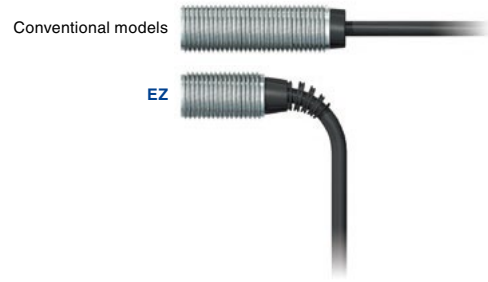


Three-wire self contained amplifier proximity sensors **EZ Series**

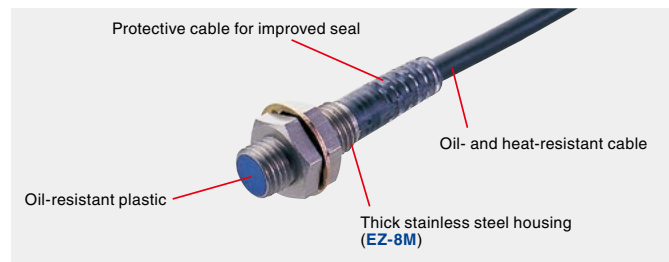


Space-saving

With a sensor body up to 30% shorter than previous models, the EZ Series proximity sensor offers high sensitivity and long detecting distance.



Excellent water and oil resistance



Flat design, space-saving, 8-mm thick model available

Provides an impressive detecting distance of 5 mm and features a die-cast aluminium housing.



Easy-to-see output indicator

An output indicator is built into the sensor unit in such a manner that sensor operation can be easily confirmed from virtually any angle.



For standard certification and conformance list, see our website.
www.keyence.com.sg/products/certified/

ASK KEYENCE

www.keyence.com.sg/ASKG

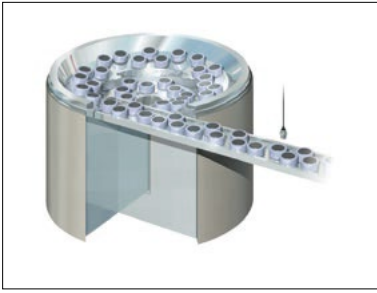


FREE DOWNLOAD

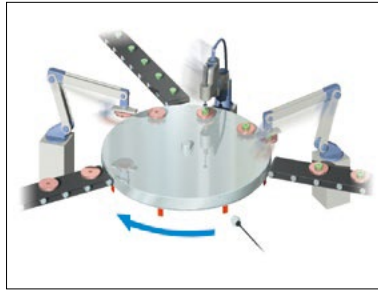
www.keyence.com.sg/DLG

Free downloads for product and technical support are readily available in one convenient location

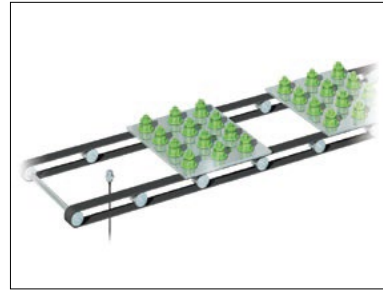
Applications



Detecting full/empty parts feeder



Detecting the index position of a rotary table



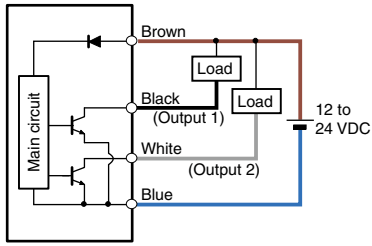
Detecting the presence of moving pallets

