

### E57G General Purpose Proximity Sensors



### Contents

<b>Description</b>	<b>Page</b>
E57G General Purpose Proximity Sensors	
Product Selection	
E57G General Purpose Proximity Sensors . . . . .	<b>V8-T3-30</b>
Compatible Connector Cables . . . . .	<b>V8-T3-31</b>
Accessories . . . . .	<b>V8-T3-31</b>
Technical Data and Specifications . . . . .	<b>V8-T3-32</b>
Wiring Diagrams . . . . .	<b>V8-T3-33</b>
Dimensions . . . . .	<b>V8-T3-34</b>

## E57G General Purpose Proximity Sensors

### Product Description

For global sensing applications, the E57G General Purpose series is designed for most standard inductive sensing needs. With its stainless steel tubular body, 360 degree visible LED, fast switching speed and laser-etched markings, the E57G series is an ideal cost-effective solution.

### Features

- 360° LED indicator
- Stainless steel tube
- 10–30 Vdc operating voltage
- Short-circuit protection
- –25 to 70 °C temperature range
- IP67 environmental rating
- Durable laser-engraved label
- Available in cable and micro-connector styles
- Nickel-brass mounting nuts

### Standards and Certifications

- cULus Listed
- CE



### 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](http://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.

# 3.4

## Inductive Proximity Sensors



### E57G General Purpose Proximity Sensors

#### Product Selection

#### E57G General Purpose Proximity Sensors

3

#### Three-Wire Sensors

	Operating Voltage	Sensing Range	Shielding	Output Type	Connection Type	NO Output Catalog Number	NC Output Catalog Number			
	<b>12 mm Diameter</b>									
	10–30 Vdc	2 mm (standard range)	Shielded	PNP	2-meter cable	<b>E57G-12SPN2-C2</b>	<b>E57G-12SPC2-C2</b>			
					4-pin micro DC connector	<b>E57G-12SPN2-Q</b>	<b>E57G-12SPC2-Q</b>			
					NPN	2-meter cable	<b>E57G-12SNN2-C2</b>	<b>E57G-12SNC2-C2</b>		
				NPN	4-pin micro DC connector	<b>E57G-12SNN2-Q</b>	<b>E57G-12SNC2-Q</b>			
					4 mm (standard range)	Unshielded	PNP	2-meter cable	<b>E57G-12UPN4-C2</b>	<b>E57G-12UPC4-C2</b>
								4-pin micro DC connector	<b>E57G-12UPN4-Q</b>	<b>E57G-12UPC4-Q</b>
	NPN	2-meter cable	<b>E57G-12UNN4-C2</b>	<b>E57G-12UNC4-C2</b>						
		4-pin micro DC connector	<b>E57G-12UNN4-Q</b>	<b>E57G-12UNC4-Q</b>						
	4 mm (extended range)	Shielded	PNP	PNP	2-meter cable	<b>E57G-12SPN4-C2</b>	<b>E57G-12SPC4-C2</b>			
					4-pin micro DC connector	<b>E57G-12SPN4-Q</b>	<b>E57G-12SPC4-Q</b>			
				NPN	2-meter cable	<b>E57G-12SNN4-C2</b>	<b>E57G-12SNC4-C2</b>			
			4-pin micro DC connector		<b>E57G-12SNN4-Q</b>	<b>E57G-12SNC4-Q</b>				
			8 mm (extended range)	Unshielded	PNP	PNP	2-meter cable	<b>E57G-12UPN8-C2</b>	<b>E57G-12UPC8-C2</b>	
							4-pin micro DC connector	<b>E57G-12UPN8-Q</b>	<b>E57G-12UPC8-Q</b>	
	NPN	2-meter cable				<b>E57G-12UNN8-C2</b>	<b>E57G-12UNC8-C2</b>			
		4-pin micro DC connector			<b>E57G-12UNN8-Q</b>	<b>E57G-12UNC8-Q</b>				
		<b>18 mm Diameter</b>								
10–30 Vdc		5 mm (standard range)			Shielded	PNP	2-meter cable	<b>E57G-18SPN5-C2</b>	<b>E57G-18SPC5-C2</b>	
			4-pin micro DC connector	<b>E57G-18SPN5-Q</b>			<b>E57G-18SPC5-Q</b>			
			NPN	2-meter cable			<b>E57G-18SNN5-C2</b>	<b>E57G-18SNC5-C2</b>		
				NPN		4-pin micro DC connector	<b>E57G-18SNN5-Q</b>	<b>E57G-18SNC5-Q</b>		
						8 mm (standard range)	Unshielded	PNP	2-meter cable	<b>E57G-18UPN8-C2</b>
			4-pin micro DC connector	<b>E57G-18UPN8-Q</b>					<b>E57G-18UPC8-Q</b>	
NPN		2-meter cable	<b>E57G-18UNN8-C2</b>	<b>E57G-18UNC8-C2</b>						
		4-pin micro DC connector	<b>E57G-18UNN8-Q</b>	<b>E57G-18UNC8-Q</b>						
8 mm (extended range)		Shielded	PNP	PNP	2-meter cable	<b>E57G-18SPN8-C2</b>	<b>E57G-18SPC8-C2</b>			
					4-pin micro DC connector	<b>E57G-18SPN8-Q</b>	<b>E57G-18SPC8-Q</b>			
				NPN	2-meter cable	<b>E57G-18SNN8-C2</b>	<b>E57G-18SNC8-C2</b>			
	4-pin micro DC connector		<b>E57G-18SNN8-Q</b>		<b>E57G-18SNC8-Q</b>					
	12 mm (extended range)		Unshielded	PNP	PNP	2-meter cable	<b>E57G-18UPN12-C2</b>	<b>E57G-18UPC12-C2</b>		
						4-pin micro DC connector	<b>E57G-18UPN12-Q</b>	<b>E57G-18UPC12-Q</b>		
NPN		2-meter cable			<b>E57G-18UNN12-C2</b>	<b>E57G-18UNC12-C2</b>				
		4-pin micro DC connector		<b>E57G-18UNN12-Q</b>	<b>E57G-18UNC12-Q</b>					

