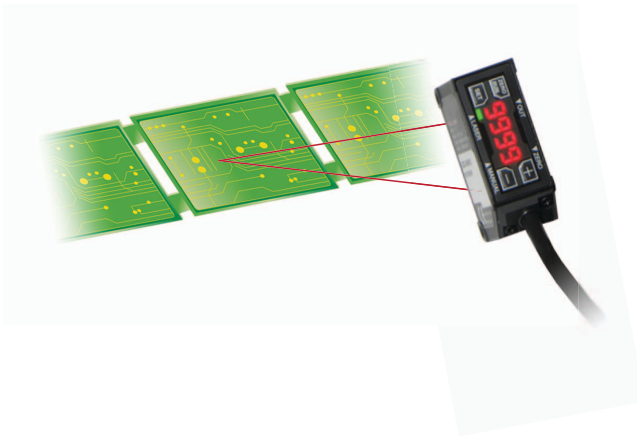


Laser Displacement Sensor

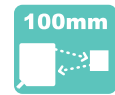
Analogue Output Type

ZXD-C



SALIENT FEATURES

- ◆ Built-in Display
- ◆ 1 μ m Resolution
- ◆ $\pm 0.1\%$ F.S Linearity
- ◆ Upto 100mm sensing
- ◆ 4-20mA / 0-10V Output
- ◆ Auto Sampling Function



Model Number Legend

ZXD - C -

1 2 3 4 5 6

1. Series

ZXD

2. Type

C: Digital Compact Type

3. Sensing Distance

15: 15 \pm 5mm
 35: 35 \pm 15mm
 100: 100 \pm 50mm

4. Control Output

S: NPN/PNP Selectable

5. Output

C: 4-20mA Current Output
 V: 0-10V Voltage Output

6. Connection

M12J3: Junction Connector with 0.3m Cable
 M8C : M8 Connector

Example:

ZXD-C-15SC-M12J3

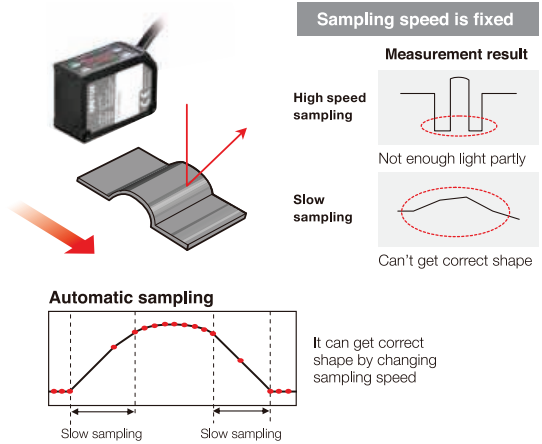
ZXD Series - Digital Compact Type- 15 \pm 5mm Sensing Distance, NPN/PNP Selectable, 4-20mA Current Outputs - Junction Connector with 0.3m Cable

NOTE: Contact us for models not shown in catalogue.
 Connector cables are sold separately; look in CCX series catalogue for the same (www.inno.sg/ccx).

Product Highlights

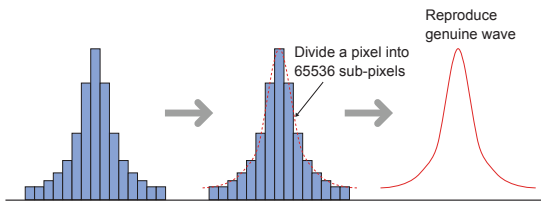
◆ Automatic Sampling Function

The ZXD-C series has automatic sampling function by receiving feedback light to Laser power which enables stable measurement of metal surface and also back material by adjusting sampling speed.



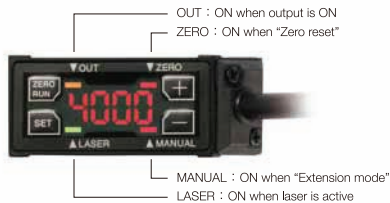
◆ Subpixel Processing

Normal Displacement sensors process the light intensity in each pixel to measure the displacement. The ZXD-C series employs Digital Sub-pixel processing to improve upon the result. Subpixel processing divides one pixel into small pieces that enables accurate measurement by reproducing the genuine value of incoming light. This results in a more accurate displacement measurement or upto 2µm resolution.



