

INDICATOR

SPS-TYPE  **CE**

Semaphore Indicator



**SPECIFICATIONS (RATINGS, PERFORMANCE)**

Specification \ Type	SPSR-2□S, 3□S	SPSL-2□S, 3□S
Rated insulation voltage(Ui)	AC,DC250V	
Rated operational voltage (Ui)	DC24V, 30V, 48V, 100/110 V, 125 V, 200/220 V	
Voltage fluctuation range	±15%(24 V, 30V,48 V, 200/220 V) -20 to 30%(100/110 V, 125V)	
Rated operational current (Ie)	11 mA max.	
Insulation resistance	1,000 MΩ over	
Power-frequency withstand voltage	2,000 V AC/min.	
Inpulse withstand voltage	±4,500 V, 3 times for each pole (1.2/50 μs)	
Shock resistance	490m/s ² 6 directions 3 times	
Durability	Over 10 thousand cycles	
Degree of protection	IP52	
Operating temperature	-20 to 60°C	
Storage temperature	-30 to 75°C	
Relative humidity	45 to 85%	
Altitude	Max 2,000 m	
Compatible copper conductors	AWG20 to14	
Compatible terminal	M3.5 x 8 with square washer	
Mounting plate thickness	1 to 6 mm	
Weight	Approximately 30 g	

* Please refer to page 6 for the rating compliant with the international standard.

FEATURES

1 TÜV approved International Standard products conforming to EN60947-1 and EN60947-5-1.
 (The TÜV and CE marks are affixed on the main body of the product.)

5 Standard terminal cover for the live parts ensures a higher level of safety.

2 Customer requirements for size and weight reductions are completely satisfied by the equipment's compact design.



6 Option for a round or square external shape is available. Distinct display of each optional shape completes the sophisticated panel design.



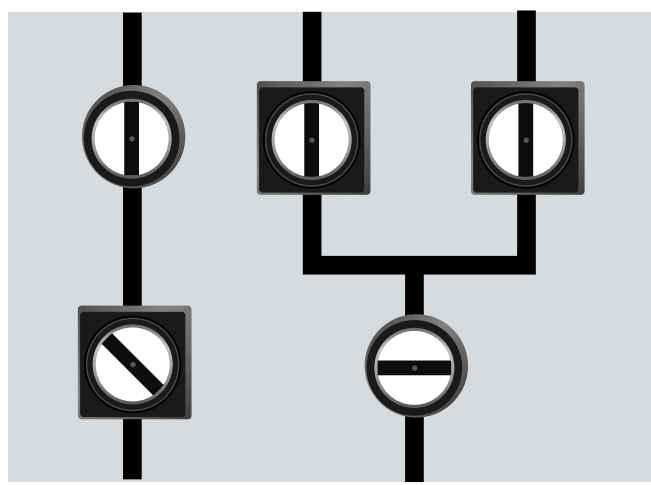
3 A superior energy-efficient design has achieved further reductions of power consumption to one fourth the previous model.

Note: Rated operationI current/24VDC
 (Previous model) SPR/L model: Approx. 37 mA
 (New model) SPSR/L model: Approx. 9 mA

7 Visual-apparent circuit display makes it possible to verify the circuit connection accurately and instantly.

4 Compatible with at maximum an AWG14 power cable (equivalent to 2.5 mm²).

(Conceptual drawing)





