

TAKEX

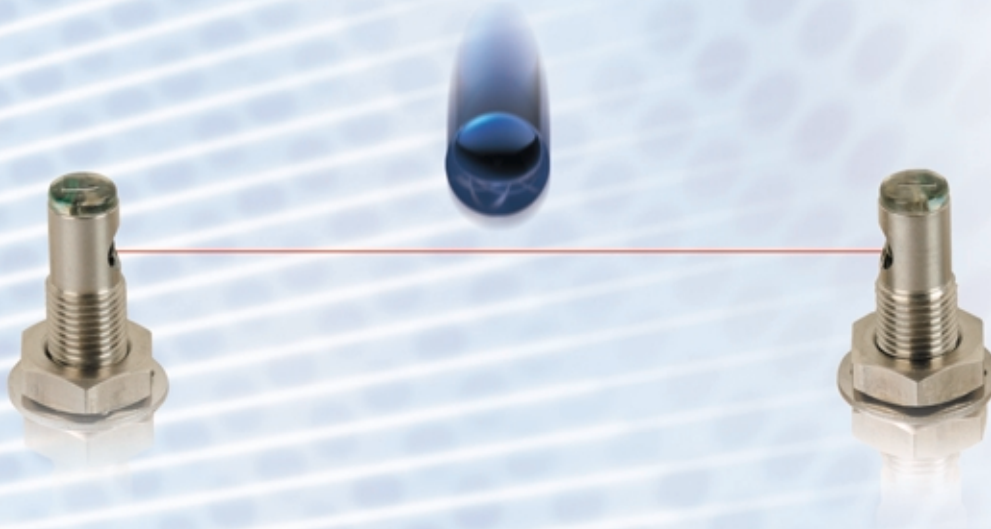
Embedded Amplifier Thru Hole/Threaded Barrel installation

Ultra Xtreme miniaturization **UXSeries**



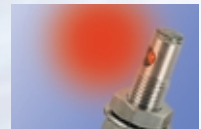
Ultra Xtreme-miniature

Self contained device designed for constrained area applications



Revolutionary Side View approach is the first of its kind in the world

Side View Thru Beam range to 500mm



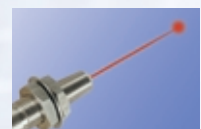
Save the installation space

Installs in the same space as typical Fiber applications



Long distance detection up to 1m

Head On Thru Beam range to 1000mm



SS construction rated at IP67

High solidity and durability are performed by a strong body made of the stainless steel.



Polysulfone lens resists harsh chemical environments

Polysulfone lens is adopted as chemical resistance.



Self contained- no external electronic requirement

Diffuse Reflective iterations available with integrated sensitivity adjustment

(Model: UX-R5V and UX-R5VFN)



Specifications

Ratings and performance	Detection method	Through beam		Diffuse reflective			
	Type	Straight	Side view	Straight			
	NPN output type	UX-T100D	UX-T50DS	UX-R2	UX-R3	UX-R5	UX-R5V
	PNP output type	UX-T100DPN	UX-T50DSPN	UX-R2PN	UX-R3PN	UX-R5PN	UX-R5VPN
	Detecting distance	1000mm	500mm	3-20mm	3-30mm	3-50mm	3-50mm *1
	Detection object	φ 4mm opaque	φ 5mm opaque	100×100mm white paper			
	Thread size	M5×0.5		M6×0.75			
	Power supply	12-24VDC±10% ripple 10% or less					
	Current consump	Transmitter 15mA or less Receiver 15mA or less		20mA or less			
	Output mode	Open collector output					
NPN output	Rating: sink current 80mA DC 30V or less						
PNP output	Rating: source current 80mA DC 30V or less						
Operation mode	Dark-on			Light-on			
Response time	0.5ms or less						
Specification	Operating angle	2° (Receiver side)	10° (Receiver side)	—			
	Light source	Red LED (630nm)	Red LED (625nm)	Infrared LED (870nm)			
	Indicator	Operation: orange LED, Stability: green LED					
	Sensitivity adjustment	—				SENS.VR *1	
	Short circuit protection	Built-in					
	Material	Case,Nut and Washer:SUS303, Lens:Polysultiopne					
	Connection	Flying lead outer diameter φ2.8 Length 2m					
	Connection	Transmitter:0.15 sq × 2 core Receiver:0.15 sq × 3 core		0.15 sq × 3 core			
	Mass	Transmitter:30g, Receiver:30g		30g			
	Accessory	Screw driver					

