

# 3.15

## Inductive Proximity Sensors

### E51 Modular Limit Switch Style Sensors

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#### Product Selection

##### Standard Sensors—Assembled with Terminal Wiring

Standard E51 sensors feature long sensing ranges and a choice of top or side sensing heads. Alternate frequency units eliminate interference when mounted close to standard frequency units. Order sensors in component form, as assembled plug-in units, or in a sealed version where the sensor body is factory assembled to an epoxy filled receptacle with tamper-proof screws to ensure a lasting seal.

##### Assembled Sensor



##### Assembled Sensors—Standard (with Terminal Wiring)

###### Sensor Body and Receptacle



Operating voltage	20–264 Vac/dc	<b>Two-Wire Sensors</b>		<b>Four-Wire Sensors</b>		10–30 Vdc
Output	NO or NC <sup>1</sup>	NO and NC complementary		NO and NC complementary		NO and NC complementary
Sensor body	<b>E51SAL</b>	<b>E51SCL</b>	<b>E51SCN</b> Accepts logic modules <sup>2</sup>	<b>E51SPL</b> PNP	<b>E51SNL</b> NPN	
Receptacle <sup>3</sup>	<b>E51RA</b>	<b>E51RC</b>	<b>E51RCB</b>	<b>E51RN</b>	<b>E51RN</b>	

##### Sensor Heads <sup>1</sup>

###### Top Sensing



###### Sensing Range Shielding Frequency Sensor Head Only Catalog Number Assembled Sensors with Head, Sensor Body and Receptacle Catalog Number

Sensing Range		Shielding	Frequency	Sensor Head Only Catalog Number	Assembled Sensors with Head, Sensor Body and Receptacle Catalog Number					
0.51 in (13 mm)		Shielded	Standard	<b>E51DT1</b>	<b>E51ALT1</b> ☹ ☹	<b>E51CLT1</b>	<b>E51CNT1</b>	<b>E51PLT1</b> ☹ ☹	<b>E51NLT1</b> ☹ ☹	
				Alternate	<b>E51DT2</b>	<b>E51ALT2</b> ☹ ☹	<b>E51CLT2</b>	<b>E51CNT2</b>	<b>E51PLT2</b> ☹ ☹	<b>E51NLT2</b> ☹ ☹
0.94 in (24 mm)		Unshielded	Standard	<b>E51DT5</b>	<b>E51ALT5</b> ☹ ☹	<b>E51CLT5</b>	<b>E51CNT5</b>	<b>E51PLT5</b> ☹ ☹	<b>E51NLT5</b> ☹ ☹	
				Alternate	<b>E51DT6</b>	<b>E51ALT6</b> ☹ ☹	<b>E51CLT6</b>	<b>E51CNT6</b>	<b>E51PLT6</b> ☹ ☹	<b>E51NLT6</b> ☹ ☹

###### Side Sensing



###### Side Sensing

0.51 in (13 mm)		Shielded	Standard	<b>E51DS1</b>	<b>E51ALS1</b> ☹ ☹	<b>E51CLS1</b>	<b>E51CNS1</b>	<b>E51PLS1</b> ☹ ☹	<b>E51NLS1</b> ☹ ☹
				Alternate	<b>E51DS2</b>	<b>E51ALS2</b> ☹ ☹	<b>E51CLS2</b>	<b>E51CNS2</b>	<b>E51PLS2</b> ☹ ☹
0.94 in (24 mm)		Unshielded	Standard	<b>E51DS5</b>	<b>E51ALS5</b> ☹ ☹	<b>E51CLS5</b>	<b>E51CNS5</b>	<b>E51PLS5</b> ☹ ☹	<b>E51NLS5</b> ☹ ☹
				Alternate	<b>E51DS6</b>	<b>E51ALS6</b> ☹ ☹	<b>E51CLS6</b>	<b>E51CNS6</b>	<b>E51PLS6</b> ☹ ☹

##### Notes

<sup>1</sup> All sensor heads feature a programmable output selector switch for NO or NC operation. Operation is as follows:

For This Output Type:	Set Selector Position:	
	"TARGET"	"NO TARGET"
NO	Target present	Target absent
NC	Target absent	Target present

<sup>2</sup> Logic module must be ordered separately, see [Page V8-T3-86](#). These sensor bodies are rated NEMA 4, 4X and 13.

<sup>3</sup> Receptacles feature terminal wiring with a 1/2 in NPT thread at the conduit entrance. Other connection options are available:

Connection Option	Catalog Number	Code Suffix	Example
20 mm thread at the conduit entrance	—	<b>20</b>	<b>E51ALT120</b>
Mini-connector termination with epoxy filled receptacle, see <a href="#">Page V8-T3-87</a> for additional receptacle options	Two-wire, 3-pin connector	<b>CSMS3F3CY1602</b>	<b>P3</b> <b>E51ALT1P3</b>
	Four-wire, 5-pin connector	<b>CSMS5D5CY1602</b>	<b>P5</b> <b>E51CLT1P5</b>
Pre-wired cable with epoxy filled receptacle	8 ft long	—	<b>S</b> <b>E51ALT1S</b>
	12 ft long	—	<b>S12</b> <b>E51ALT1S12</b>
	20 ft long	—	<b>S20</b> <b>E51ALT1S20</b>