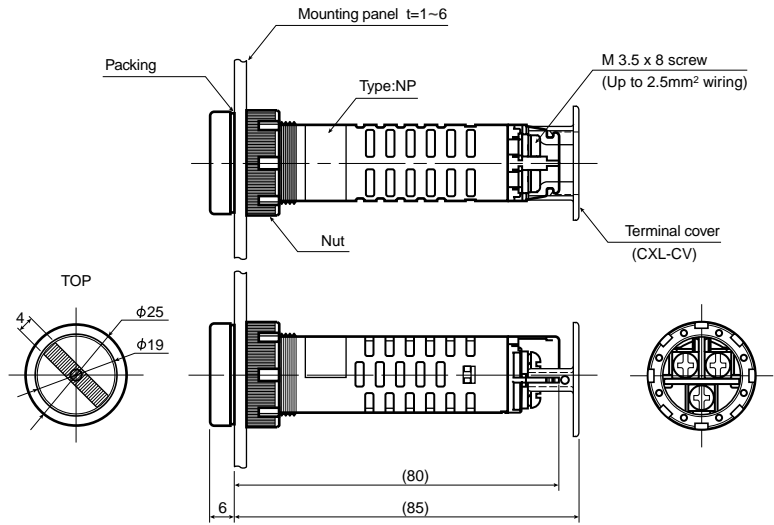
Semaphore Indicator

SPS-TYPE

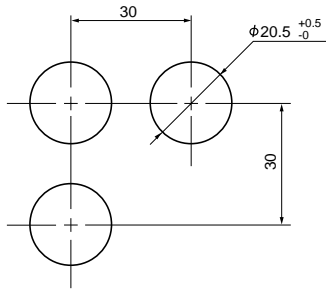


STANDARD PRODUCTS

SPSR-2 S



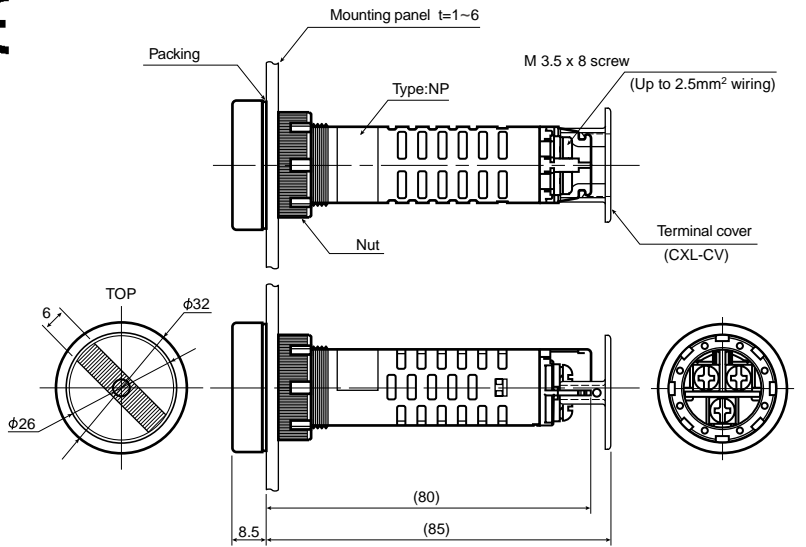
● Panel cut dimensions
(Minimum mounting pith)



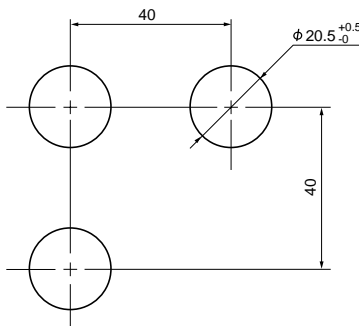
● Applicable accessories

Terminal cover	CXL-CV
Tightening tool	SPS-Q

SPSR-3 S



● Panel cut dimensions
(Minimum mounting pith)

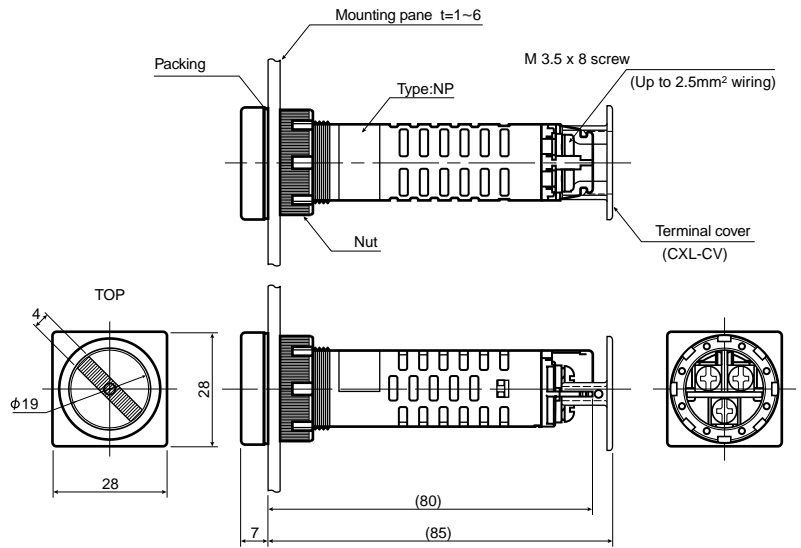


● Applicable accessories

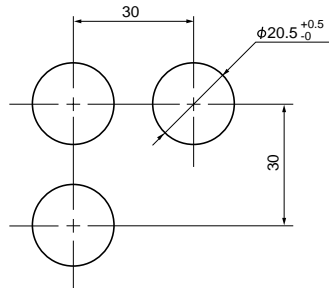
Terminal cover	CXL-CV
Tightening tool	SPS-Q

