

Global Series inductive proximity sensors



Created with the high-volume OEM in mind, the Global Series inductive sensor family is optimized to include only those functions necessary for reliable sensing.

Overview

There's no need to design your machine around these sensors. The Global family includes models in a variety of diameters, so they will fit right where you need them. Select models from 8 mm to 30 mm in diameter with standard or extended sensing ranges, to meet your specific application requirements. Need something smaller? The standard offering also includes inductive proximity sensors as small as 4 mm in diameter.

Even more, extended range models give you the ability to mount the sensor further from the target, reducing the potential for sensor damage caused by target impacts.

Features

- PNP and NPN versions
- Connectivity options that include four-pin micro and two-meter potted cable
- Shielded sensing for flush-mounted applications, as well as unshielded models for sensing long distances
- Bright LED output status indicator on the sensor barrel
- Available in a variety of sizes: 8 mm, 12 mm, 18 mm and 30 mm diameters
- DC sensors operate on 10–30 Vdc in two-wire and three-wire (PNP or NPN) configurations, and include short-circuit protection
- AC sensors operate on 20–250 Vac in two-wire configuration

Approvals

- CE (DC models only)
- cCSAus

Accessories to make installation easier

Eaton's Global line isn't just about sensors—it's also a complete offering of connectivity products and installation accessories. To finish your installation, consider using Eaton's Global Plus connector cables, field-wireable connectors and multi-connector junction boxes.

Global Plus connector cables

- Mini, micro and nano (pico) cables in various lengths, gauges and jacket materials
- Single- and double-ended connector cables
- Specialty cables, including those with built-in LEDs
- Straight and right-angle connectors
- Available in standard lengths of 2, 5 and 10 meters
- Bulk cable available in any length, along with field-wireable connectors for making your own custom cables

Global Plus junction boxes

Eaton's multi-connector junction boxes are an easy way to quickly connect multiple sensors to a control system. Using a variety of double-ended, industry-standard M12 micro connector cables, a system can be wired up in minutes, eliminating the need for multiple long runs of cable and saving installation time and expense.

- Models available with four, six or eight sensor ports in one block
- Block capacity can be doubled with a micro splitter accessory (CSDY5)
- Available with a molded cable or spring-cage main body exit
- Capacity of up to 4A per port and 12A per block
- Robust design to resist vibration and moisture penetration

Get the details

For more information on the Global Proximity and Global Plus family of sensing products, including detailed specifications and wiring diagrams, see the latest edition of the Sensing Solutions Product Guide (CA08100010E), available online at www.eaton.com/sensors.

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Specifications

		Two-Wire		Three-Wire
		AC Models	DC Models	DC Models
Operating voltage		20–250 Vac	10–30 Vdc	10–30 Vdc
Off-state leakage		<1.8 mA	<0.8 mA	<0.01 mA
Maximum load current		200 mA	100 mA	100 mA
Minimum load current		5 mA	3 mA	—
Surge current		5A (20 ms)	—	—
Voltage drop		<8 Vac at 400 mA	<6V	<1.5V
Switching frequency	8 mm diameter	—	—	2 kHz (shielded and unshielded)
	12 mm diameter	25 Hz	1 kHz (shielded); 1 kHz (unshielded)	2 kHz (shielded); 1 kHz (unshielded)
	18 mm diameter	25 Hz	1 kHz (shielded); 500 Hz (unshielded)	1 kHz (shielded); 500 Hz (unshielded)
	30 mm diameter	25 Hz	500 Hz (shielded); 200 Hz (unshielded)	300 Hz (shielded); 150 Hz (unshielded)
Short-circuit protection		No	Yes	Yes
Overload trip point		—	>120 mA	220 mA
Time delay before availability		—	—	<10 ms
Transient protection		—	2 kV, 1 ms, 1k ohm	1 kV, 0.1 ms, 1k ohm
Repeat accuracy		Shielded: <1.0% / unshielded: <3.0% (Sr)	<2.0% (Sr)	<1.0% (Sr)
Switching hysteresis		<15%		
Operating temperature		–25° to 70°C (0° to 60°C for all extended range models)		
Temperature drift		<10% (Sr)		
Protection		IP67		
Housing material		Nickel-plated brass (stainless steel for 8 mm diameter, nano-connector models)		
Cable		PVC jacket, 2-meter length		

Wiring diagrams

Operating Voltage	Output	Cable Models	Connector Models (Face View Male Shown)	
			Micro	Nano
Two-Wire Sensors				
20–250 Vac	NO	<p>* Internally connected to housing (use of this wire is optional)</p>	<p>* Internally connected to housing (use of this wire is optional)</p>	—
10–30 Vdc	NO (NPN)			—
	NO (PNP)			—
Three-Wire Sensors				
10–30 Vdc	NO (NPN)			
	NO (PNP)			

Note: Pin numbers are for reference only; rely on pin location when wiring.

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 Printed in USA
 Publication No. PA05301004E / Z11072
 April 2011

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