E52 Rectangular Style Sensors

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Product Description

Rectangular E52 Inductive Proximity Sensors from Eaton's Electrical Sector feature a small, thin, compact space-saving design for applications where tubular type sensors cannot be used. Sensors are self-contained for direct connection to a logic circuit, relay, counter, programmable controller, and so on.

Features

- Small, low-profile design for use in space restrictive applications
- Three-wire DC operation
- Choose from a variety of sizes, and side or end sensing configurations
- Output indicator included on all models
- Epoxy filled cavities stop fluids from contacting any electrical component
- Convenient mounting holes integrated into each sensor housing

⚠ DANGER

THIS SENSOR IS NOT A SAFETY DEVICE AND IS NOT INTENDED TO BE USED AS A SAFETY DEVICE. This sensor is designed only to detect and read certain data in an electronic manner and perform no use apart from that, specifically no safety-related use. This sensor product does not include self-checking redundant circuitry, and the failure of this sensor product could cause either an energized or de-energized output condition, which could result in death, serious bodily injury, or property damage.

For the most current information on this product, visit our Web site: www.eaton.com

For Customer Service in the U.S. call 1-877-ETN CARE (386-2273), in Canada call 1-800-268-3578. For Application Assistance in the U.S. and Canada call 1-800-426-9184.

Product Selection

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Three-Wire Models

	Voltage	Sensing Range	Frequency	Shielding	Connection Type	NO Output Catalog Number	NC Output Catalog Number
R12 Side Sensing	**R12 Side Sensing**						
	12–24 Vdc	0.12 in (3 mm)	Standard	Shielded (NPN)	1-meter cable	**E52RAL12T110**	—
				Shielded (PNP)		**E52RAL12T111**	—
			Alternate	Shielded (NPN)	1-meter cable	**E52RAL12T110AF**	—
				Shielded (PNP)		**E52RAL12T111AF**	—
Q16 End Sensing	**Q16 End Sensing**						
	12–30 Vdc	0.20 in (5 mm)	Standard	Unshielded (NPN)	2-meter cable	**E52-16QS04-C**	**E52-16QS04-C1**
				Unshielded (PNP)	2-meter cable	**E52-16QS04-B**	**E52-16QS04-B1**
R18 Side Sensing	**R18 Side Sensing**						
	10–30 Vdc	0.16 in (4 mm)	Standard	Unshielded (NPN)	2-meter cable	**E52-18RU04-C**	**E52-18RU04-C1**
					3-pin nano-connector	**E52-18RU04-CN** ☺	**E52-18RU04-C1N** ☺
				Unshielded (PNP)	2-meter cable	**E52-18RU04-B**	**E52-18RU04-B1**
					3-pin nano-connector	**E52-18RU04-BN** ☺	**E52-18RU04-B1N** ☺
Q25 End Sensing	**Q25 End Sensing**						
	10–30 Vdc	0.39 in (10 mm)	Standard	Shielded (NPN)	2-meter cable	**E52-25QS10-C**	**E52-25QS10-C1**
				Shielded (PNP)	2-meter cable	**E52-25QS10-B**	**E52-25QS10-B1**

Compatible Connector Cables

Standard Cables [1]

	Voltage Style	Number of Pins	Gauge	Length	Pin Configuration/Wire Colors (Face View Female Shown)	PVC Jacket Catalog Number	PUR Jacket Catalog Number
Nano-Style Straight Female	**Nano-Style, Straight Female**						
	DC	3-pin	24 AWG	6.0 ft (2m)	③ ④ ① 1-Brown 3-Blue 4-Black	**CSNS3A3CY2402**	**CSNS3A3RY2402**

Technical Data and Specifications

E52 Rectangular Style Sensors

Description	Specification
Input current	Less than 10 mA
Load current	100 mA maximum
Switching rate	500 operations per second
Circuit protection	Short circuit
Ambient temperature range	−13° to 130°F (−10° to 55°C)
Enclosure rating	NEMA 1, 2, 3, 3S, 4, 12 (IEC IP66)
Enclosure material	PBT composition
Output indicator LED	Lights when output is ON

Notes

☺ See listing of compatible connector cables above.

[1] For a full selection of connector cables, see **Tab 10**, **section 10.1**.
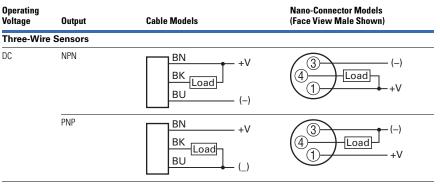
3

Wiring Diagrams

Pin numbers are for reference, rely on pin location when wiring.

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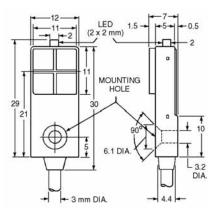| Operating Voltage	Output	Cable Models	Nano-Connector Models (Face View Male Shown)
Three-Wire Sensors			
DC	NPN		
	PNP		

Dimensions

Approximate Dimensions in Inches (mm) except where noted

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R12
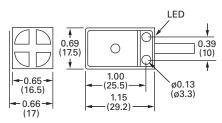
Note: Dimensions are mm only.

Q16

Q25

R18