

E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors



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E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors

Product Description

Eaton carries several options for your sensing needs in the E57 two-wire family. The stainless steel models are available in a standard length or short body, while available in AC or AC/DC configurations. The nickel-brass body models are available in standard length and either AC or DC two-wire configurations.

All of these are available in NPN or PNP with cable connections or micro connectors. The stainless steel standard length models are also available with mini connectors.

The stainless steel models in both lengths have 360 degree LEDs while the nickel-brass models have a single LED indicator.

Extended sensing ranges are also available in the stainless steel and nickel-brass standard length models, while shielded and unshielded models are offered throughout the E57 two-wire sensor products.

Standards and Certifications

- Stainless Steel:
 - UL Listed, E166051
 - UL Tested to Canadian safety standards
 - CE (AC/DC only)
 - RoHS Compliant
- Nickel-Brass:
 - CSA Certified, 224447
 - Products certified by CSA for US
 - CE (DC only)
 - RoHS Compliant



⚠ 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.

Highlighted Comparisons

Description	Stainless Steel	Stainless Steel Short Body	Nickel-Brass
Current ratings	250–500 mA	250–500 mA	200 mA
Enclosure ratings	NEMA 4, 4K, 6, 6P, 12, 13, IEC IP6, IP69K7	NEMA 4, 4K, 6, 6P, 12, 13, IEC IP67	IP67, IP69K
Operating temperature	–25 to 70 °C	–25 to 70 °C	–25 to 70 °C
Indicator	360° LED	360° LED	LED
Increased shock and vibration ratings	Yes	Yes	No

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.

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Product Selection

Stainless Steel Body (Standard Length)

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Two-Wire Sensors

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ^①	NO Output Catalog Number	NC Output Catalog Number	
	12 mm Diameter End Sensing						
	20–250 Vac	2 mm (standard range)	Shielded	2-meter cable	E57LAL12A2	E57LBL12A2	
				3-pin micro AC connector	E57LAL12A2SA ☹	E57LBL12A2SA ☹	
				3-pin micro AC pigtail connector	E57LAL12A2SP ☹	E57LBL12A2SP ☹	
		4 mm (standard range)	Unshielded	2-meter cable	E57LAL12A2E	E57LBL12A2E	
				3-pin micro AC connector	E57LAL12A2EA ☹	E57LBL12A2EA ☹	
				3-pin micro AC pigtail connector	E57LAL12A2EP ☹	E57LBL12A2EP ☹	
	20–132 Vac	6 mm (extended range)	Semi-shielded	2-meter cable	E57-12LE06-A	E57-12LE06-A1	
				3-pin micro AC connector	E57-12LE06-AA ☹	E57-12LE06-A1A ☹	
				3-pin micro AC pigtail connector	E57-12LE06-AP ☹	—	
		10 mm (extended range)	Non-embeddable	2-meter cable	E57-12LE10-A	E57-12LE10-A1	
				3-pin micro AC connector	E57-12LE10-AA ☹	E57-12LE10-A1A ☹	
				3-pin micro AC pigtail connector	E57-12LE10-AP ☹	E57-12LE10-A1P ☹	
	40–250 Vac 50/60 Hz ^② 20–250 Vdc	2 mm (standard range)	Shielded	2-meter cable	E57SAL12A2	E57SBL12A2	
				3-pin micro AC connector	E57SAL12A2SA ☹	E57SBL12A2SA ☹	
				3-pin mini-connector	E57MAL12A2B1 ☹	—	
		4 mm (standard range)	Unshielded	2-meter cable	E57SAL12A2E	E57SBL12A2E	
				3-pin micro AC connector	E57SAL12A2EA ☹	E57SBL12A2EA ☹	
3-pin micro AC pigtail connector				E57SAL12A2EP ☹	E57SBL12A2EP ☹		
	18 mm Diameter End Sensing						
	20–250 Vac	5 mm (standard range)	Shielded	2-meter cable	E57LAL18A2	E57LBL18A2	
				3-pin micro AC connector	E57LAL18A2SA ☹	E57LBL18A2SA ☹	
				3-pin micro AC pigtail connector	E57LAL18A2SP ☹	E57LBL18A2SP ☹	
				3-pin mini-connector	E57MAL18A2B1 ☹	E57MBL18A2B1 ☹	
		8 mm (standard range)	Unshielded	2-meter cable	E57LAL18A2E	E57LBL18A2E	
				3-pin micro AC connector	E57LAL18A2EA ☹	E57LBL18A2EA ☹	
				3-pin micro AC pigtail connector	E57LAL18A2EP ☹	E57LBL18A2EP ☹	
				3-pin mini-connector	E57MAL18A2EB1 ☹	E57MBL18A2EB1 ☹	
		20–132 Vac	12 mm (extended range)	Semi-shielded	2-meter cable	E57-18LE12-A	E57-18LE12-A1
					3-pin micro AC connector	E57-18LE12-AA ☹	E57-18LE12-A1A ☹
					3-pin micro AC pigtail connector	E57-18LE12-AP ☹	E57-18LE12-A1P ☹
					3-pin mini-connector	E57-18LE12-AB ☹	E57-18LE12-A1B ☹
	18 mm (extended range)	Non-embeddable	2-meter cable	E57-18LE20-A	E57-18LE20-A1		
			3-pin micro AC connector	E57-18LE20-AA ☹	E57-18LE20-A1A ☹		
			3-pin micro AC pigtail connector	E57-18LE20-AP ☹	E57-18LE20-A1P ☹		
			3-pin mini-connector	E57-18LE20-AB ☹	E57-18LE20-A1B ☹		
	40–250 Vac 50/60 Hz ^② 20–250 Vdc	5 mm (standard range)	Shielded	2-meter cable	E57SAL18A2	E57SBL18A2	
				3-pin micro AC connector	E57SAL18A2SA ☹	E57SBL18A2SA ☹	
		8 mm (standard range)	Unshielded	2-meter cable	E57SAL18A2E	E57SBL18A2E	
				3-pin micro AC connector	E57SAL18A2EA ☹	E57SBL18A2EA ☹	
				3-pin micro AC pigtail connector	E57SAL18A2EP ☹	E57SBL18A2EP ☹	
				3-pin mini-connector	E57MAL18A2B1 ☹	E57MBL18A2B1 ☹	

