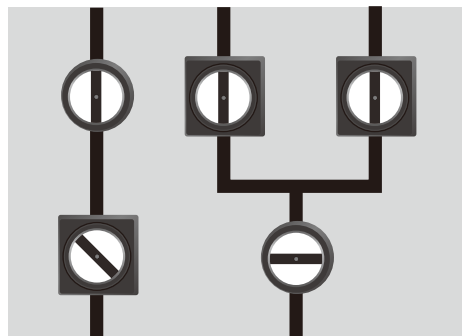
The round and square types can be selected as the face shape of the indicator. Indication can be differentiated by the face shape, which enhances the panel design easily.



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.

(Conceptual image)





SEMAPHORE INDICATOR

SPS TYPE**PRODUCT CODING****SPSR-20S-DC110-BBA**

Basic type

Face shape

Code	Shape
R	Round
L	Square

Face dimensions

Code	Dimension	Flag width
2	ø25mm	4mm
	□28mm	
3	ø32mm	6mm
	□35mm	

Terminal

Code	Shape
S	Screw terminal

Rated operational voltage

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

Mounting hole size

Code	Mounting hole diameter
No code	ø20.5
A	ø22.3

Frame color

Code	Color
B	Black (N1.5)

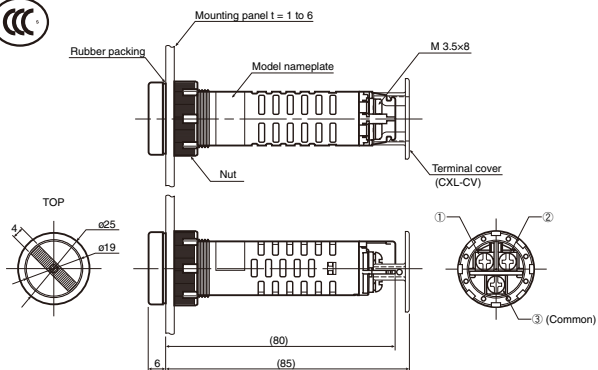
Flag shape

Code	① input	② input	No input
0	⊖	⓪	⊘
1	Ⓜ	Ⓜ	Ⓜ
2	Ⓜ	Ⓜ	Ⓜ

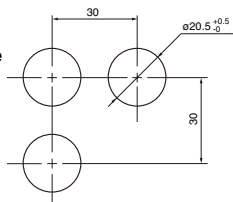
Flag color

Code	Color
B	Black (N1.5)

PILOT LAMP & INDICATOR

STANDARD PRODUCTS**SPSR-2□S**

● Mounting hole size

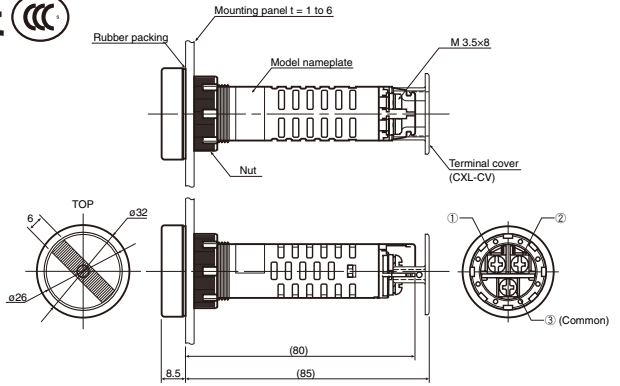


● Applicable accessories

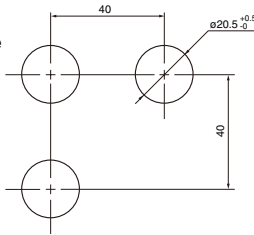
Terminal cover	CXL-CV
Tightening tool	SPS-Q

