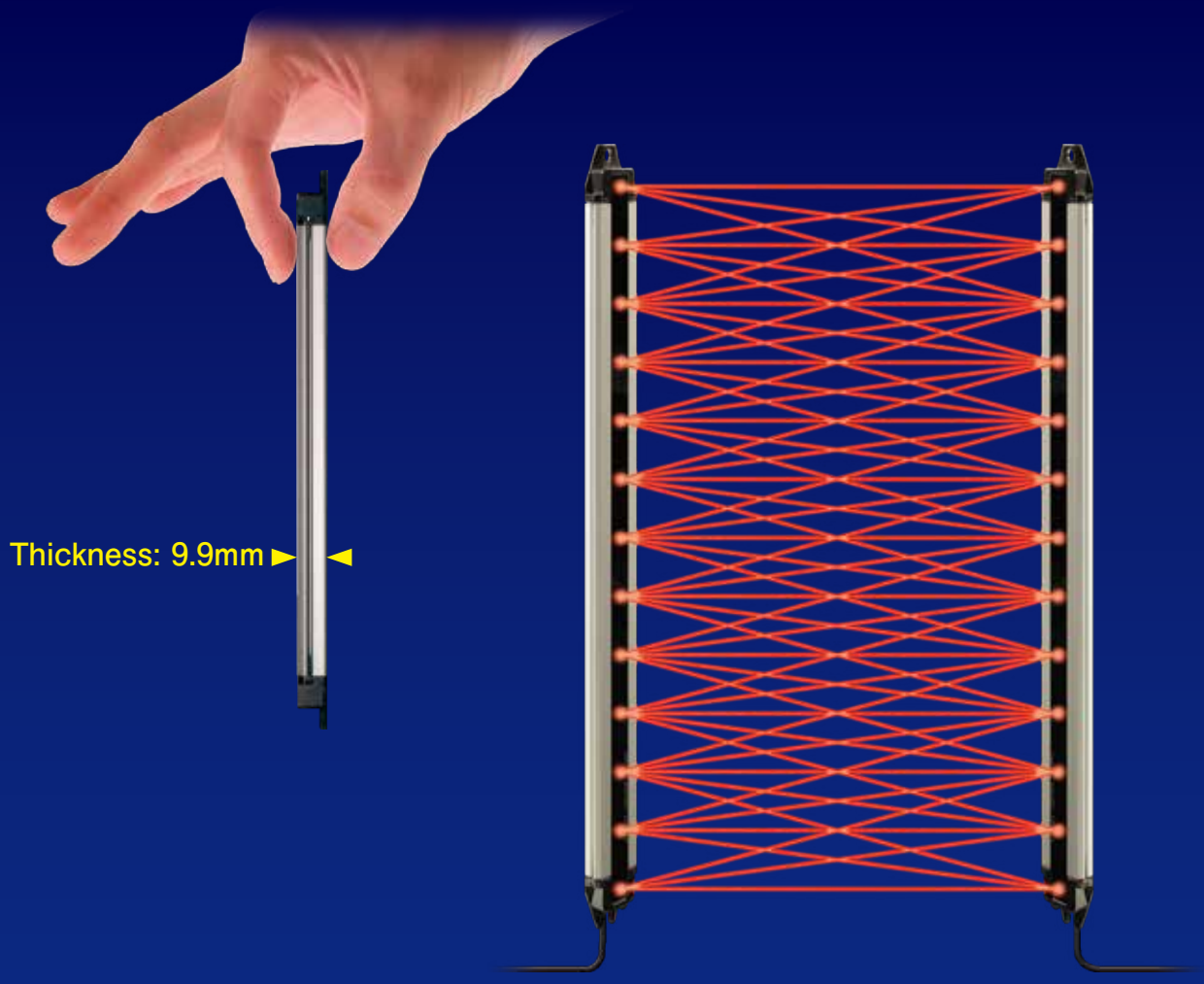
TAKEX

Ultra-thin Light Curtain Sensor

SSXU20 series

CE

Improved versatility while maintaining our slim profile.