Notes



☹ See listing of compatible connector cables on **Page V8-T3-40**.

① For cable lengths longer than 2 meters, add the number of the desired length in meters to the end of the listed catalog number (for catalog numbers ending with a number, add an **S** and then the length). Examples for a 5-meter cable: E57-18LE12-A becomes E57-18LE12-A5; E57LAL12A2 becomes E57LAL12A2S5.

② Avoid wiring these AC/DC models in series as the sensors may not perform reliably. Contact Eaton's Applications Engineering at 1-800-426-9184 with questions.

Stainless Steel Body (Standard Length)

Two-Wire Sensors, continued

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ^①	NO Output Catalog Number	NC Output Catalog Number	
 Right Angle	18 mm Diameter Right Angle Sensing						
	20–250 Vac	5 mm	Shielded	2-meter cable	E57RAL18A2	E57RBL18A2	
				3-pin micro AC connector	E57RAL18A2SA ☺	E57RBL18A2SA ☺	
				3-pin micro AC pigtail connector	E57RAL18A2SP ☺	E57RBL18A2SP ☺	
				3-pin mini-connector	E57RAL18A2B1 ☺	E57RBL18A2B1 ☺	
	8 mm	Unshielded	2-meter cable	E57RAL18A2E	E57RBL18A2E		
			3-pin micro AC connector	E57RAL18A2EA ☺	E57RBL18A2EA ☺		
			3-pin micro AC pigtail connector	E57RAL18A2EP ☺	E57RBL18A2EP ☺		
			3-pin mini-connector	E57RAL18A2EB1 ☺	E57RBL18A2EB1 ☺		
	 30 mm	30 mm Diameter End Sensing					
20–250 Vac		10 mm (standard range)	Shielded	2-meter cable	E57LAL30A2	E57LBL30A2	
				3-pin micro AC connector	E57LAL30A2SA ☺	E57LBL30A2SA ☺	
				3-pin micro AC pigtail connector	E57LAL30A2SP ☺	E57LBL30A2SP ☺	
				3-pin mini-connector	E57MAL30A2B1 ☺	E57MBL30A2B1 ☺	
		15 mm (standard range)	Unshielded	2-meter cable	E57LAL30A2E	E57LBL30A2E	
				3-pin micro AC connector	E57LAL30A2EA ☺	E57LBL30A2EA ☺	
				3-pin micro AC pigtail connector	E57LAL30A2EP ☺	E57LBL30A2EP ☺	
				3-pin mini-connector	E57MAL30A2EB1 ☺	E57MBL30A2EB1 ☺	
		20–132 Vac	22 mm (extended range)	Semi-shielded	2-meter cable	E57-30LE22-A	E57-30LE22-A1
					3-pin micro AC connector	E57-30LE22-AA ☺	E57-30LE22-A1A ☺
					3-pin micro AC pigtail connector	E57-30LE22-AP ☺	E57-30LE22-A1P ☺
					3-pin mini-connector	E57-30LE22-AB ☺	E57-30LE22-A1B ☺
40–250 Vac 50/60 Hz ^② 20–250 Vdc		10 mm (standard range)	Shielded	2-meter cable	E57SAL30A2	E57SBL30A2	
				3-pin micro AC connector	E57SAL30A2SA ☺	E57SBL30A2SA ☺	
		15 mm (standard range)	Unshielded	2-meter cable	E57SAL30A2E	E57SBL30A2E	
				3-pin micro AC connector	E57SAL30A2EA ☺	E57SBL30A2EA ☺	

