

- Suitable for location not allowing use of through-beam type

The SSR Series is a series of light curtain sensors used together with a reflector and ideal for locations with a wall or other obstacle on one side that hinders the installation of the transmitter or receiver of through-beam type.

- Metal connector for simple connection and handling
- Reflective type for simple installation and wiring
- No adjustment on sensor required
- Compact size achieved by unitization of transmitter and receiver
- Wide variation of detecting widths: 140/220/300/380/460 mm

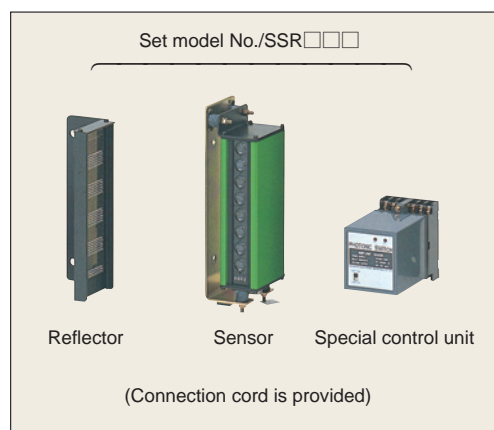
Type

| Detection method | Detecting distance | Detecting width | Set model No. | No. of light axes | Light axis interval | Detecting object |
|--------------------|----------------------|-----------------|---------------|-------------------|---------------------|--|
| Reflector type | 1-3m (0.4-1m) | 140mm | SSR304 | 4 | 40mm | Opaque object of ϕ 60 mm min. (At 1.5 m from sensor; ϕ 80 mm min. near reflector) |
| | | 220mm | SSR306 | 6 | | |
| | | 300mm | SSR308 | 8 | | |
| | | 380mm | SSR310 | 10 | | |
| | | 460mm | SSR312 | 12 | | |

Optional parts

| Type | Appearance | Model | Description |
|------------------|------------|----------------|---|
| Reflector | | SSM304S | For 0.4-1 m detecting distance |
| | | SSM306S | |
| | | SSM308S | |
| | | SSM310S | |
| | | SSM312S | |
| Mounting bracket | | PSZ300 | Applicable sensor SSB304-SSB308 Applicable reflector SSM304-SSM308 |
| | | PSZ300L | Applicable sensor SSB-310-SSB312 |
| | | PSZ300S | Applicable reflector SSM310-SSM312 |
| Connection cord | | SSR-H10 | Cord with connector (10 m) |

*For prices of the sensor, reflector and control unit for separate purchase, see the Price List at the end of this book.