STANDARD PRODUCTS

SPSL-2□S



●Panel cut dimensions
 (Minimum mounting pith)

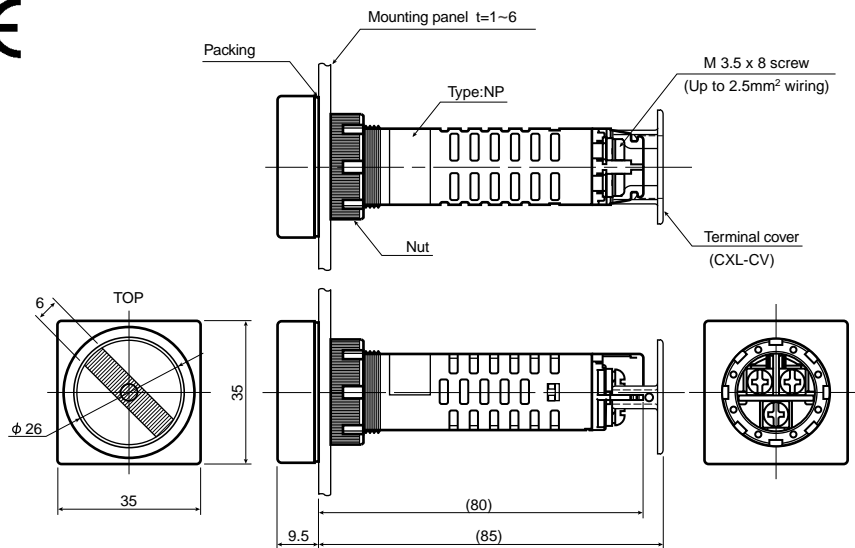


●Applicable accessories

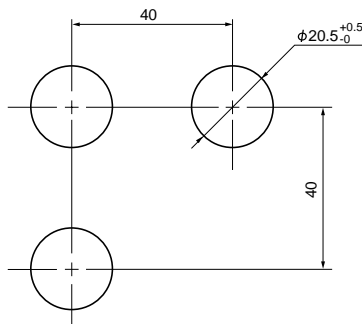
Terminal cover **CXL-CV**

Tightening tool **SPS-Q**

SPSL-3□S



●Panel cut dimensions
 (Minimum mounting pith)



●Applicable accessories

Terminal cover **CXL-CV**

Tightening tool **SPS-Q**



ORDERING METHOD

Refer to the following type code.

Product coding

SPSR-20S-DC110-BBA

Basic type

Surface dimensions

Code	Dimensions
R	Round type
L	Square type

Surface dimensions

Code	Face size	Indicating flag width
2	φ25mm	4mm
	□28mm	
3	φ32mm	6mm
	□35mm	

Terminal

Code	Type
S	Terminal screw

Power supply voltage

Code	Voltage
DC024	DC24V
DC030	DC30V
DC048	DC48V
DC110	DC100/110V
DC125	DC125V
DC220	DC200/220V

Mounting hole

Code	Mounting hole dimension
No Code	φ 20.5mm
A	φ 22.3mm

Frame color

Code	Color
B	Black(N1.5)

Flag color

Code	Color
B	Black(N1.5)

Indicating flag

Code	OFF	ON	No voltage
0	⊖	⊥	↘
1	⊕	⊔	↗
2	⊘	⊚	⊙

ACCESSORIES

Terminal cover (Order unit : 10)

CXL-CV



Note:
The terminal cover is supplied with main unit.

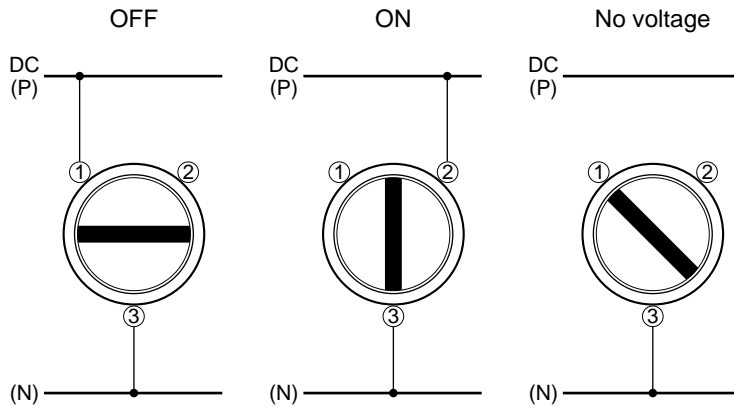
Tightening tool

SPS-Q

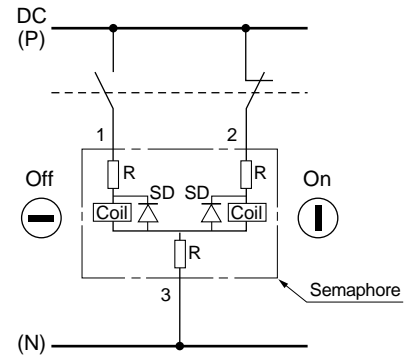


MOVEMENT AND CIRCUIT

● Indication diagram



● Circuit diagram



Rating compliant with the international standard (EN60947/IEC60947) as of June 2004