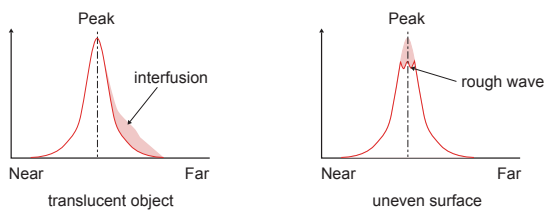
◆ Ease of Viewing

4 Digit display in small housing.
4 easy setup button.
Mode Indication in front scan.



◆ True Peak Detection

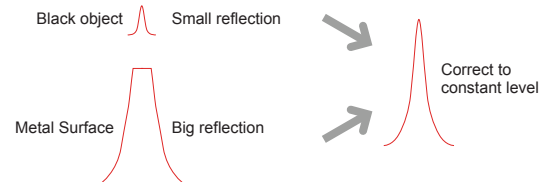
The ZXD-C series can detect the position of the true peak due to the original designed algorithm, even if the object is translucent or its surface is uneven.



◆ Electronic Shutter

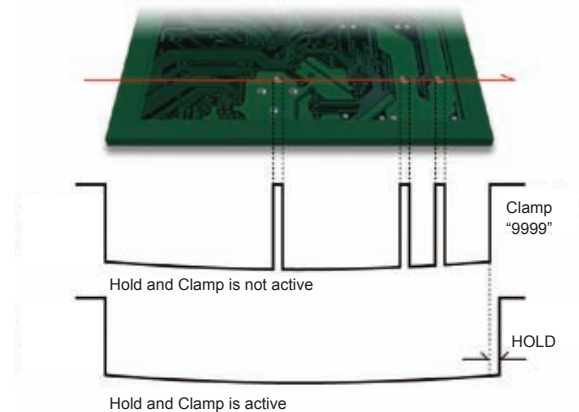
The ZXD-C series uses a High Resolution electronic shutter control to keep a constant light level according to the reflection. It can be controlled to 1/485th of the sampling period.

This function enables stable peak level detections even in rough/ uneneven or unstable surfaces.



◆ Hold & Clamp

Hold & Clamp function is used for detecting objects with rough surface, neglecting small holes in PCB.



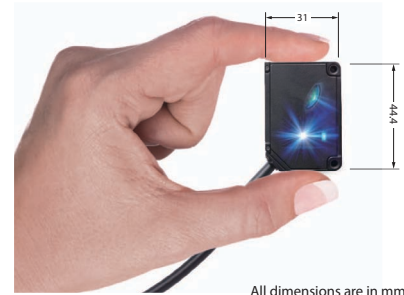
Product Highlights

ZXD-C

◆ The World's Smallest in Size!

High performance and cost efficient ZXD-C series is built in innovative compact case.

ZXD-C Series is almost 50% smaller in size than ZXD-B series with dimension 18mm (W) x 31mm (D) x 44mm (H).