**Note**

⊕⊖ See listing of compatible connector cables on **Page V8-T3-31**.

### Three-Wire Sensors, continued

30 mm




Operating Voltage	Sensing Range	Shielding	Output Type	Connection Type	NO Output Catalog Number	NC Output Catalog Number	
<b>30 mm Diameter</b>							
10–30 Vdc	10 mm (standard range)	Shielded	PNP	2-meter cable	<b>E57G-30SPN10-C2</b>	<b>E57G-30SPC10-C2</b>	
				4-pin micro DC connector	<b>E57G-30SPN10-Q</b>	<b>E57G-30SPC10-Q</b>	
			NPN	2-meter cable	<b>E57G-30SNN10-C2</b>	<b>E57G-30SNC10-C2</b>	
		4-pin micro DC connector		<b>E57G-30SNN10-Q</b>	<b>E57G-30SNC10-Q</b>		
		15 mm (standard range)	Unshielded	PNP	2-meter cable	<b>E57G-30UPN15-C2</b>	<b>E57G-30UPC15-C2</b>
					4-pin micro DC connector	<b>E57G-30UPN15-Q</b>	<b>E57G-30UPC15-Q</b>
	NPN			2-meter cable	<b>E57G-30UNN15-C2</b>	<b>E57G-30UNC15-C2</b>	
			4-pin micro DC connector	<b>E57G-30UNN15-Q</b>	<b>E57G-30UNC15-Q</b>		
	15 mm (extended range)		Shielded	PNP	2-meter cable	<b>E57G-30SPN15-C2</b>	<b>E57G-30SPC15-C2</b>
					4-pin micro DC connector	<b>E57G-30SPN15-Q</b>	<b>E57G-30SPC15-Q</b>
		NPN		2-meter cable	<b>E57G-30SNN15-C2</b>	<b>E57G-30SNC15-C2</b>	
			4-pin micro DC connector	<b>E57G-30SNN15-Q</b>	<b>E57G-30SNC15-Q</b>		
22 mm (extended range)		Unshielded	PNP	2-meter cable	<b>E57G-30UPN22-C2</b>	<b>E57G-30UPC22-C2</b>	
				4-pin micro DC connector	<b>E57G-30UPN22-Q</b>	<b>E57G-30UPC22-Q</b>	
	NPN		2-meter cable	<b>E57G-30UNN22-C2</b>	<b>E57G-30UNC22-C2</b>		
		4-pin micro DC connector	<b>E57G-30UNN22-Q</b>	<b>E57G-30UNC22-Q</b>			

### Compatible Connector Cables

#### Standard Cables <sup>①</sup>

Micro-Style Straight Female



Voltage Style	Number of Pins	Gauge	Length	Pin Configuration/Wire Colors (Face View Female Shown)	PVC Jacket Catalog Number	PUR Jacket Catalog Number
<b>Micro-Style, Straight Female</b>						
DC	4-pin, 3-wire	22 AWG	6.0 ft (2m)	 1-Brown 2-No Wire 3-Blue 4-Black	<b>CSDS4A3CY2202</b>	<b>CSDS4A3RY2202</b>

### Accessories

#### E57G General Purpose Proximity Sensors

Description	Reference
Mounting brackets	See <b>Tab 8, section 8.2</b>
Replacement mounting nuts and other accessories	See <b>Tab 8, section 8.3</b>
Connector cables	See <b>Tab 10, section 10.1</b>

#### Notes

- ⊕ See listing of compatible connector cables on **Page V8-T3-31**.
- ① For a full selection of connector cables, see **Tab 10, section 10.1**.