Ultra-thin light curtain sensor of only 9.9 mm in thickness

Switchable between parallel beam and cross beam modes

NPN or PNP output selectable

Eight selections of detection width from 160 mm to 720 mm

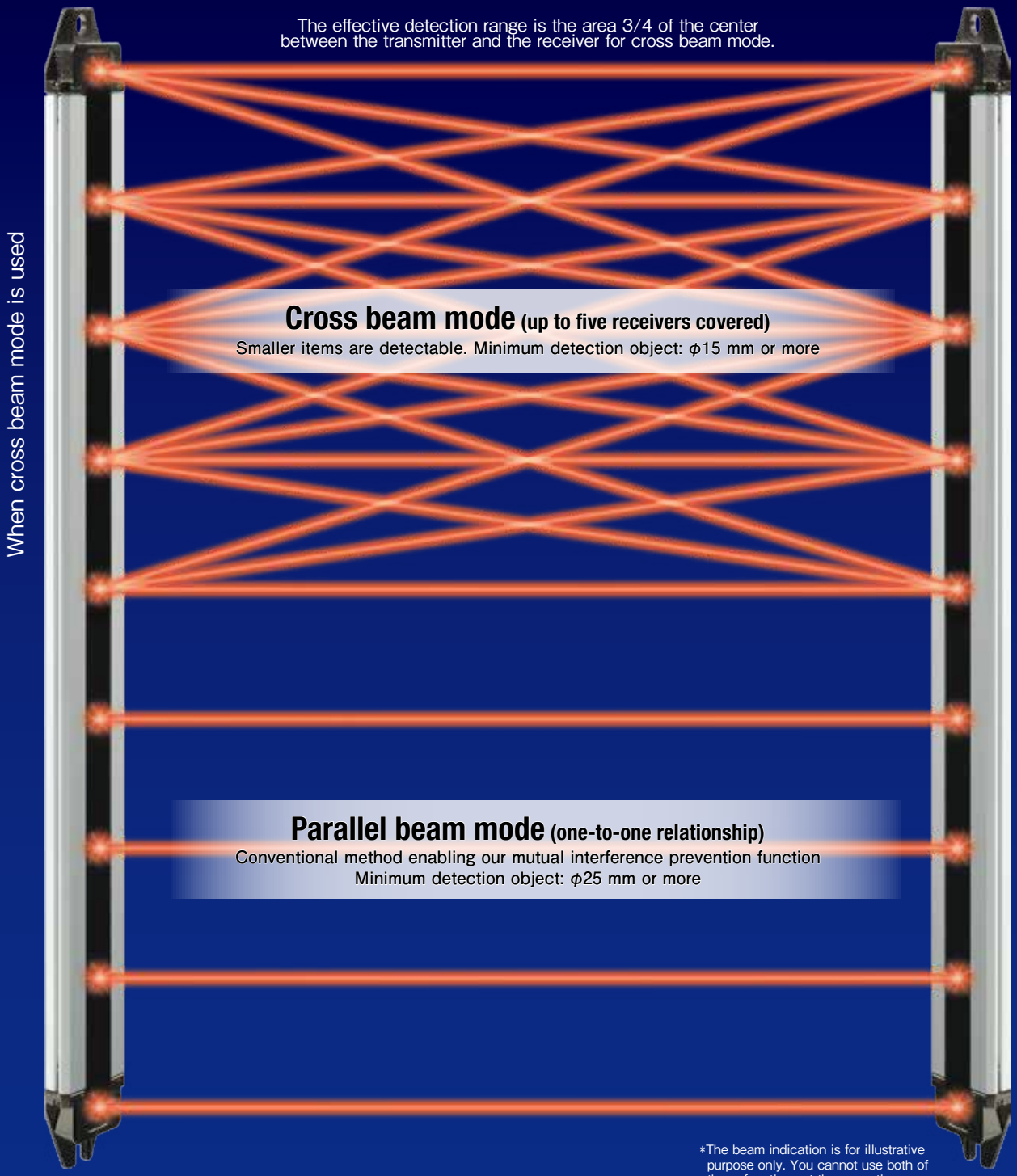
Light curtain sensor of only 9.9 mm in thickness

Switchable between parallel beam and cross beam modes

Suitable detection mode selectable for the application

Smaller objects can be detected by cross beam mode

Minimum detection objects: ϕ15 mm or more at cross beam, ϕ25 mm or more at parallel beam



*The beam indication is for illustrative purpose only. You cannot use both of these functions at the same time.