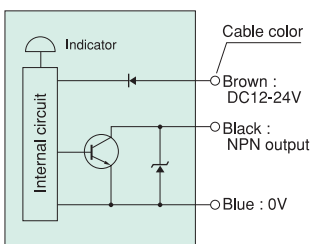
*1 Maximum torque specification on sensitivity Pot of 8mN.m (use supplied screwdriver)

Environmental specification

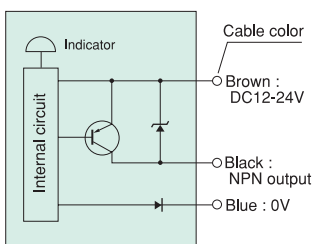
Environmental performance	Ambient light	3,000lx or less
	Ambient temperature	−25 to +55°C (non-freezing) storage:−30 to +70°C (non-freezing)
	Ambient humidity	35 to 85%RH (non-condensing)
	Protective structure	IP67
	Vibration	10 to 55Hz /1.5mm amplitude, 2 hours in X.Y.Z direction for each
	Shock	500m/s ² 3 times each in 3 directions
	Dielectric withstanding	500VAC for 1 minute
	Insulation resistance	500VDC, 20M ohms or higher

Input/output circuit and connection

NPN output



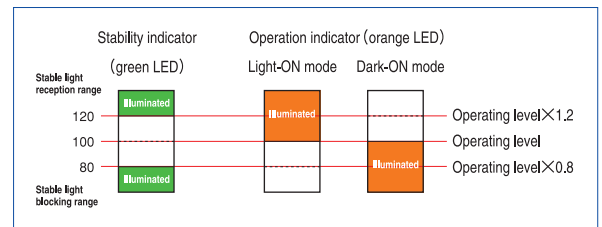
PNP output



- The output transistor becomes OFF when it's short or overload.
- Make sure all connections are correct before turning the power on.

Indicators

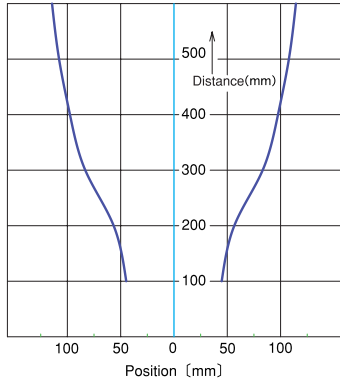
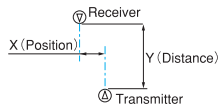
- Light axis alignment and sensitivity adjustment are simple. Setting within the stable range increases the reliability against variation of environment after setting.
- The operation indicator (orange LED) and Stability indicator (green LED) respectively show different received light intensity levels as described in the figure.



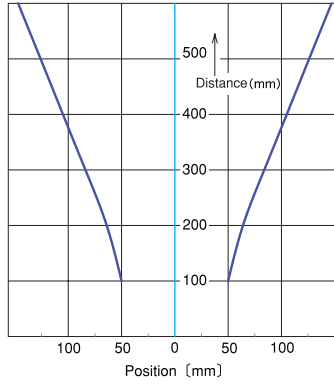
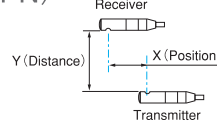
Characteristics (Typical example)

Directional characteristics

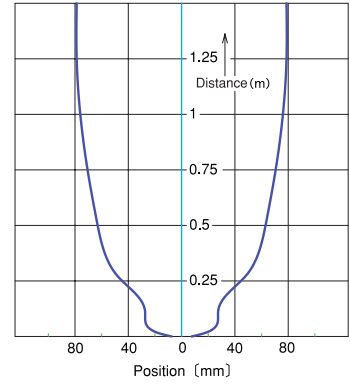
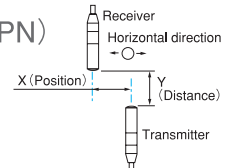
UX-T50DS (PN)



