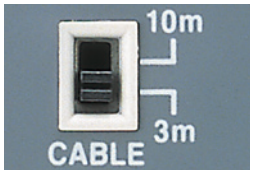
High Accuracy Inductive Gauging Sensors

EX-500 Series

CE Refer to P.821 for a list of products complying with EU Directives.

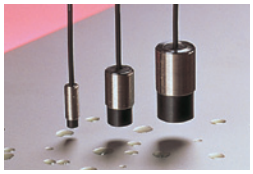
Compatible sensor heads

Replacement of the same type sensor heads can be accomplished with only minor adjustments. The sensor cable can easily be extended by adding the optional extension cable and switching the setting.



Heat-resistant sensor heads (105°C (221°F)) conform to IP67

The EX-500 Series offers four types of sensor heads including high-accuracy and long-range models. These sensor heads are ideal for measurements in harsh environments.



Auto-zero function

Pressing the auto-zero key sets the current measured value to 0 V. Zero-point adjustment with a standard target is as simple as pressing the auto-zero key, making sensor setup at product changeover quick and easy. (External control terminal is also provided.)

Lineup

Type	Model		Appearance	Measuring range (0 5 10 (mm inch))	Resolution	Mounting size
Non-shielded threaded	Sensor head	Controller				
	EX-008	EX-501	ø6.5 × 25.2 mm ø0.26" × 0.99"	0 to 1 mm 0.04"	0.3 µm 0.00001"	M8
		EX-502		0 to 2 mm 0.08"	0.6 µm 0.00002"	M8
	EX-016	EX-505	ø14 × 31.4 mm ø0.55" × 1.24"	0 to 5 mm 0.20"	1.5 µm 0.00006"	M16
	EX-022	EX-510	ø20.5 × 40.6 mm ø0.81" × 1.60"	0 to 10 mm 0.39"	3 µm 0.00012"	M22

Specifications

Type	Size	M8	M8	M16	M22
Model	Sensor head	EX-008	EX-008	EX-016	EX-022
	Controller	EX-501	EX-502	EX-505	EX-510
Measuring range		0 to 1mm 0.04"	0 to 2 mm 0.08"	0 to 5 mm 0.20"	0 to 10 mm 0.39"
Analog output	Output voltage	0 to 5 V (Output impedance: 100 Ω)			
	Output current	4 to 20 mA (Applicable load: 0 to 350 Ω)			
	Resolution	0.03% of F.S. (RESPONSE = 3, 4)			
	Linearity	±0.3% of F.S. (RESPONSE = 2, 3, 4)			
	Response time (Response mode)	0.1 ms (RESPONSE = 1), 1 ms (RESPONSE = 2), 10 ms (RESPONSE = 3), 100 ms (RESPONSE = 4)			
Disconnection alarm output [1] (N.C.)		NPN: 100 mA max. (40 V), Residual voltage: 1 V max.			
Functions		Auto-zero function/Auto-span function, Response time selector function/ Preset metal characteristic memory function, Cable length selector function/Interference suppression function			
Temperature fluctuation	Sensor head	0.03% of F.S./°C			
	Controller	0.04% of F.S./°C [2]			
Power supply voltage		12 to 24 VDC ±10%			
Current consumption		220 mA max.			
Enclosure rating		Sensor head: IP67			
Ambient temperature	Sensor head	-20 to +105°C (-4 to +221°F), No freezing			
	Controller	0 to 50°C (32 to 122°F)			
Relative humidity		35 to 85%, No condensation			
Weight	Sensor head	Approx. 50 g		Approx. 63 g	Approx. 80 g
	Controller	Approx. 360 g			

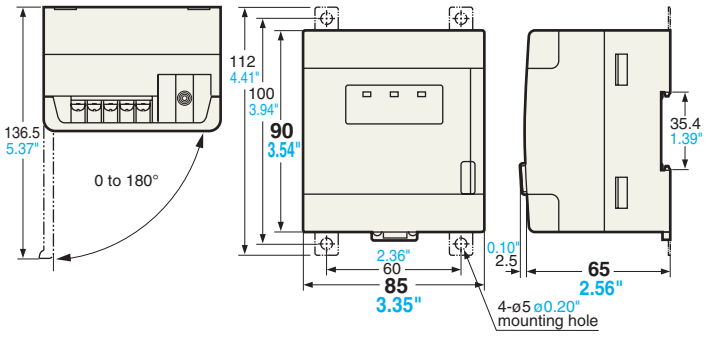
The above data was obtained using an aluminum target (A5052 t=1 mm 0.04"). When measuring steel or stainless steel targets, refer to the characteristics of linearity for these materials.
1. NPN output can easily be converted to PNP output by connecting the optional **OP-5148** PNP Output Converter.
2. When the distance between the sensor head and the target is 50% of the measuring range and the operating temperature is 10 to 40°C (50 to 104°F) (**EX-008**) or 0 to 50°C (32 to 122°F) (**EX-016** and **EX-022**).

Dimensions

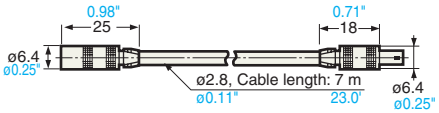
Unit: mm inch

Controllers

EX-501/502/505/510

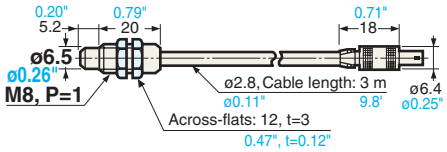


Extension cable (optional: **OP-20708**)

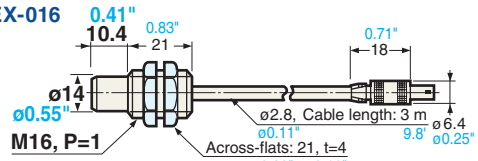


Sensor heads

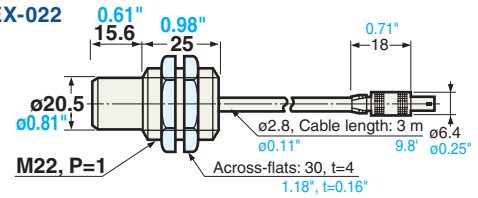
EX-008



EX-016



EX-022



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