High robustness

A robust metal case of 30 mm × 9.9 mm is employed as the sensor housing. Optimum for mounting the sensor on aluminum construction frames with the holes at the center of the brackets.

Do not use this product for life or safety critical applications such as for power press machines.
This product does not comply with any domestic or international standard or regulation as a device for human body protection.

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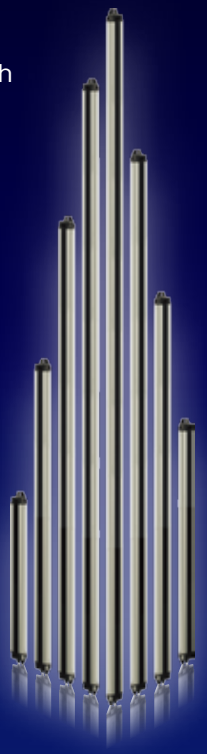
Variety of lineups

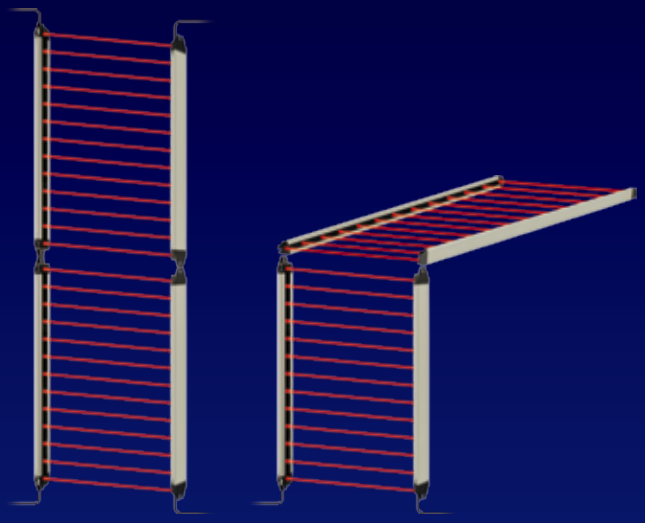
Eight selection of the detection width from 160 to 720 mm are available.



Model	Detection width (mm)
SSXU20-T160	160
SSXU20-T240	240
SSXU20-T320	320
SSXU20-T400	400
SSXU20-T480	480
SSXU20-T560	560
SSXU20-T640	640
SSXU20-T720	720

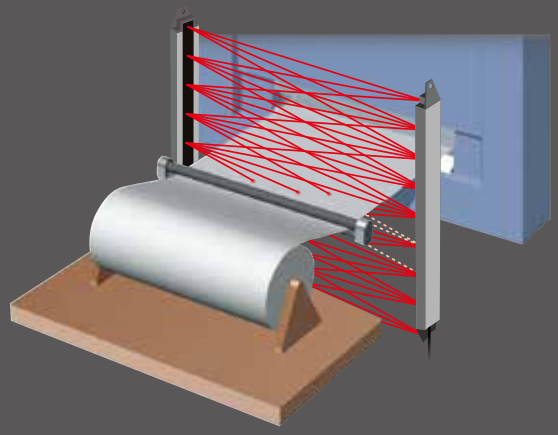
Mutual interference prevention

The mutual interference prevention function allows wider detection area by the sensors stacked or arranged in parallel beam mode.

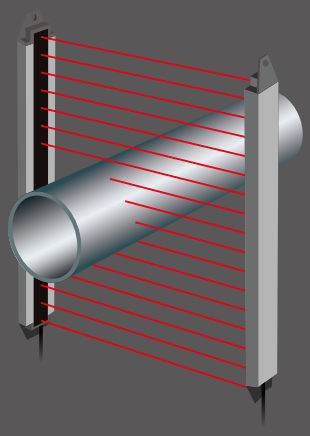


Applications

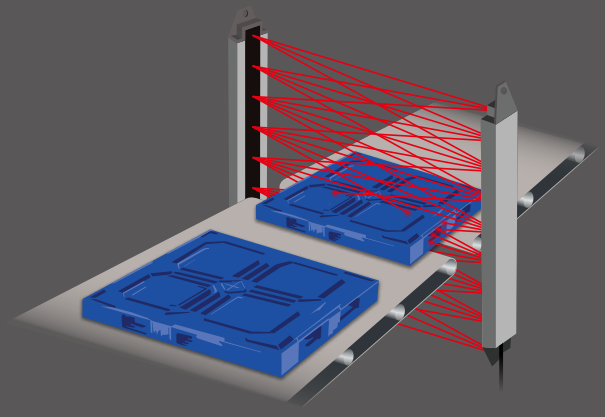
- Tilted cross beams can detect sheet materials (cross beam mode).