Notes

- ☺ See listing of compatible connector cables on **Page V8-T3-40**.
- ① For cable lengths longer than 2 meters, add the number of the desired length in meters to the end of the listed catalog number (for catalog numbers ending with a number, add an **S** and then the length). Examples for a 5-meter cable: E57-18LE12-A becomes E57-18LE12-A**5**; E57LAL12A2 becomes E57LAL12A2**S5**.
- ② Avoid wiring these AC/DC models in series as the sensors may not perform reliably. Contact Eaton's Applications Engineering at 1-800-426-9184 with questions.

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E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors

Stainless Steel Short Body

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Two-Wire Sensors

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ^①	NO Output Catalog Number	NC Output Catalog Number
12 mm 	12 mm Diameter					
	20–250 Vac	2 mm	Shielded	2-meter cable	E57SAL12A4	E57SBL12A4
				3-pin micro AC connector	E57SAL12A4SA ☺	E57SBL12A4SA ☺
		4 mm	Unshielded	2-meter cable	E57SAL12A4E	E57SBL12A4E
				3-pin micro AC connector	E57SAL12A4EA ☺	E57SBL12A4EA ☺
	40–250 Vac 50/60 Hz ^② 20–250 Vdc	2 mm	Shielded	2-meter cable	E57SAL12A2	E57SBL12A2
				3-pin micro AC connector	E57SAL12A2SA ☺	E57SBL12A2SA ☺
		4 mm	Unshielded	2-meter cable	E57SAL12A2E	E57SBL12A2E
				3-pin micro AC connector	E57SAL12A2EA ☺	E57SBL12A2EA ☺
	18 mm 	18 mm Diameter				
20–250 Vac		5 mm	Shielded	2-meter cable	E57SAL18A4	E57SBL18A4
				3-pin micro AC connector	E57SAL18A4SA ☺	E57SBL18A4SA ☺
		8 mm	Unshielded	2-meter cable	E57SAL18A4E	E57SBL18A4E
				3-pin micro AC connector	E57SAL18A4EA ☺	E57SBL18A4EA ☺
40–250 Vac 50/60 Hz ^② 20–250 Vdc		5 mm	Shielded	2-meter cable	E57SAL18A2	E57SBL18A2
				3-pin micro AC connector	E57SAL18A2SA ☺	E57SBL18A2SA ☺
		8 mm	Unshielded	2-meter cable	E57SAL18A2E	E57SBL18A2E
				3-pin micro AC connector	E57SAL18A2EA ☺	E57SBL18A2EA ☺
30 mm 		30 mm Diameter				
	20–250 Vac	10 mm	Shielded	2-meter cable	E57SAL30A4	E57SBL30A4
				3-pin micro AC connector	E57SAL30A4SA ☺	E57SBL30A4SA ☺
		15 mm	Unshielded	2-meter cable	E57SAL30A4E	E57SBL30A4E
				3-pin micro AC connector	E57SAL30A4EA ☺	E57SBL30A4EA ☺
	40–250 Vac 50/60 Hz ^② 20–250 Vdc	10 mm	Shielded	2-meter cable	E57SAL30A2	E57SBL30A2
				3-pin micro AC connector	E57SAL30A2SA ☺	E57SBL30A2SA ☺
		15 mm	Unshielded	2-meter cable	E57SAL30A2E	E57SBL30A2E
				3-pin micro AC connector	E57SAL30A2EA ☺	E57SBL30A2EA ☺

Notes




☺ See listing of compatible connector cables on **Page V8-T3-40**.

① Cable models are supplied as standard with a 2-meter cable. A 5-meter cable is available by adding **S5** to the catalog number. Example: E57SAL12T110 becomes E57SAL12T110**S5**.

② Avoid wiring these AC/DC models in series as the sensors may not perform reliably. Contact Eaton's Applications Engineering at 1-800-426-9184 with questions.