## Technical Data and Specifications

### E57G General Purpose Proximity Sensors

Description	Three-Wire DC Sensors
Operating voltage	10–30 Vdc
Output current (continuous)	100 mA
Switching frequency [Hz]	Standard range: 12 mm—Shielded: 2000; Unshielded: 2000 18 mm—Shielded: 1200; Unshielded: 1200 30 mm—Shielded: 600; Unshielded: 500 Extended range: 12 mm—Shielded: 1200; Unshielded: 500 18 mm—Shielded: 300; Unshielded: 300 30 mm—Shielded: 400; Unshielded: 200
Leakage current	<100 $\mu$ A
Output voltage drop [Vsat]	<2.5 V
Current consumption	<10 mA
Short-circuit protection	Yes (Auto Reset)
Hysteresis [% of Sr]	2–20%
Repeat accuracy	1% shielded, 3% unshielded
Time delay before availability	<200 ms
Output indicator LED	360° amber LED
Operating temperature range	–25 to 70 °C
Ingress protection	IEC IP67, UL Type 1
Mechanical shock	IEC 60947-5-2 30 G half-sine wave, 11 mS
Vibration	IEC 60947-5-2 10–55 Hz, 1 mm amplitude
Housing materials	Front face: Ryton Tube: stainless steel End bells: M12 body: Polycarbonate Cable end bell: Polycarbonate Nuts: Ni-Brass
Cable	AWM style 20387 (PVC)

### Wiring Diagrams

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

#### E57G General Purpose Proximity Sensors

Operating Voltage	Output	Cable Models	Connector Models (Face View Male Shown) Micro
<b>Three-Wire Sensors</b>			
10–30 Vdc	NO (NPN)		
	NO (PNP)		
	NC (NPN)		
	NC (PNP)		

# 3.4

## Inductive Proximity Sensors

### E57G General Purpose Proximity Sensors

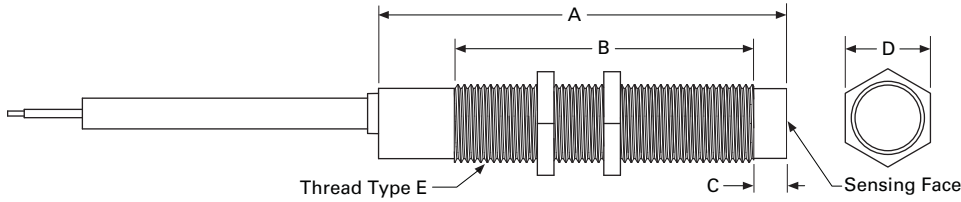
#### Dimensions

Approximate Dimensions in Inches (mm)

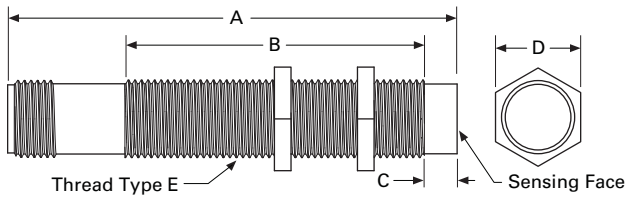
#### E57G General Purpose Proximity Sensors

##### Cable Models

3



##### Connector Models



Size	Shielding	Overall Length A	Threaded Length B	Cap Height C	Nut Width D	Thread Size E
<b>Three-Wire DC Sensors—Cable Models</b>						
12 mm	Shielded	2.52 (64.1)	1.98 (50.3)	—	0.67 (16.8)	M12 x 1
	Unshielded	2.52 (64.1)	1.80 (45.8)	0.20 (5.0)	0.67 (16.8)	M12 x 1
18 mm	Shielded	2.59 (65.9)	2.00 (50.9)	—	0.94 (23.8)	M18 x 1
	Unshielded	2.59 (65.9)	1.75 (44.4)	0.28 (7.0)	0.94 (23.8)	M18 x 1
30 mm	Shielded	2.67 (67.7)	1.98 (50.3)	—	1.41 (35.9)	M30 x 1.5
	Unshielded	2.67 (67.7)	1.49 (37.8)	0.51 (13.0)	1.41 (35.9)	M30 x 1.5
<b>Three-Wire DC Sensors—Micro-Connector Models</b>						
12 mm	Shielded	2.70 (68.7)	1.98 (50.3)	—	0.67 (16.8)	M12 x 1
	Unshielded	2.70 (68.7)	1.80 (45.8)	0.20 (5.0)	0.67 (16.8)	M12 x 1
18 mm	Shielded	2.72 (69.2)	2.00 (50.9)	—	0.94 (23.8)	M18 x 1
	Unshielded	2.72 (69.2)	1.75 (44.4)	0.28 (7.0)	0.94 (23.8)	M18 x 1
30 mm	Shielded	2.79 (70.9)	1.98 (50.3)	—	1.41 (35.9)	M30 x 1.5
	Unshielded	2.79 (70.9)	1.49 (37.8)	0.51 (13.0)	1.41 (35.9)	M30 x 1.5

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