Rating/Performance/Specification

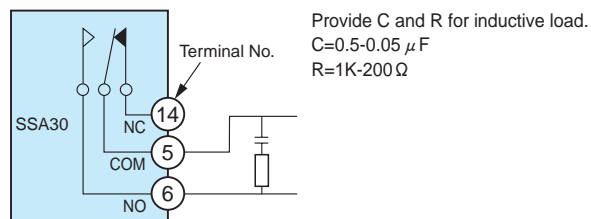
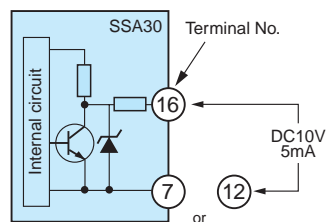
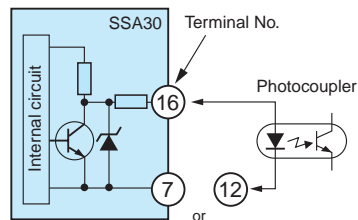
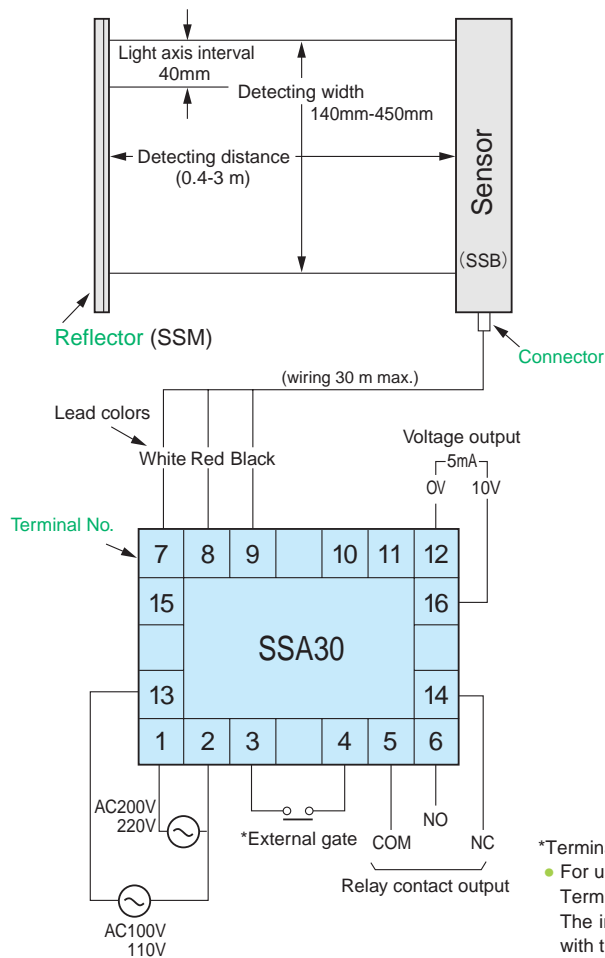
| Model | Set model No. | SSR304 | SSR306 | SSR308 | SSR310 | SSR312 | |
|--------------------|---|---|------------|--|------------|------------|-------------|
| | Sensor only | SSB304 | SSB306 | SSB308 | SSB310 | SSB312 | |
| | Reflector only | SSM304 | SSM306 | SSM308 | SSM310 | SSM312 | |
| | Control unit | SSA30 | | | | | |
| Rating/performance | Detection method | Reflector type | | | | | |
| | Detecting distance | 1-3m (0.4-1m)* | | | | | |
| | Detection object | Opaque object of ϕ 60 mm min. (At 1.5 m from sensor; ϕ 80 mm min. near reflector) | | | | | |
| | No. of light axes | 4 | 6 | 8 | 10 | 12 | |
| | Detecting width | 140mm | 220mm | 300mm | 380mm | 460mm | |
| | Light axis interval | 40mm | | | | | |
| | Power supply | 100VAC 110V / 200V 220V \pm 10% 50/60Hz | | | | | |
| | Power consumption | 4VA max. | | | | | |
| | Output mode | Relay output 1c Voltage output | (Rating) | Relay output :5 A (250 VAC) max. noninductive load Voltage output :output impedance 4.7 k Ω (10 VDC) | | | |
| | Operation mode | Light-ON/Dark-ON selectable (with switch on control unit) | | | | | |
| | External gate | Contact/voltage input | | H:6V min. L:1V max. | | | |
| | Response time | Relay output Voltage output | | 25ms max. 5ms max. | | | |
| Specification | Light source (light wavelength) | Infrared LED(950nm) | | | | | |
| | Light-sensitive element | Photo transistor | | | | | |
| | Indicator | Sensor: Light reception indicator (red LED) \times No. of light axes | | Control unit: PL Power indicator (red LED) OP.L Operation indicator (red LED) | | | |
| | Switch (SW) | Light-ON/Dark-ON selector switch provided (on control unit) | | | | | |
| | Material | Case: aluminum / Reflector and control unit: resin | | | | | |
| | Connector | Sensor: connector connection with VCT cord with 3-pin connector / three 0.75 mm ² cores / 5 m Control unit :terminal block with M3.5 screws | | | | | |
| | Mass | Sensor | 1.3kg max. | 1.7kg max. | 2.1kg max. | 2.5kg max. | 2.9 kg max. |
| | | Reflector | 300g max. | 400g max. | 500g max. | 600g max. | 700g max. |
| | | Control unit | 400g max. | | | | |
| Notes | *For a detection distance between 0.4-1 m, use an appropriate model of special reflector (see Optional Parts on the previous page). | | | | | | |

Environmental Specification

| | | |
|-------------|-------------------------|--|
| Environment | Ambient light | 8,000lx max. |
| | Ambient temperature | -10 - +55°C (non-freezing) |
| | Ambient humidity | 35-85%RH (non-condensing) |
| | Protective structure | Sensor : IP42 Control unit:IP20 |
| | Vibration | 10-55 Hz / 1.5 mm amplitude / 2 hours each in 3 directions |
| | Shock | 1000 m/s ² / 2 times each in 3 directions |
| | Dielectric withstanding | 1500 VAC for 1 minute |
| | Insulation resistance | 500 VDC, 20 M Ω |

SSR

Input/Output Circuit and Connection



*Terminals 3 and 4 compose the external gate (shorting bar is provided).
 • For use by external voltage input to the external gate, connect the positive electrode to Terminal 3 and negative electrode to Terminal 12.
 The internal circuit is activated when the gate is closed. The circuit does not function with the gate open. The applicable voltage range is 5-25 V.