Nickel-Brass Body

Two-Wire Sensors

	Operating Voltage	Sensing Range	Shielding	Output Type	Connection Type	NO Output Catalog Number	NC Output Catalog Number	
	12 mm Diameter							
	20–250 Vac	2 mm	Shielded	—	2-meter cable	E57-12GS02-A	E57-12GS02-A1	
					3-pin micro AC connector	E57-12GS02-AAB ☺	E57-12GS02-A1AB ☺	
		4 mm	Unshielded	—	2-meter cable	E57-12GU04-A	E57-12GU04-A1	
					3-pin micro AC connector	E57-12GU04-AAB ☺	E57-12GU04-A1AB ☺	
		10–30 Vdc	2 mm	Shielded	NPN/PNP	2-meter cable	E57-12GS02-D	E57-12GS02-D1
						4-pin micro DC connector	E57-12GS02-DDB ☺	E57-12GS02-D1DB ☺
	4 mm		Unshielded	NPN/PNP	2-meter cable	E57-12GU04-D	E57-12GU04-D1	
					4-pin micro DC connector	E57-12GU04-DDB ☺	E57-12GU04-D1DB ☺	
	8 mm (extended range)			NPN/PNP	2-meter cable	E57-12GE08-D	E57-12GE08-D1	
					4-pin micro DC connector	E57-12GE08-DDB ☺	E57-12GE08-D1DB ☺	
		18 mm Diameter						
20–250 Vac		5 mm	Shielded	—	2-meter cable	E57-18GS05-A	E57-18GS05-A1	
					3-pin micro AC connector	E57-18GS05-AAB ☺	E57-18GS05-A1AB ☺	
		8 mm	Unshielded	—	2-meter cable	E57-18GU08-A	E57-18GU08-A1	
					3-pin micro AC connector	E57-18GU08-AAB ☺	E57-18GU08-A1AB ☺	
		16 mm				3-pin micro AC connector	E57-18GE16-AAB ☺	E57-18GE16-A1AB ☺
10–30 Vdc		5 mm	Shielded	NPN/PNP	2-meter cable	E57-18GS05-D	E57-18GS05-D1	
					4-pin micro DC connector	E57-18GS05-DDB ☺	E57-18GS05-D1DB ☺	
		8 mm	Unshielded	NPN/PNP	2-meter cable	E57-18GU08-D	E57-18GU08-D1	
					4-pin micro DC connector	E57-18GU08-DDB ☺	E57-18GU08-D1DB ☺	
		16 mm (extended range)			NPN/PNP	2-meter cable	E57-18GE16-D	E57-18GE16-D1
	4-pin micro DC connector					E57-18GE16-DDB ☺	E57-18GE16-D1DB ☺	
	30 mm Diameter							
	20–250 Vac	10 mm	Shielded	—	2-meter cable	E57-30GS10-A	E57-30GS10-A1	
					3-pin micro AC connector	E57-30GS10-AAB ☺	E57-30GS10-A1AB ☺	
		15 mm	Unshielded	—	2-meter cable	E57-30GU15-A	E57-30GU15-A1	
					3-pin micro AC connector	E57-30GU15-AAB ☺	E57-30GU15-A1AB ☺	
		10–30 Vdc	10 mm	Shielded	NPN/PNP	2-meter cable	E57-30GS10-D	E57-30GS10-D1
						4-pin micro DC connector	E57-30GS10-DDB ☺	E57-30GS10-D1DB ☺
	15 mm		Unshielded	NPN/PNP	2-meter cable	E57-30GU15-D	E57-30GU15-D1	
					4-pin micro DC connector	E57-30GU15-DDB ☺	E57-30GU15-D1DB ☺	
	25 mm (extended range)				NPN/PNP	2-meter cable	E57-30GE25-D	E57-30GE25-D1
						4-pin micro DC connector	E57-30GE25-DDB ☺	E57-30GE25-D1DB ☺

Note

☺☺ See listing of compatible connector cables on [Page V8-T3-40](#).

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Inductive Proximity Sensors

E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors


Compatible Connector Cables

Standard Cables ^①

3

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
Micro-Style, Straight Female						
AC	3-pin, 3-wire	22 AWG	6.0 ft (2m)	 1-Green 2-Red/Black 3-Red/White	CSAS3F3CY2202	CSAS3F3RY2202