STANDARD PRODUCTS

SPSR-3 □ S



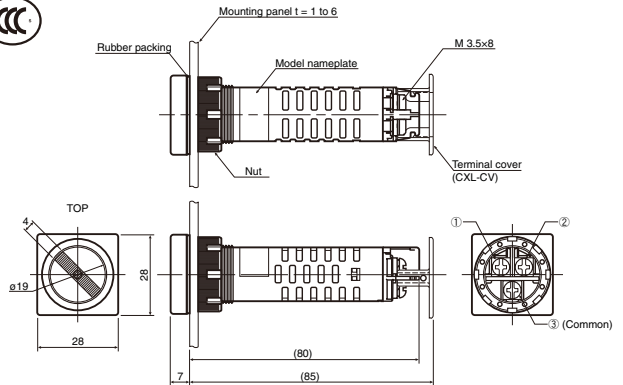
● Mounting hole size



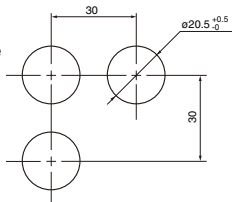
● Applicable accessories

Terminal cover	CXL-CV
Tightening tool	SPS-Q

SPSL-2 □ S



● Mounting hole size



● Applicable accessories

Terminal cover	CXL-CV
Tightening tool	SPS-Q

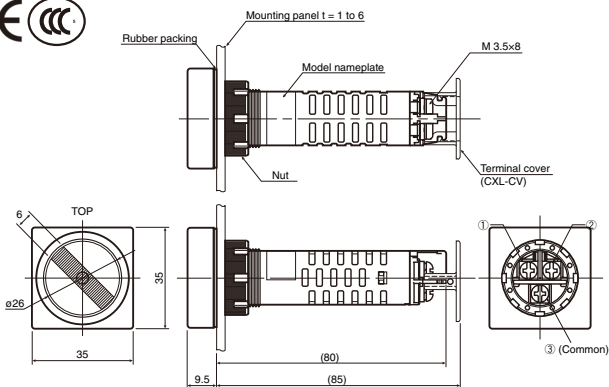


SEMAPHORE INDICATOR

SPS TYPE

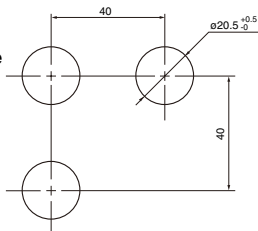


SPSL-3 S



PILOT LAMP & INDICATOR

● Mounting hole size



● Applicable accessories

Terminal cover	CXL-CV
Tightening tool	SPS-Q

ACCESSORIES

Terminal cover

(Order unit: 10)

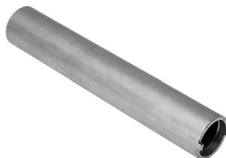
● CXL-CV



* The terminal cover is provided as standard equipment.

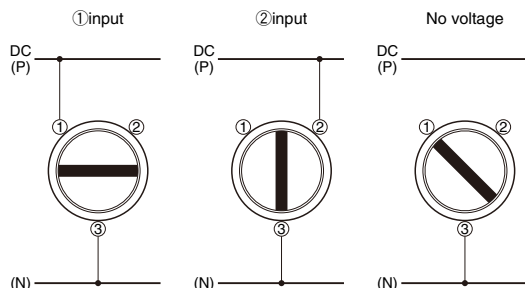
Tightening tool

● SPS-Q

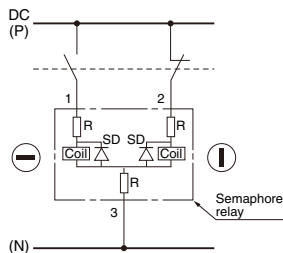


OPERATION AND CIRCUIT SPECIFICATIONS

● Operation chart



● Circuit diagram



OVERSEAS STANDARD CONFORMABLE RATINGS (EN60947/IEC60947)

As of July 2004

(1) Basic ratings and applications

No.	Item	Basic rating and application	IEC standard No.
1	Rated operational voltage	24 V, 48 V, 100 / 110 V, 125 V, 200 / 220 V DC	IEC60947-5-1; 5.1-d
2	Rated operational current	11 mA max.	IEC60947-5-1; 5.1-e
3	Rated insulation voltage	250 V	IEC60947-5-1; 5.1-f
4	IP code	IP52	IEC60947-5-1; 5.1-l

(2) Normal operating conditions

No.	Item	Normal operating condition	IEC standard No.	
1	Ambient air 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) Microscopic environment: Pollution degree: 3	IEC60947-1; 6.1.3	
4	Conditions during transport and storage	-25°C to +55°C +70°C for short periods (within 24 hours)	IEC60947-1; 6.2	
5	Mounting of single hole mounted devices	See p. 178 - p. 180.	IEC60947-5-1; 6.3.1	
6	Range of panel thickness	1 to 6 mm	IEC60947-5-1; 6.3.1.2	
7	Minimum distances between centres of mounting holes	SPSR / L-2□	30mm	IEC60947-5-1; 6.3.1.3
		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: 2000 V AC for one minute	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.