- Detects work items whose relative position varies (parallel beam mode)



- For detecting plastic pallets (cross beam mode)



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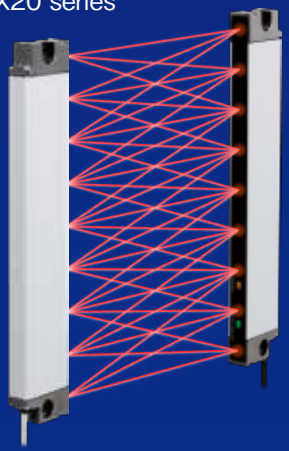


- Slim and ultra-thin body
- Parallel and cross beam modes are available
- Eight models in side-array optical housing

Model	Detection width (mm)
SSX20-T160	160
SSX20-T240	240
SSX20-T320	320
SSX20-T400	400
SSX20-T480	480
SSX20-T560	560
SSX20-T640	640
SSX20-T720	720

■ Rated voltage/Performance/Specifications

Model		SSXU20-T160	SSXU20-T240	SSXU20-T320	SSXU20-T400	SSXU20-T480	SSXU20-T560	SSXU20-T640	SSXU20-T720
Detection method		Through beam							
Detection distance		Parallel beam mode: 0-4m Cross beam mode: 0.5-4m							
Detection target		Parallel beam mode: Opaque ϕ25mm or more Cross beam mode: Opaque ϕ15mm or more							
Optical axis interval		20mm							
Number of optical axes		9	13	17	21	25	29	33	37
Detecting width		160mm	240mm	320mm	400mm	480mm	560mm	640mm	720mm
Power supply		12-24VDC ±10%, Ripple 10%							
Power consumption		75mA or less	80mA or less	90mA or less	95mA or less	110mA or less	110mA or less	120mA or less	125mA or less
Output mode		NPN/PNP Open collector output (Output selectable) Load current: 50mA (30VDC) or less Residual voltage: 2V or less							
Operation mode		Light ON: Activated when beams of all optical axes are received (Deactivated when a beam of any optical axis is blocked).							
Response time		Parallel beam mode: 20ms or less when light blocked, 30ms or less if when light received. Cross beam mode: 30ms or less when light blocked, 50ms or less if when light received.							
Light source (wavelength)		Infrared LED (850nm)							
Light receiving element		Photo IC							
Indicators		Transmitter: Power Indicator (Green), Slave Indicator/Cross beam Indicator (Blue), Cross beam Indicator (Blue) Receiver: Power Indicator/Light reception stability Indicator (Green), Operation Indicator (Orange)							
Auxiliary functions		Automatic sensitivity compensation, Mutual interference prevention for close proximity installations (Up to 2 sets in Parallel beam mode), Reverse polarity protection, Short-circuit protection							
Ptotection Material		Case: Aluminun, Front cover: Poly carbonate, Mounting part: Zinc alloy die casting							
Connection		Attached cable ϕ3.5mm, 3m Transmitter: 0.15mm² × 4 cores (Gray), Receiver: 0.15mm² × 5 cores (Black)							
Weight	Transmitter	Approx. 145g	Approx. 170g	Approx. 200g	Approx. 230g	Approx. 260g	Approx. 285g	Approx. 310g	Approx. 355g
	Receiver	Approx. 150g	Approx. 180g	Approx. 215g	Approx. 240g	Approx. 265g	Approx. 295g	Approx. 330g	Approx. 360g
Accessories Instruction		Manual, small 3-point SEMS screw M4							

■ Environmental performance

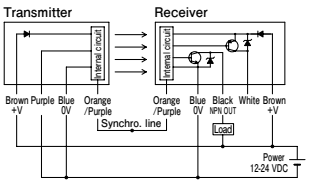
Ambient light	10,000 lux or less
Ambient temperature	−10 °C to +55 °C (No freezing)
Ambient humidity	35 to 85 % RH (No corrosion)
Protective structure	IP 65
Vibration	10 Hz to 55 Hz, 1.5mm double amplitude, 2 hours each in 3 directions (X, Y, Z)
Shock	300 m/s², 3 directions (X, Y, Z), three times for each axis
Dielectric withstand voltage	1000 VAC, 1 minute
Insulation resistance	500 VDC, 20 MΩ

- The product is equipped with a noise filter between the case and the charger section to avoid malfunctions caused by noise. Accordingly, the maximum breakdown voltage rating and the insulation resistance in the above specifications show the values without the noise filter.