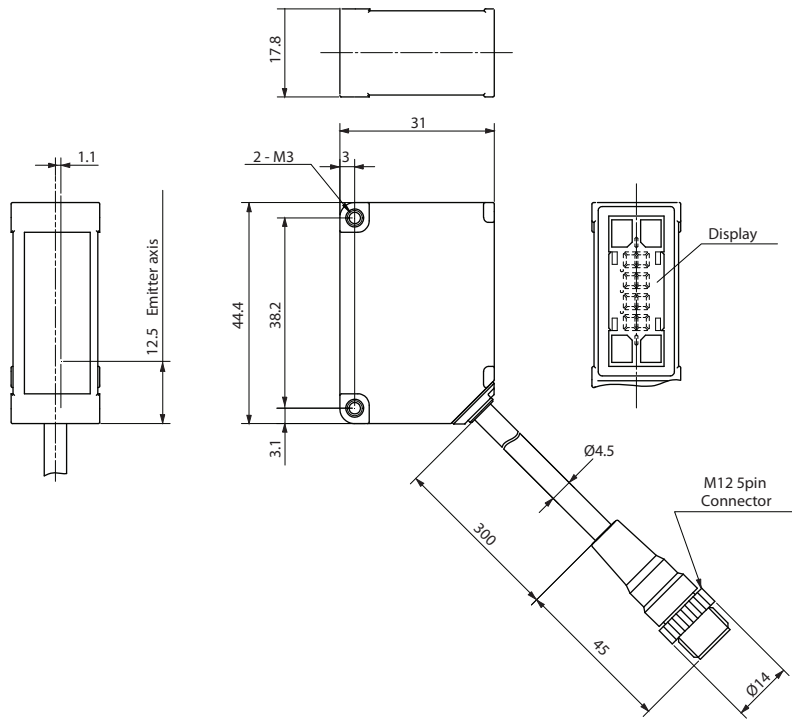
All dimensions are in mm

Ratings and Specifications

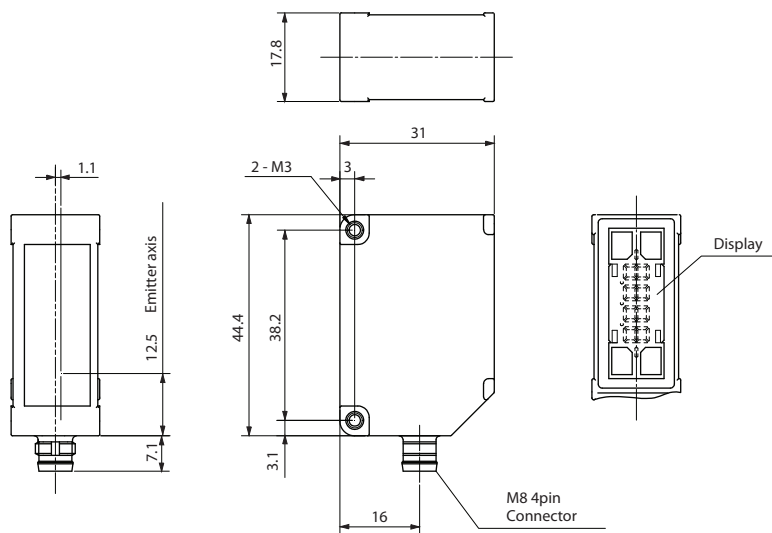
Models	Current	ZXD-C-15SC- _	ZXD-C-35SC- _	ZXD-C-100SC- _
	Voltage	ZXD-C-15SV- _	ZXD-C-35SV- _	ZXD-C-100SV- _
Sensing Distance		15mm	35mm	100mm
Measurement Range		±5mm	± 15mm	± 50mm
Full Scale		10mm	30mm	100mm
Connection	ZXD-C- _ _ _ - M12J3 - M12 Junction Connector with 0.3m Cable Extension; ZXD-C- _ _ _ - M8C - M8 Connector;			
Light Source	Class II Red Laser Diode (wavelength 650nm)			
Spot Size		0.5 x 0.7mm	0.45 x 0.8mm	0.6 x 0.7mm
Linearity		± 0.1% F.S.		
Temperature Drift		± 0.02% F.S./ C°	± 0.02% F.S./ C°	± 0.05% F.S./ C°
Sampling Period		500 μs / 1000 μs / 2000 μs / 4000 μs / Auto		
Repeatability		1μm	6μm	20μm
Supply Voltage		18 - 24 VDC (Ripple Max 10%)		
Current Consumption		Control Output: max. 75mA (24 VDC); Analog Output: max. 80mA (24 VDC)		
Control Output		NPN or PNP open collector output (selectable)		
Control Output Rating		Load Voltage: max. 30 VDC; Load Current: max 100mA (residual voltage max. 1.8V)		
Analog Output		4-20mA; 0-10 V		
Operation Indications		Laser Indication: Green LED; Output Indication: Orange (ON); Zero Reset / Mode Indication: Red		
Shock Resistance		50 G; Vibration: 10-55Hz at 1.5mm, 2 hrs for X, Y, Z axes		
Environmental Illuminance		Lamp: msx. 3,000 lux		
Ambient Temperature		Operation: -10° ~ 50°C; Storage: -20° ~ 60°C (non- freezing; non- condensing)		
Ambient Humidity		Operation: 35 ~ 85% RH; Storage: 35 ~ 95% RH (non- condensing)		
Protection Class		IP67		
Weight		Cable Type: aprox. 60g (Junction Connector with cable); Connector Type: aprox. 40g		
Material		Housing: Aluminum, Lens: PPSU, Display: PET		

