ESNseries

Light Curtain Sensors

- **Ultra-thin**
  Slim type of only 13 mm thick and 30 mm wide never affecting work efficiency

- **High-intensity red LED employed**
  Large operation indicator of high-intensity LEDs in series offering superb visibility, may double as work instruction indicator

- **Objects as small as ϕ30 detected**

- **Automatic sensitivity compensation feature**

- **Anti Interference feature**
  Allowing adjacent mounting of 2 units for wider range of applications

■ Type

Detection method	Detecting distance	Light axis interval	No. of light axes	Detecting width	Set model No.	Operation mode	Detecting object
Through-beam type	5m	20mm	8	140mm	**ESN-T8**	Activated when light beams of all axes are received	Opaque object of ϕ30 mm min.
			12	220mm	**ESN-T12**		
			16	300mm	**ESN-T16**		
			20	380mm	**ESN-T20**		

*For prices of the transmitter and receiver for separate purchase, see the Price List at the end of this book.
Mounting brackets are separately available. See "With Mounting Bracket (Optional) Attached" for details.

Transmitter-receiver linked operation indicator

High-intensity LEDs in series

Wide display offers excellent visibility

Light axis interval: 20mm

Smallest detectable object diameter: ϕ30 mm

Detecting distance: 5m

Optimum sensitivity maintained by automatic sensitivity compensation feature

Wide display may be used as work instruction indicator

Thin and slim size requiring minimum mounting space

30 mm wide

Only 13 mm thick
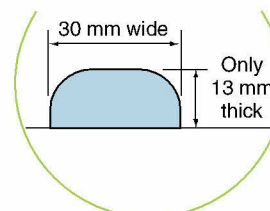
Flexible cord orientation (left/right/rear) for routing convenience

270

TAKEX
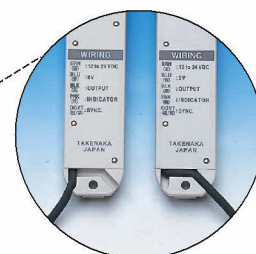
■ Rating/Performance/Specification

	Model	Set model No.	ESN-T8（PN）	ESN-T12（PN）	ESN-T16（PN）	ESN-T20（PN）
Rating/performance		Transmitter model No.	ESN-TL8	ESN-TL12	ESN-TL16	ESN-TL20
		Receiver model No.	ESN-TR8（PN）	ESN-TR12（PN）	ESN-TR16（PN）	ESN-TR20（PN）
	Detection method		Through-beam type			
	Detecting distance		5m max.			
	Detection object		Opaque object of ϕ 30mm min.			
	Light axis interval		20mm			
	No. of light axes		8	12	16	20
	Detecting width		140mm	220mm	300mm	380mm
	Power supply		12-24V DC ±10% / Ripple 10% max.			
	Current consumption		100mA max.	110mA max.	120mA max.	130mA max.
	Output mode		NPN open collector Rating: sink current 100 mA (30 VDC) max. Models with model Nos. ending with "-PN" have PNP open collector output; source current: 100 mA max.			
	Operation mode		Activated when light beams of all axes are received (deactivated when light beam of any axis is blocked)			
	Response time		7ms max.			
Specification	Light source		Infrared LED (wavelength: 850 nm)			
	Light-sensitive element		Photo IC			
	Indicator		Transmitter: Power indicator (green LED) / Operation indicator (red LED) Receiver: Stable light reception indicator (green LED) / Operation indicator (red LED)			
	Material		Case: ABS / Indicator window: acrylic			
	Connection		Permanently attached cord (Outer dimension: dia.4.3)　Cord length: 3 m Cord: with five 0.2 mm² cores, gray (transmitter) or black (receiver) covering			
	Mass		160g max.	180g max.	200g max.	220g max.
	Auxiliary functions		Automatic sensitivity compensation, Anti Mutual Sensitivity feature for adjacent installation, output short circuit protection			
	Accessory		Operation manual Note: Mounting brackets are separately available.			

■ Environmental Specification

Environment	Ambient light	10000lx max.
	Ambient temperature	−10 - +55°C (non-freezing)
	Ambient humidity	35-85%RH (non-condensing)
	Vibration	10-55 Hz / 1.5 mm amplitude / 2 hours each in 3 directions
	Protective structure	IP40
	Dielectric withstanding	1000VAC for 1 minute / between entire live part and case
	Insulation resistance	500 VDC, 20 MΩ.

Adjacent or face-to-face installation of two pairs of sensors will not cause interference.

Transmitter (1) (2)
Receiver (1) (2)
Transmitter(1)
Receiver(1)
Receiver(2)
Transmitter(2)