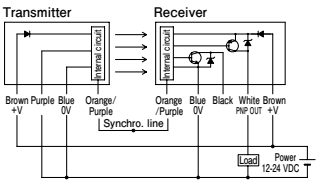
■ Connection

● Parallel beam mode

NPN output



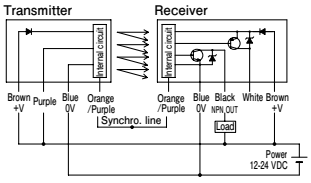
PNP output



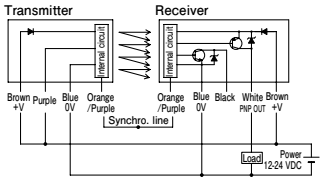
(Pay attention that the wiring is different from that of SSU20) • Insulate any unused output lines.

● Cross beam mode

NPN output



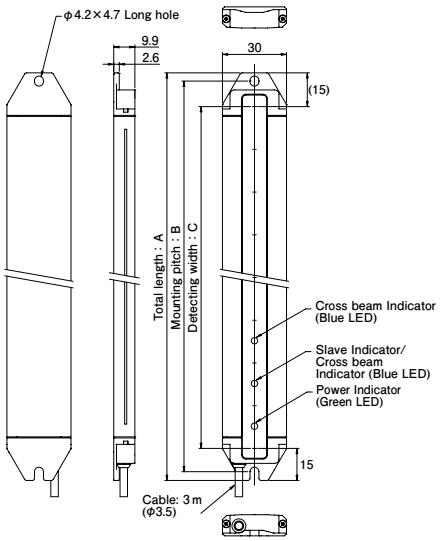
PNP output



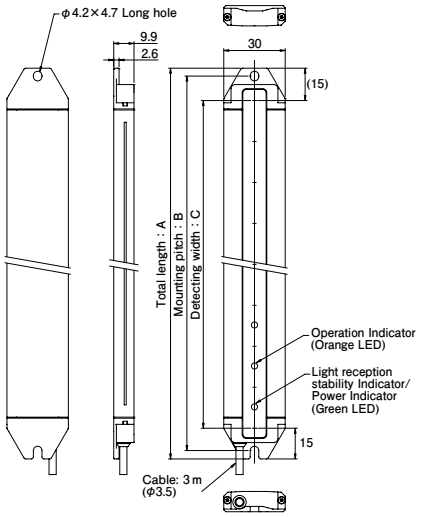
- When cross beam mode is selected, mutual interference prevention is disabled.
- Insulate any unused output lines.

■ Dimensions (Unit : mm)

Transmitter



Receiver



■ Parts dimensions (Unit : mm)

Model	Dimension A	Dimension B	Dimension C
SSXU20-T160	190	182.5	160
SSXU20-T240	270	262.5	240
SSXU20-T320	350	342.5	320
SSXU20-T400	430	422.5	400
SSXU20-T480	510	502.5	480
SSXU20-T560	590	582.5	560
SSXU20-T640	670	662.5	640
SSXU20-T720	750	742.5	720

Do not use this product for safety critical applications such as where detection of human presence or intervention is required.

CAUTION

- This product is designed for industrial applications to detect a various kinds of objects. It has no function to prevent disasters, accidents, death or injuries.
- TAKEX will not held responsible for any damage or loss incurred due to accidents, faulty installation, abuse, misuse, improper maintenance or acts of God including lightning surge.
- This product cannot be used as safety equipment.
- This product is designed and manufactured for industrial use. It cannot be used where there is a requirement for a high degree of reliabilty or considerable care or attention to safety.
- Read this instruction manual carefully and use the product properly according to it.
- This instruction manual including the specifications and dimensions may be subject to change without notice.

Takenaka Sensor Group

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