Accessories

E57 Two-Wire Proximity Sensors

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

Note

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

Technical Data and Specifications

Stainless Steel Body

Description	Two-Wire AC/DC Sensors		
	Two-Wire AC Sensors	AC Operation	DC Operation
Operating voltage	40–250 Vac	40–250 Vac	20–250 Vdc
Maximum load current	250 mA	200 mA	200 mA
Switching frequency	20 Hz	60 Hz	60 Hz
Leakage current	1.7 mA maximum at 70 °C	1.7V mA maximum at 120 Vac	≤2.0 mA
Voltage drop	7V maximum	≤4 V at >25 mA	12 V at <10 mA
Holding current	5 mA minimum	5 mA minimum	5 mA maximum
Protection	—	Resettable short circuit; overload protection	Resettable short circuit; overload protection
Switching hysteresis	2–20% of rated sensing distance	2–20% of rated sensing distance	2–20% of rated sensing distance
Repeat accuracy	<3% sensing distance	<3% sensing distance	<3% sensing distance
Output indicator LED	360° viewable LED	360° viewable LED	360° viewable LED
Operating temperature	–13 to 158 °F (–25 to 70 °C) ^①	–13 to 158 °F (–25 to 70 °C) ^①	–13 to 158 °F (–25 to 70 °C) ^①
Enclosure ratings	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67)	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67)	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67)
Shock	30 g sine wave, 11 ms per IEC68-2-76	30 g sine wave, 11 ms per IEC68-2-76	30 g sine wave, 11 ms per IEC68-2-76
Vibration	10 to 55 Hz, 1 mm amplitude	10 to 55 Hz, 1 mm amplitude	10 to 55 Hz, 1 mm amplitude
Material of construction	Stainless steel, polycarbonate end bells, Ryton [®] front cap	Stainless steel, polycarbonate end bells, Ryton [®] front cap	Stainless steel, polycarbonate end bells, Ryton [®] front cap
Cable	AWM Style 20387 (PVC)	AWM Style 20387 (PVC)	AWM Style 20387 (PVC)

Notes

Ryton[®] is a registered trademark of Phillips Chemical (division of Phillips Petroleum).

^① 240 Vac operation is limited to less than 122 °F (50 °C) in two-wire AC/DC models.

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Inductive Proximity Sensors

E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors

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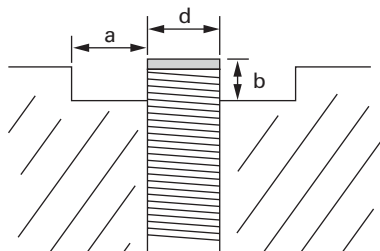
Nickel-Brass Body

Description	Two-Wire AC Sensors	Two-Wire DC Sensors
Operating voltage	20–250 Vac	10–30 Vdc
OFF-state leakage	<1.8 mA	<0.8 mA
Maximum load current	200 mA	100 mA
Minimum load current	5 mA	3 mA
Surge current	5 A (20 ms)	—
Voltage drop	<8 Vac at 400 mA	<6 V
Switching frequency	—	—
8 mm diameter	—	—
12 mm diameter	25 Hz	1 kHz (shielded); 1 kHz (unshielded)
18 mm diameter	25 Hz	1 kHz (shielded); 500 Hz (unshielded)
30 mm diameter	25 Hz	500 Hz (shielded); 200 Hz (unshielded)
Short-circuit protection	No	Yes
Overload trip point	—	>120 mA
Time delay before availability	—	—
Transient protection	—	2 kV, 1 ms, 1 kohm
Repeat accuracy	Shielded: <1.0%/Unshielded: <3.0% (Sr)	<2.0% (Sr)
Switching hysteresis	<15%	<15%
Operating temperature	–13 to 158 °F (–25 to 70 °C) (32 to 140 °F [0 to 60 °C] for all extended range models)	–13 to 158 °F (–25 to 70 °C) (32 to 140 °F [0 to 60 °C] for all extended range models)
Temperature drift	<10% (Sr)	<10% (Sr)
Protection	IP67, IP69K	IP67, IP69K
Housing material	Nickel plated brass (stainless steel for 8 mm diameter, nano-connector models)	Nickel plated brass (stainless steel for 8 mm diameter, nano-connector models)
Cable	PVC jacket, 2-meter length	PVC jacket, 2-meter length

Recommended Mounting Clearances

For unshielded standard range sensors and extended range sensors, clearance must be provided around the sensor when mounting for reliable performance. ("Sn" is the sensing range of the sensor, "d" is the sensor diameter.)

E57 Premium Sensors, Mounting



Type	Shielding	a	b
Standard range	Shielded	0	0
	Unshielded	Cap height	2 x Sn
Extended range	Semi-shielded	d	Sn
	Non-embeddable	Cap height	2 x Sn

Wiring Diagrams

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

Stainless Steel Body

Operating Voltage	Output	Cable Models	Connector Models (Face View Male Shown)	
			Micro	Mini
Two-Wire Sensors				
20–250 Vac/dc and AC-only AC wiring example	NO and NC			
20–250 Vac/dc DC wiring example	NO and NC (NPN)			—
	NO and NC (PNP)			—

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Inductive Proximity Sensors

E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors

Nickel-Brass Body

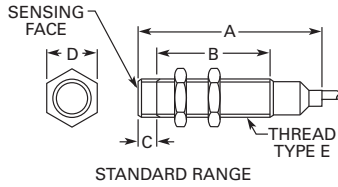
Operating Voltage	Output	Cable Models	Connector Models (Face View Male Shown) Micro
Two-Wire Sensors			
20–250 Vac	NO	<p>* Internally connected to housing (use of this wire is optional)</p>	<p>* Internally connected to housing (use of this wire is optional)</p>
10–30 Vdc	NO (NPN)		
	NO (PNP)		