UX-T50DS (PN)

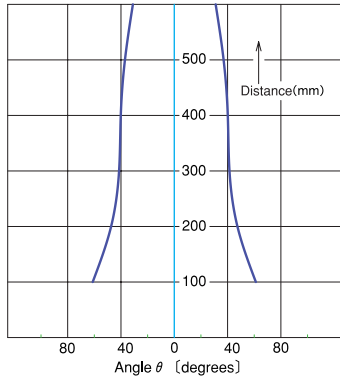
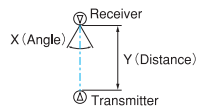


UX-T100D (PN)

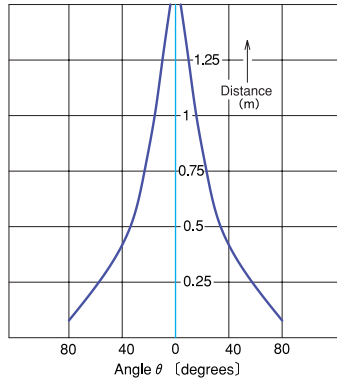
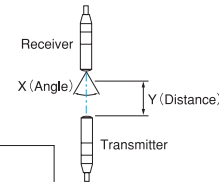


Operating angle characteristics

UX-T50DS (PN)

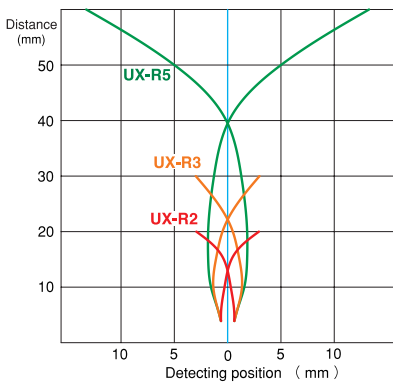
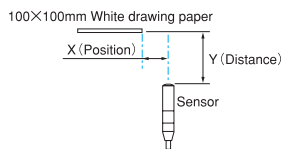


UX-T100D (PN)

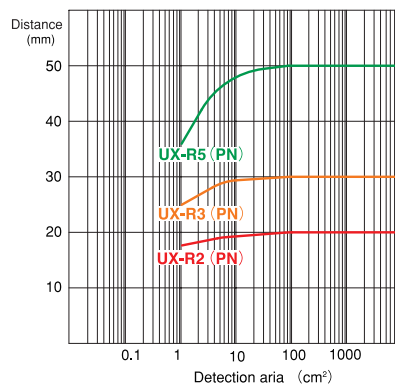
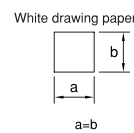


Activation area characteristics

UX-R□ (V) (PN)



UX-R□ (V) (PN)



WIDE SELECTION

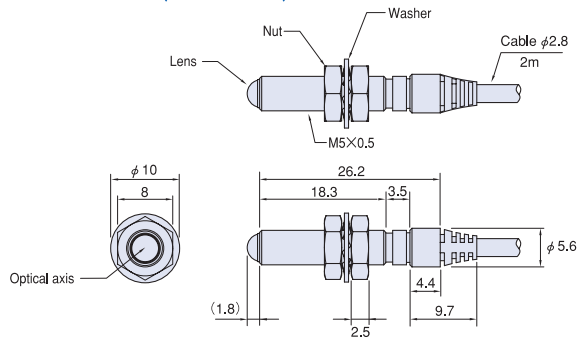
Available through-beam and diffuse reflective type

Type		NPN output	PNP output	Detection distans
Through beam	Straight type	UX-T100D	UX-T100DPN	
Through beam	Side view type	UX-T50DS	UX-T50DSPN	
Diffuse reflection	Straight type	UX-R5V	UX-R5VPN	
Diffuse reflection	Straight type	UX-R5	UX-R5PN	
Diffuse reflection	Straight type	UX-R3	UX-R3PN	
Diffuse reflection	Straight type	UX-R2	UX-R2PN	