Sensor Dimension Drawing

◆ M12 Type



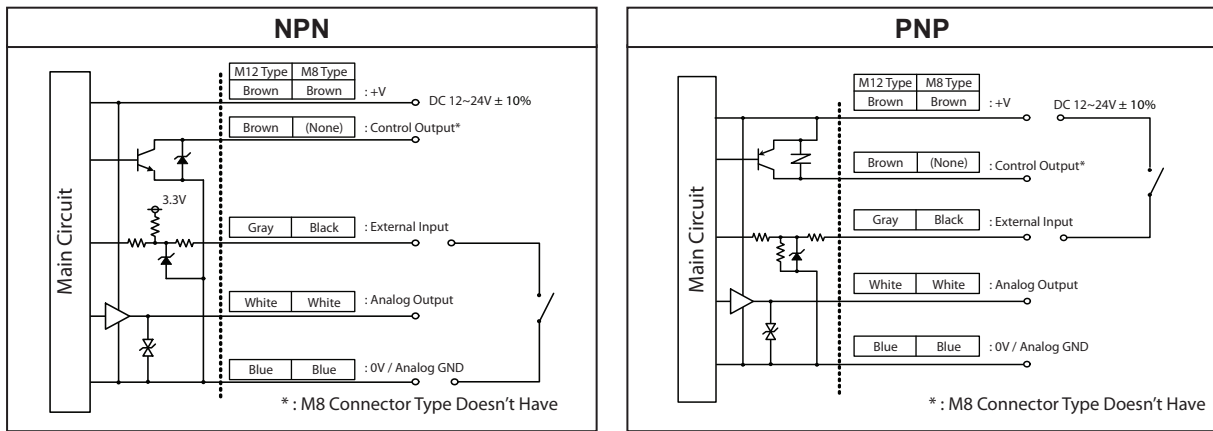
◆ M8 Type



All dimensions are in mm

- Proximity Sensors
- Photoelectric Sensors
- Measurement Sensors
- Vision & Safety Sensors
- Control
- Weighing
- Automation
- Components