Specifications

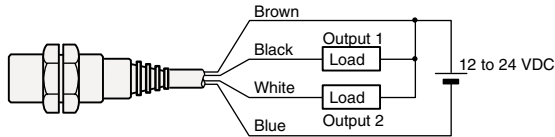
DC 3-wire type

Type		Shielded				
Model	NPN	EZ-8M	EZ-12M	EZ-18M	EZ-30M	EZ-18T
Appearance						
Size		M8	M12	M18	M30	20 x 32 x 8 mm
Detecting distance		1.5 mm ±10%	2.5 mm ±10%	5 mm ±10%	10 mm ±10%	5 mm ±10%
Detectable object		Ferrous metals (see Characteristics for nonferrous metals)				
Standard target (iron, t=1 mm)		10 x 10 mm	12 x 12 mm	18 x 18 mm	30 x 30 mm	18 x 18 mm
Hysteresis		10% max. of detecting distance				
Response frequency		800 Hz	600 Hz	350 Hz	250 Hz	350 Hz
Temperature fluctuation		±10% max. of detecting distance at 23°C, within -25 to +70°C				
Operation mode		N.O./N.C.				
Control output		NPN open collector 100 mA max. (40 V max.), Residual voltage: 1 V max.				
Power supply		12 to 24 VDC ±10%				
Current consumption		13 mA max.				
Enclosure rating		IP67				
Ambient temperature		-25 to +80°C, No freezing				
Relative humidity		35 to 95%, No condensation				
Vibration resistance		10 to 55 Hz, 1.5 mm double amplitude in X, Y, and Z directions, 2 hours				
Shock resistance		500 m/s ² in X, Y, and Z directions, 3 times respectively		1,000 m/s ² in X, Y, and Z directions, 3 times respectively		
Cable length		2 m				
Weight (including cable and nuts)		Approx. 50 g	Approx. 65 g	Approx. 130 g	Approx. 235 g	Approx. 55 g

Input/Output Circuits



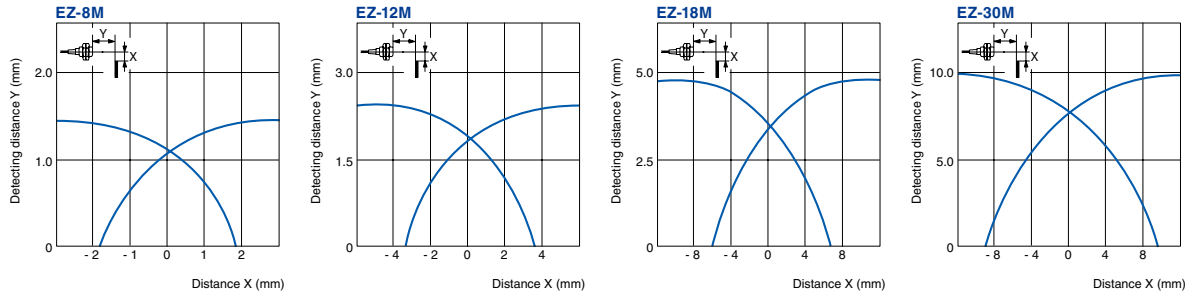
Connections



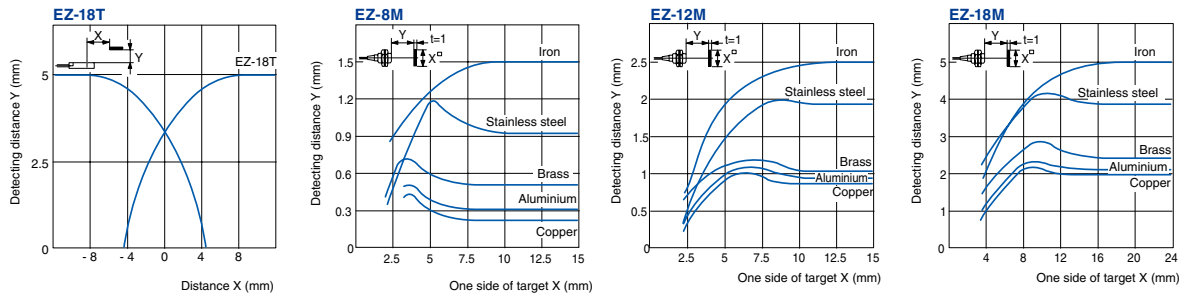
Black (output 1): N.O.
White (output 2): N.C.