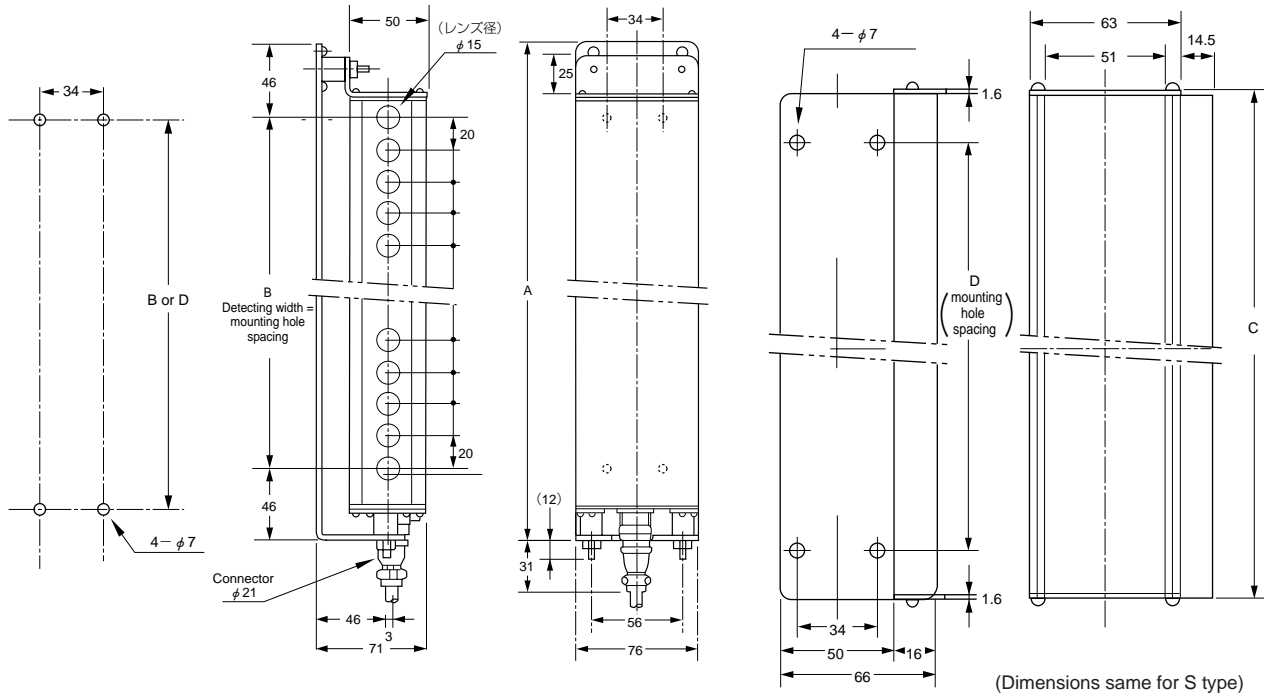
Dimensions (in mm)

CAD

● Sensor

● Reflector

Sensor mounting hole dimensions



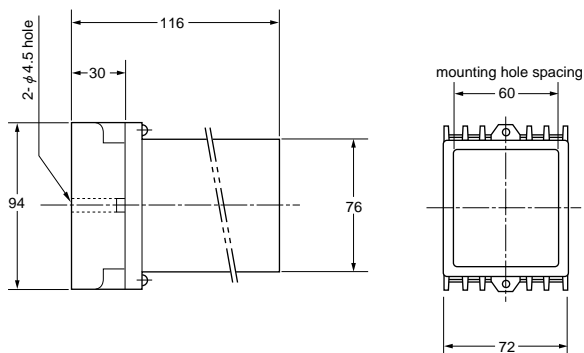
● Dimensions of portions

| Model | Type Portion mm | Sensor (SSB) | | Se | |
|------------|--------------------|--------------------|---------------------|--------------------|----------------------|
| | | A (overall length) | B (detecting width) | C (overall length) | D (mounting spacing) |
| SSB(M) 304 | | 232 | 140 | 183.2 | 140 |
| SSB(M) 306 | | 312 | 220 | 263.2 | 220 |
| SSB(M) 308 | | 392 | 300 | 343.2 | 300 |
| SSB(M) 310 | | 472 | 380 | 423.2 | 380 |
| SSB(M) 312 | | 552 | 460 | 503.2 | 460 |

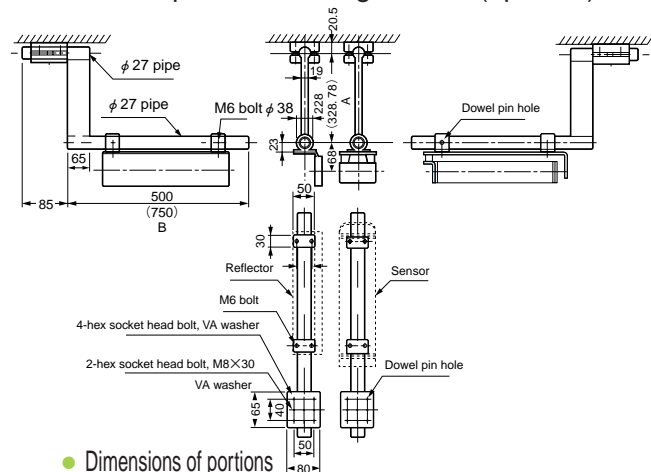
CAD

● Control unit

SSA30



● With special mounting bracket (optional)



● Dimensions of portions

| Model | A(mm) | B(mm) | Applicable sensor and reflector model |
|---------|-------|-------|---------------------------------------|
| PSZ300 | 228 | 500 | SSB304-SSB308 SSM304-SSM308 |
| PSZ300L | 328 | 750 | SSB310/SSB312 SSM310/SSM312 |
| PSZ300S | 78 | 750 | SSM310/SSM312 |