(1) Basic rated values and utilization

No.	Item	Basic rated values and utilization	IEC standard
1	Rated operational voltages	DC24V, 48V, 100/110V, 125V, 200/220V	IEC60947-5-1; 5.1-d
2	Rated operational currents	11mA max.	IEC60947-5-1; 5.1-e
3	Rated insulation voltage	250V	IEC60947-5-1; 5.1-f
4	IP code	IP 52	IEC60947-5-1; 5.1-l

(2) Normal service conditions

No.	Item	Normal service conditions	EC standard
1	Ambient air temperature	-5°C~+40°C	IEC60947-1; 6.1.1
2	Altitude	2,000m max.	IEC60947-1; 6.1.2
3	Atmospheric conditions	Humidity : max 90% at +20°C, 50% at +40°C Micro-environment : Pollution degree 3	IEC60947-1; 6.1.3
4	Conditions during transport and storage	Between -25°C and +55°C, for short periods not exceeding 24h, up to +70°C	IEC60947-1; 6.2
5	Mounting hole	see 3-4page	IEC60947-5-1; 6.3.1
6	Range of panel thickness	1~6mm	IEC60947-5-1; 6.3.1.2
7	Minimum mounting pitch	SPSR/L-2□	30mm
		SPSR/L-3□	40mm

(3) Basic rated values and utilization

No.	Item	Basic rated values and utilization	EC standard
1	Connecting capacity	Stranded wire : AWG20(max 2pear)	IEC60947-1; 7.1.7
		With ring lug : AWG14-20(max 2pear)	IEC60947-1; AnnexD
2	Dielectric properties	Power frequency withstand voltage : AC2000V/1 minute	IEC60947-5-1; 7.2.3
3	Durability	Mechanical durability : 100,000times	IEC60947-5-1; AnnexC

Note: The above items have been certified according to TÜV. Please contact us for more details.

Offering quality assurance for control parts

FUJI ELECTRIC INDUSTRY CO., LTD.

(Head Office) Nishiiru, Tominokoji, Oike-dori, Nakagyo-ku, Kyoto 604-0954, Japan

(Kusatsu Factory) 3-4-1, Nomura, Kusatsu, Shiga 525-8521, Japan

Phone 81-77-562-1215 / Fax 81-77-562-1213

(Shin-Asahi Factory) 905-1, Ota Oaza Shin-Asahi-cho, Takashima-gun, Shiga 520-1512, Japan

Phone 81-740-25-6338 / Fax 81-740-25-6339

Please address inquiries to the following offices:

- Sales Office 3-4-1, Nomura, Kusatsu, Shiga 525-8521, Japan
Phone 81-77-562-1215 / Fax 81-77-562-1213
- Osaka Sales Office Koei Bldg. 3-2-2, Ekimae, Ibaragi, Osaka 567-0888, Japan
Phone 81-72-624-7175 / Fax 81-72-624-7235
- Tokyo Sales Office ALTE Bldg. Hamamatsucho, 1-25-6, Hamamatsu-cho, Minato-ku, Tokyo 105-0013, Japan
Phone 81-3-5401-3379 / Fax 81-3-5401-3047

URL: <http://www.fujidk.co.jp/>

E-mail: prod@fujidk.co.jp

Precautions

- Be sure to use the product within the correct voltage and amperage ranges as stated in this manual.
- Check connections carefully, as a faulty connection may lead to an accident.
- Check for abnormalities such as breaks in the leads, etc. before using the product.
- Avoid using the product in extreme environments such as in the presence of high temperatures, high humidity, dust, corrosive gases, vibration, or shocks.
- Please contact the manufacturer for advice before using the products for special applications.
- When overheating or other problems occurs, disconnect the power to prevent the voltage from being applied.
- Be sure to use compatible parts or tools during wire connection.

※ To facilitate technical improvements, we reserve the right to change the specifications and names of products without notice.
The contents described herein are correct as of June, 2004.