Characteristics

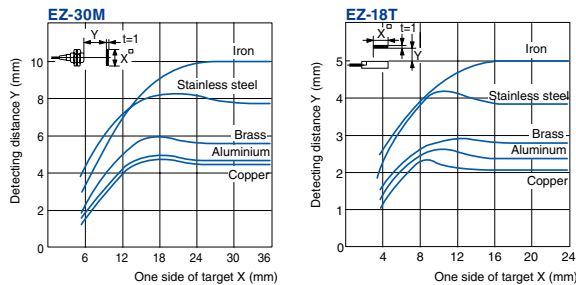
Detecting range (Typical)



Detecting distance vs. size and material of target (Typical)



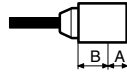
Detecting distance vs. size and material of target (Typical)



Hints on Correct Use

Mounting

When mounting the sensor, insert the attached toothed washer. Do not tighten beyond the torque specified in the following table.



Model	Dimension A (mm)	Tightening torque	
		at A	at B
EZ-8M	3	3 N·m max.	5 N·m max.
EZ-12M	6	6 N·m max.	10 N·m max.
EZ-18M	6	15 N·m max.	20 N·m max.
EZ-30M	10	50 N·m max.	100 N·m max.

Note: The sensor cable can be extended up to 100 m (EZ Series).

Interference

When installing 2 or more sensors of the same model face-to-face or in parallel, separate them by the distance specified in the following table to prevent interference.

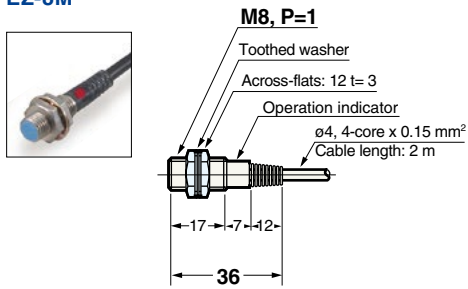
Model	Distance	Face-to-face (mm min.)	Parallel (mm min.)
EZ-8M	20	20	23
EZ-12M	30	30	32
EZ-18M	40	40	48
EZ-30M	100	100	100

Model	Distance	Face-to-face (mm min.)	Parallel (mm min.)
EZ-18T	40	40	35

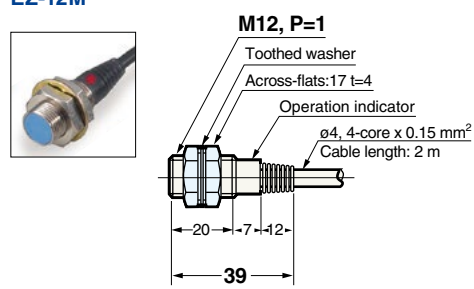
Dimensions

Unit: mm

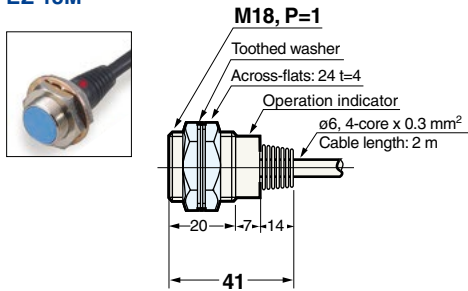
EZ-8M



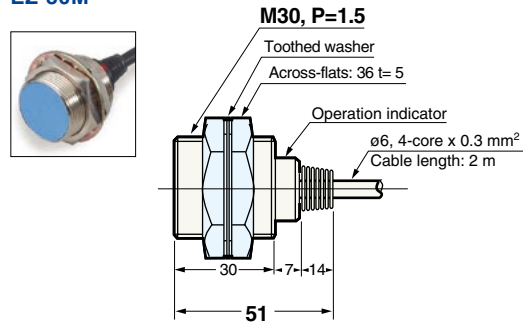
EZ-12M



EZ-18M



EZ-30M



EZ-18T