Dimensions

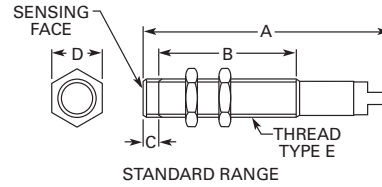
Approximate Dimensions in Inches (mm)

Stainless Steel Body (Standard Length)

Cable Models



Connector Models



Size	Shielding	Overall Length A	Threaded Length B	Cap Height C	Nut Width D	Thread Size E
Two-Wire AC Sensors—Cable Models						
12 mm	Shielded	2.46 (62.4)	1.98 (50.3)	—	0.67 (16.8)	M12 x 1
	Semi-shielded	2.87 (72.8)	2.28 (57.9)	0.06 (1.62)	0.67 (16.8)	M12 x 1
	Unshielded	2.87 (72.7)	1.98 (50.3)	0.36 (9.14)	0.67 (16.8)	M12 x 1
18 mm	Shielded	2.54 (64.5)	2.00 (50.9)	—	0.94 (23.8)	M18 x 1
	Semi-shielded	2.60 (66.1)	1.90 (48.2)	0.10 (2.54)	0.94 (23.8)	M18 x 1
	Unshielded	2.60 (66.0)	1.47 (37.2)	0.56 (14.1)	0.94 (23.8)	M18 x 1
30 mm	Shielded	2.73 (69.3)	1.98 (50.3)	—	1.41 (35.9)	M30 x 1.5
	Semi-shielded	2.67 (67.8)	1.90 (48.2)	0.13 (3.30)	1.41 (35.9)	M30 x 1.5
	Unshielded	2.73 (69.3)	1.49 (37.8)	0.52 (13.26)	1.41 (35.9)	M30 x 1.5
Two-Wire AC Sensors—Micro-Connector Models						
12 mm	Shielded	2.69 (68.4)	1.98 (50.3)	—	0.67 (16.8)	M12 x 1
	Semi-shielded	3.04 (77.2)	2.28 (57.9)	0.06 (1.62)	0.67 (16.8)	M12 x 1
	Unshielded	3.06 (77.7)	1.98 (50.3)	0.36 (9.14)	0.36 (9.14)	M12 x 1
18 mm	Shielded	2.72 (69.06)	2.00 (50.9)	—	0.94 (23.8)	M18 x 1
	Semi-shielded	2.72 (69.1)	1.90 (48.2)	0.10 (2.54)	0.94 (23.8)	M18 x 1
	Unshielded	2.74 (69.4)	1.47 (37.2)	0.56 (14.1)	0.94 (23.8)	M18 x 1
30 mm	Shielded	2.91 (73.8)	1.98 (50.3)	—	1.41 (35.9)	M30 x 1.5
	Semi-shielded	2.78 (70.6)	1.90 (48.2)	0.13 (3.30)	1.41 (35.9)	M30 x 1.5
	Unshielded	2.91 (73.8)	1.49 (37.8)	0.52 (13.26)	1.41 (35.9)	M30 x 1.5

3.5

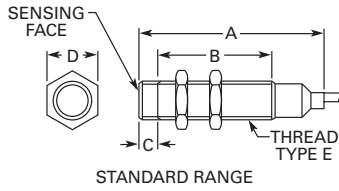
Inductive Proximity Sensors

E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors

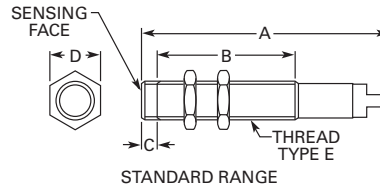
Approximate Dimensions in Inches (mm)

Stainless Steel Body (Standard Length)