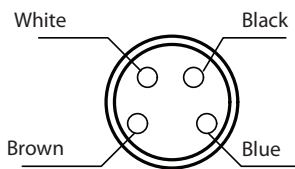
Control Output Diagram



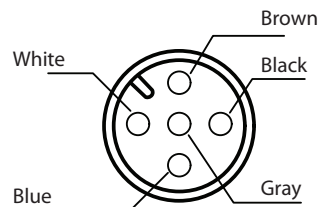
Connection

◆ Connector Type

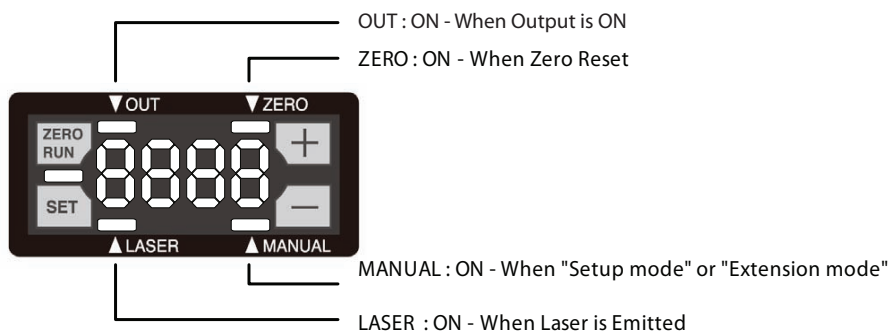
◆ M8 Connector



◆ M12 Connector



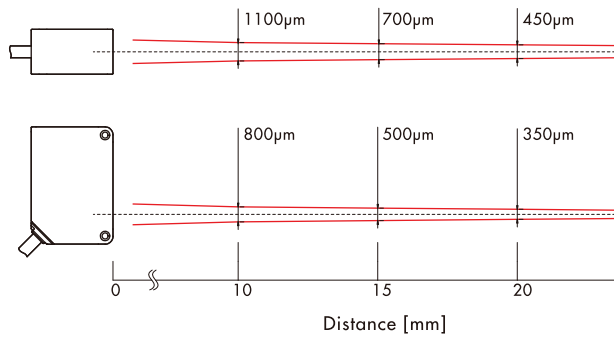
Nomenclature



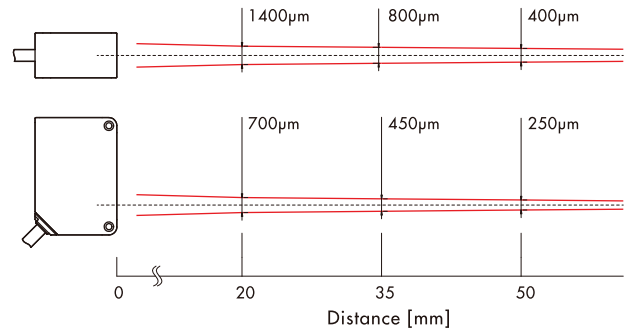
Operational Data

Spot Size

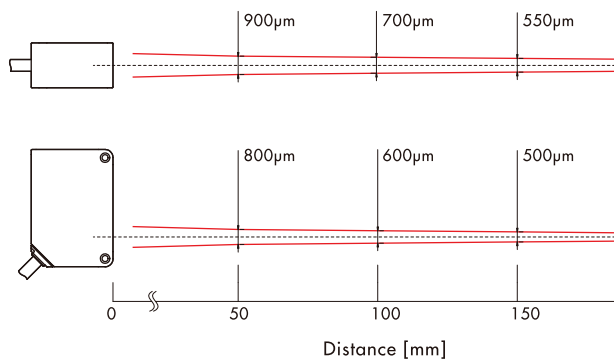
◆ ZXD-C-15 _ _ _



◆ ZXD-C-35 _ _ _



◆ ZXD-C-100 _ _ _



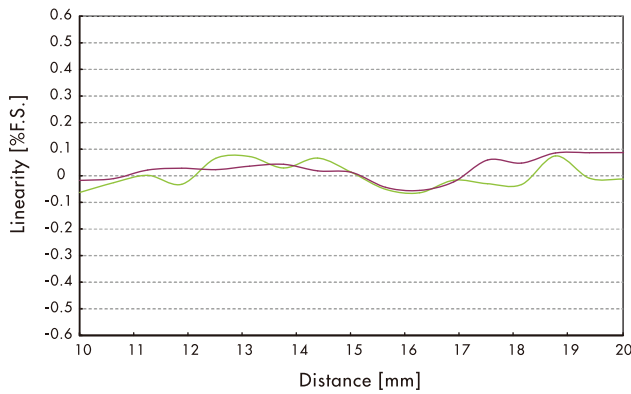
Line up

Type	Measurement Range	Repeat Accuracy	Analog Output	Line up
 Diffuse	 10 15 20 15±5mm	1 µm	4 ~ 20mA	ZXD-C-15SC-M12J3
			0 ~ 10V	ZXD-C-15SV-M12J3
	 20 35 50 35±15mm	6 µm	4 ~ 20mA	ZXD-C-35SC-M12J3
			0 ~ 10V	ZXD-C-35SV-M12J3
	 50 100 100±50mm 150	20 µm	4 ~ 20mA	ZXD-C-100SC-M12J3
			0 ~ 10V	ZXD-C-100SV-M12J3

