

Electrostatic Sensor

IZD10 Series



How to Order

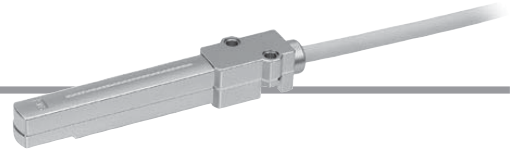
IZD 10 – 1 10

Model

10 Electrostatic sensor

Potential measurement

1	±0.4 kV
5	±20 kV



Specifications

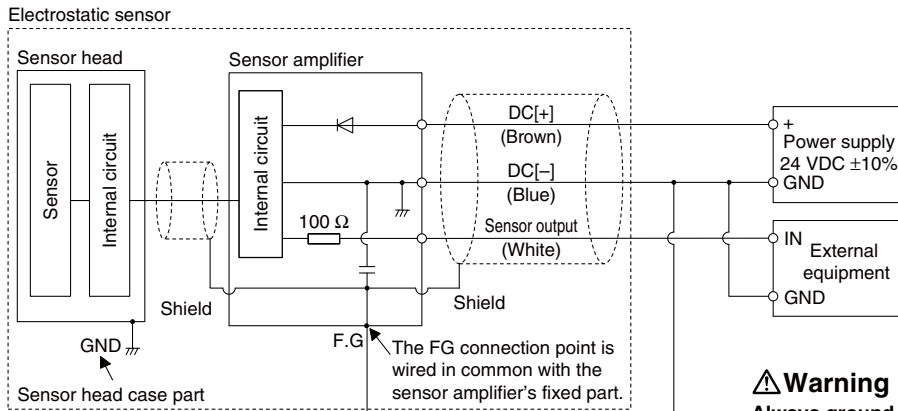
Model	IZD10-110	IZD10-510
Potential measurement	±0.4 kV (at detection distance: 25 mm) ^{Note)}	±20 kV (at detection distance: 50 mm) ^{Note)}
Output voltage	1 to 5 V (Output impedance: Approx. 100 Ω)	
Effective detection distance	10 to 50 mm	25 to 75 mm
Linearity	±5% F.S. (0 to 50°C, at detection distance: 25 mm)	±5% F.S. (0 to 50°C, at detection distance: 50 mm)
Output delay time	100 ms or less	
Power supply voltage	21.6 to 26.4 VDC (Within 24 VDC ±10%)	
Current consumption	40 mA or less	
Operating ambient temperature	0 to 50°C	
Operating ambient humidity	35 to 85% Rh (with no condensation)	
Material	Head case : ABS Amplifier case : ABS	
Vibration resistance	Durability 50 Hz Amplitude 1 mm X, Y, Z each 2 hours	
Shock resistance	100 m/s ²	
Weight	185 g (including cable weight)	
Compliance with EN standards	Protective class : Class III (EN60950-1) Pollution Degree 3 CE marking : Low voltage directive : 2006/95/EC Only when connected to a SELV-type external circuit.	
EMC directive	2004/108/EC	
UL standards	UL508	

Note) The relationship between the measured potential and the output voltage varies depending on the detection distance.
For details on the relationship in the detection distance between the measured potential and the output voltage, refer to the graph in "Technical Data - Output Signal" on page 503.

Connection Circuit and Wiring Table

Connect the lead wires according to the following connection circuit and wiring table.

1. Connection circuit



Warning

Always ground the electrostatic sensor.

Be sure to ground the GND terminal with a resistance value of 100 Ω or less. In addition, a dedicated power supply is recommended for use as the sensor-driving power supply. Connecting any equipment other than the sensor to this power supply may trigger the malfunctioning or breakdown of the equipment when static electricity is discharged to the sensor head or when noise enters the GND terminal.

Note) When using the cable on the external equipment connection side after cutting it short, do not connect a shielding wire (since the shielded line is wired in common with the amplifier case, provide a frame ground on the amplifier case side).

* Text in () refers to each lead wire coating color of the dedicated cable.

2. Wiring table

Lead wire color	Description	Function
Brown	DC (+)	Power supply 24 VDC
Blue	DC (-)	Power supply 0 V
White	Sensor output	Analog output 1 to 5 V

Dimensions

IZD10-110
IZD10-510