Cable Models, continued



Connector Models, continued

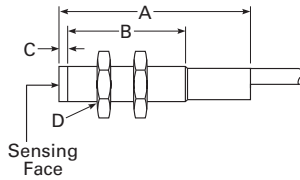


Size	Shielding	Overall Length A	Threaded Length B	Cap Height C	Nut Width D	Thread Size E
Two-Wire AC/DC Sensors—Cable Models						
12 mm	Shielded	2.45 (62.4)	1.98 (50.3)	—	0.67 (16.8)	M12 x 1
	Unshielded	2.45 (62.4)	1.80 (45.8)	0.20 (5)	0.67 (16.8)	M12 x 1
18 mm	Shielded	2.54 (64.5)	2.00 (50.9)	—	0.94 (23.8)	M18 x 1
	Unshielded	2.54 (64.5)	1.75 (44.4)	0.28 (7)	0.94 (23.8)	M18 x 1
30 mm	Shielded	2.72 (69.3)	2.12 (53.8)	—	1.41 (35.9)	M30 x 1.5
	Unshielded	2.72 (69.3)	1.63 (41.4)	0.52 (13.26)	1.41 (35.9)	M30 x 1.5
Two-Wire AC/DC Sensors—Micro-Connector Models						
12 mm	Shielded	2.69 (68.4)	1.98 (50.3)	—	0.67 (16.8)	M12 x 1
	Unshielded	2.69 (68.4)	1.80 (45.8)	0.20 (5)	0.67 (16.8)	M12 x 1
18 mm	Shielded	2.72 (69.06)	2.00 (50.9)	—	0.94 (23.8)	M18 x 1
	Unshielded	2.72 (69.06)	1.75 (44.4)	0.28 (7)	0.94 (23.8)	M18 x 1
30 mm	Shielded	2.91 (73.8)	1.98 (50.3)	—	1.41 (35.9)	M30 x 1.5
	Unshielded	2.91 (73.8)	1.49 (37.8)	0.52 (13.26)	1.41 (35.9)	M30 x 1.5
Two-Wire AC Sensors—Mini-Connector Models						
18 mm	Shielded	3.39 (86.1)	2.00 (50.8)	0.02 (0.5)	0.94 (23.8)	M18 x 1
	Semi-shielded	3.39 (86.0)	1.90 (48.2)	0.10 (2.54)	0.94 (23.8)	M18 x 1
	Unshielded	3.39 (86.1)	1.46 (37.0)	0.57 (14.5)	0.94 (23.8)	M18 x 1
30 mm	Shielded	3.39 (86.1)	2.1 (53.3)	0.03 (0.8)	1.41 (35.9)	M30 x 1.5
	Semi-shielded	3.44 (87.4)	1.90 (48.2)	0.13 (3.30)	1.41 (35.9)	M30 x 1.5
	Unshielded	3.39 (86.1)	1.55 (39.4)	0.55 (14.0)	1.41 (35.9)	M30 x 1.5

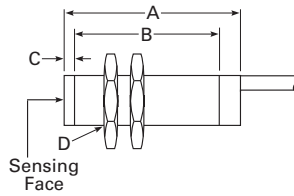
Approximate Dimensions in Inches (mm)

Stainless Steel Short Body (Cable Connector Models)

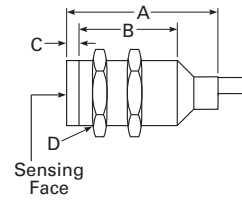
12 mm



18 mm



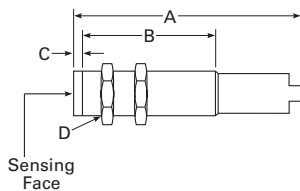
30 mm



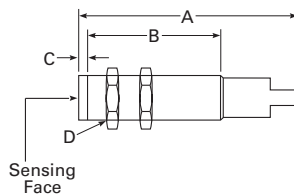
Size	Shielding	Overall Length A	Threaded Length B	Cap Height C	Thread Size D
Two-Wire AC Sensors					
12 mm	Shielded	2.04 (51.7)	1.56 (39.6)	0.02 (0.5)	M12 x 1
	Unshielded	2.04 (51.7)	1.38 (35.1)	0.20 (5)	M12 x 1
18 mm	Shielded	1.39 (35.3)	0.86 (21.82)	0.02 (0.5)	M18 x 1
	Unshielded	1.39 (35.3)	0.60 (15.32)	0.28 (7)	M18 x 1
30 mm	Shielded	1.58 (40.2)	0.99 (25.15)	0.03 (0.8)	M30 x 1.5
	Unshielded	1.77 (44.9)	0.68 (17.27)	0.52 (13.26)	M30 x 1.5
Two-Wire AC/DC Sensors					
12 mm	Shielded	2.46 (62.4)	1.98 (50.27)	—	M12 x 1
	Unshielded	2.46 (62.4)	1.80 (45.77)	0.20 (5)	M12 x 1
18 mm	Shielded	2.54 (64.5)	2.00 (50.9)	—	M18 x 1
	Unshielded	2.54 (64.5)	1.75 (44.4)	0.28 (7)	M18 x 1
30 mm	Shielded	2.72 (69.3)	2.12 (53.8)	—	M30 x 1.5
	Unshielded	2.72 (69.3)	1.63 (41.4)	0.52 (13.26)	M30 x 1.5

Stainless Steel Short Body (Micro-Connector Models)