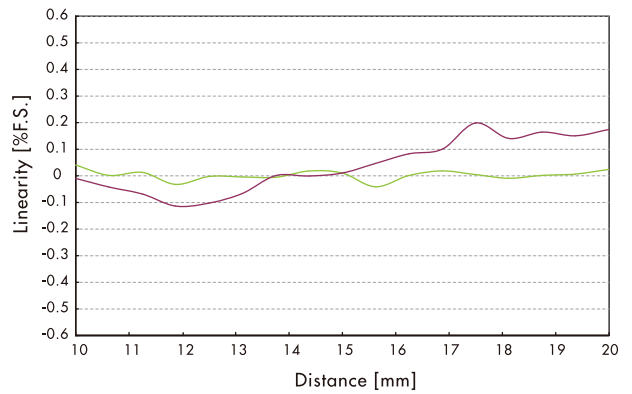
Linearity



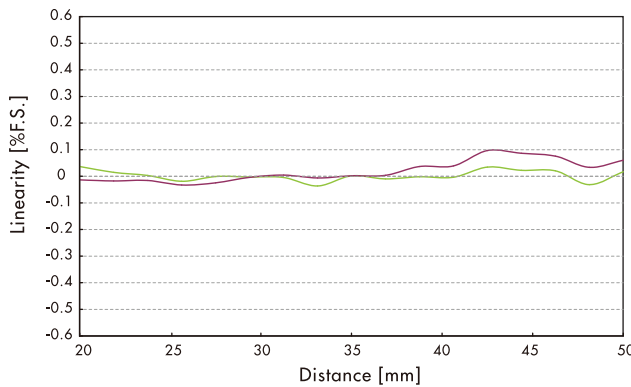
◆ ZXD-C-15SV-



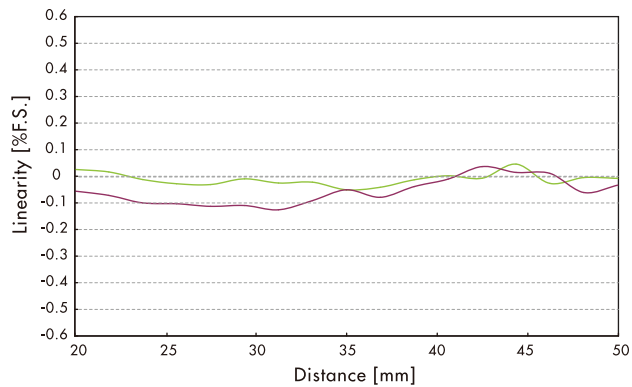
◆ ZXD-C-15SC-



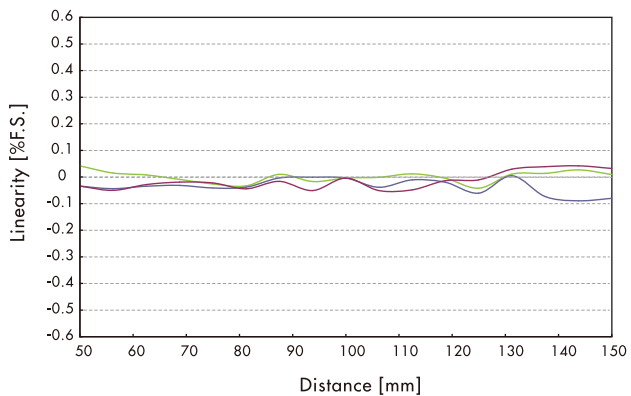
◆ ZXD-C-35SV-



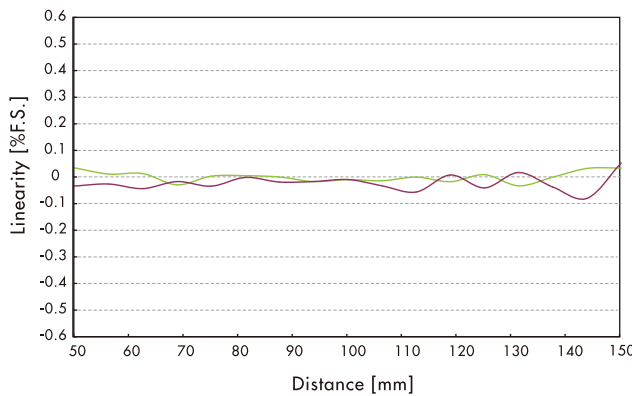
◆ ZXD-C-35SC-



◆ ZXD-C-100SV-



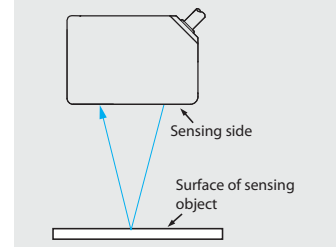
◆ ZXD-C-100SC-



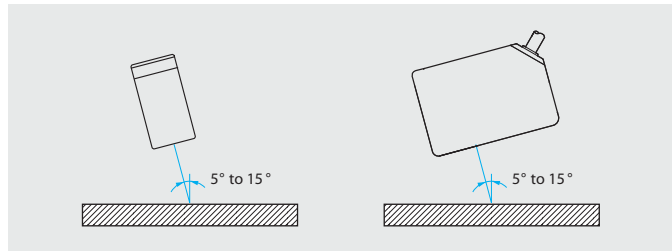
- Proximity Sensors
- Photoelectric Sensors
- Measurement Sensors
- Vision & Safety Sensors
- Control
- Weighing
- Automation
- Components

Mounting and Adjustments

Make sure that the sensing side of the sensor is parallel with the surface of the sensing object. Normally, do not incline the sensor towards the sensing object. The sensor is to be placed at least 10mm away from any glossy or reflective surface.



The Linearity of the output changes with the sensing angle. For best results the sensor should be exactly perpendicular to the sensing object. But the sensing will be normal upto to $\pm 15^\circ$



Proximity Sensors

Photoelectric Sensors

Measurement Sensors

Vision & Safety Sensors

Control

Weighing

Automation

Components

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