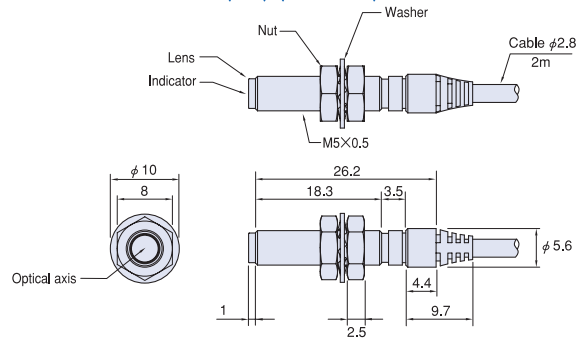
Through-beam straight type

UX-T100D

UX-TL100 (Transmitter)



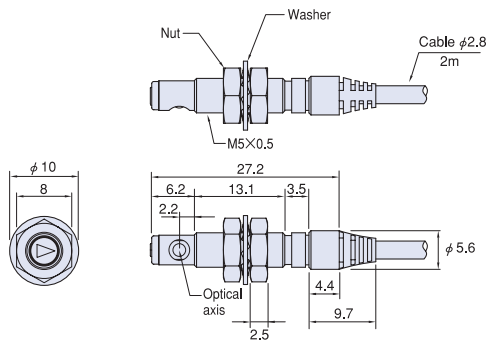
UX-TR100D (PN) (Receiver)



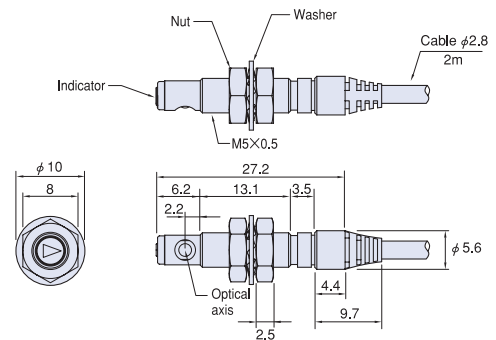
Through-beam Side-view type

UX-T50DS

UX-TL50S (Transmitter)

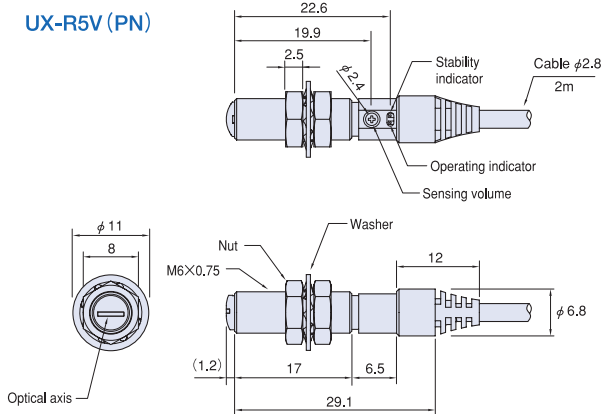


UX-TR50DS (PN) (Receiver)

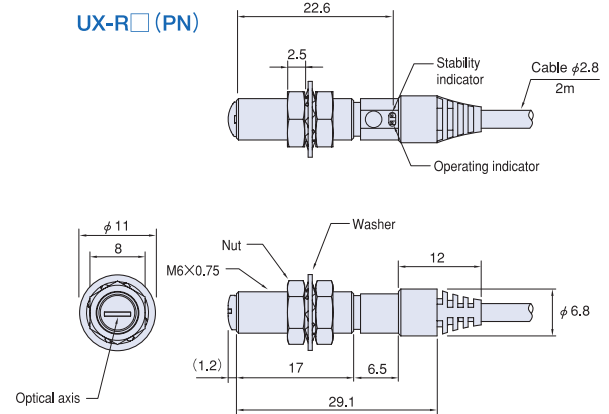


Diffuse reflective type

UX-R5V (PN)



UX-R□ (PN)



Please Note

- This sensor is designed to detect an object; it is not a safety device.
- Specifications and external dimensions described herein may be changed without notice for improvements.



TAKENAKA SENSOR GROUP

TAKENAKA ELECTRONIC INDUSTRIAL CO., LTD.

Headquarters : 20-1 Narano-cho, Shinomiya, Yamashina-ku, Kyoto, Japan

Tel. : 81-75-581-7111 Fax. : 81-75-581-7118

www.takex-elec.co.jp

Distributed by