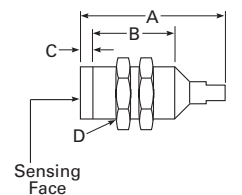
12 mm



18 mm



30 mm



Size	Shielding	Overall Length A	Threaded Length B	Cap Height C	Thread Size D
Two-Wire AC Sensors					
12 mm	Shielded	2.27 (57.8)	1.56 (39.6)	0.02 (0.5)	M12 x 1
	Unshielded	2.27 (57.8)	1.38 (35.1)	0.20 (5)	M12 x 1
18 mm	Shielded	1.57 (40.0)	0.86 (21.82)	0.02 (0.5)	M18 x 1
	Unshielded	1.57 (40.0)	0.60 (15.32)	0.28 (7)	M18 x 1
30 mm	Shielded	1.76 (44.8)	0.99 (25.15)	0.03 (0.8)	M30 x 1.5
	Unshielded	1.95 (49.5)	0.68 (17.27)	0.52 (13.26)	M30 x 1.5
Two-Wire AC/DC Sensors					
12 mm	Shielded	2.69 (68.4)	1.98 (50.27)	—	M12 x 1
	Unshielded	2.69 (68.4)	1.80 (45.77)	0.20 (5)	M12 x 1
18 mm	Shielded	2.72 (69.06)	2.00 (50.9)	—	M18 x 1
	Unshielded	2.72 (69.06)	1.75 (44.4)	0.28 (7)	M18 x 1
30 mm	Shielded	2.91 (73.8)	2.12 (53.8)	—	M30 x 1.5
	Unshielded	2.91 (73.8)	1.63 (41.4)	0.52 (13.26)	M30 x 1.5

3.5

Inductive Proximity Sensors

E57 Two-Wire (AC, AC/DC, DC) Proximity Sensors

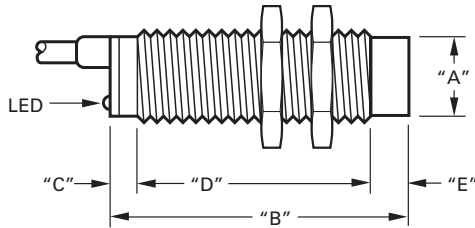
Approximate Dimensions in mm

Nickel-Brass Body

Cable Models

3

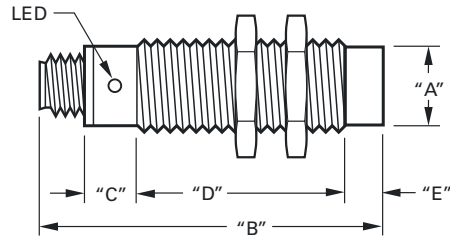
Two-Wire Sensors



Catalog Number	Operating Voltage	A	B	C	D	E
E57-12GS02-A	20–250 Vac	M12x1	65	15	50	—
E57-12GU04-A		M12x1	60	15	42	8
E57-18GS05-A		M18x1	80	20	60	—
E57-18GU08-A		M18x1	80	20	48	12
E57-30GS10-A		M30x1.5	80	20	60	—
E57-30GU15-A		M30x1.5	80	20	45	15
E57-12GS02-D	10–30 Vdc	M12x1	50	—	50	—
E57-12GU04-D		M12x1	50	—	42	8
E57-12GE08-D		M12x1	50	—	42	8
E57-12GE08-D1		M12x1	50	—	42	8
E57-18GS05-D		M18x1	55	5	50	—
E57-18GU08-D		M18x1	55	5	38	12
E57-18GE16-D		M18x1	55	5	38	12
E57-18GE16-D1		M18x1	55	5	38	12
E57-30GS10-D		M30x1.5	55	5	50	—
E57-30GU15-D		M30x1.5	55	5	35	15
E57-30GE25-D		M30x1.5	55	5	35	15
E57-30GE25-D1		M30x1.5	55	5	35	15

Connector Models

Two-Wire Sensors



Catalog Number ^①	Operating Voltage	A	B	C	D	E
E57-12GS02-AAB	20–250 Vac	M12x1	68	16	42	—
E57-12GU04-AAB		M12x1	68	16	34	8
E57-18GS05-AAB		M18x1	91	20	60	—
E57-18GU08-AAB		M18x1	91	20	48	12
E57-18GE16-AAB		M18x1	79.2	15	37	11.5
E57-30GS10-AAB		M30x1.5	80	20	60	—
E57-30GU15-AAB		M30x1.5	91	20	45	15
E57-12GS02-DDB	10–30 Vdc	M12x1	69	16	42	—
E57-12GU04-DDB		M12x1	68	16	34	8
E57-12GE08-DDB		M12x1	68	10	50	8
E57-12GE08-D1DB		M12x1	68	10	50	8
E57-18GS05-DDB		M18x1	76	15	61	—
E57-18GU08-DDB		M18x1	80	15	49	12
E57-18GE16-DDB		M18x1	79	15	52	12
E57-30GS10-DDB		M30x1.5	75	15	60	—
E57-30GU15-DDB		M30x1.5	79	15	45	15
E57-30GE25-DDB		M30x1.5	78	15	48	15

Note

① Normally closed models are dimensionally indicated to equivalent normally open models.