E57 Premium+ Series Inductive Proximity Sensors

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The Cutler-Hammer® Premium+ Series Inductive Proximity Sensors by Eaton's electrical business have improved sensing performance, product durability and selection. This improved line of sensors carries the Premium+ Series name because we have upgraded the design to a rugged stainless steel body, shock-resistant front caps and impact-absorbing potting compound. Plus, the Premium+ Series line now includes a choice of AC, AC/DC and DC-only, 12, 18 and 30 mm sensors with unmatched noise immunity of greater than 20V/meter.

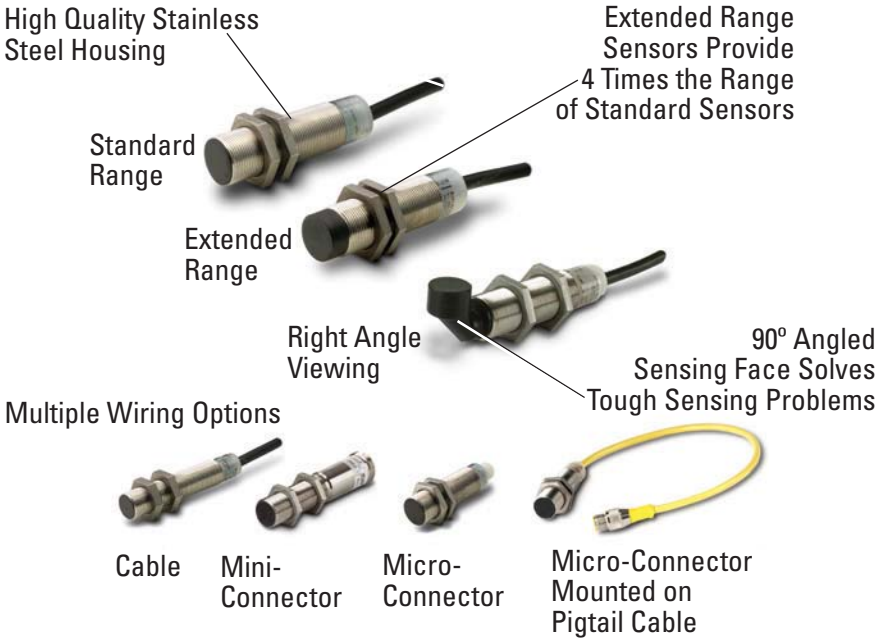
Approvals

- C-UL Listed

CE (AC/DC and DC-only models)

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

High Performance Inductive Sensors Include Stainless Steel Models, Extended Ranges and Right Angle Sensing

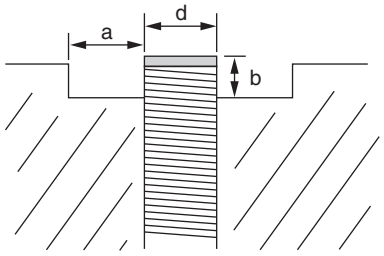


Product Features

- New expanded offering of 2-wire, 3-wire, AC, DC, and AC/DC multiple range sensor models
- Manufactured to take the physical and environmental abuse
- Designed with stainless steel barrel and new potting compound for robust, high temperature, high pressure washdown, as well as intense shock and vibration applications
- Unmatched high noise immunity eliminates problems associated with electrical noise (all models > 20V/meter)
- 360° output status indicator is visible from any angle and in any light condition
- Resettable short circuit protection and reverse polarity in select models
- Right angle sensing models offer unique problem-solving capabilities
- Wide temperature range -13 to 158°F (-25 to 70°C) on cable, micro-style connections

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.)



Type	Shielding	a	b
Standard Range	Shielded	0	0
	Unshielded	Cap Height	2 x 5n
Extended Range	Semi-shielded	d	Sn
	Non-embeddable	Cap Height	2 x Sn

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**.

Model Selection — E57 Premium+ Sensors

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ①	Catalog Number	
					N.O. Output	N.C. Output
2-Wire Sensors						
12 mm Diameter End Sensing  Standard Range	20 – 250V AC	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** ⓐ
 Extended Range	20 – 132V AC	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 – 250V AC 50/60 Hz② 20 – 250V DC	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** ⓐ
18 mm Diameter End Sensing  Standard Range	20 – 250V AC	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** ⓐ
 Extended Range	20 – 132V AC	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** ⓐ
		20 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 – 250V AC 50/60 Hz② 20 – 250V DC	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** ⓐ
18 mm Diameter Right Angle Sensing 	20 – 250V AC	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** ⓐ

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 Cutler-Hammer Applications Engineering at 1-800-426-9184 with questions.

Fast turn product with typical one business day lead-time to shipment.
Stocked product, typical order quantities guaranteed in stock.

ⓐ See listing of compatible connector cables on **Page 3-20**.

Model Selection — E57 Premium+ Sensors (Continued)

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ①	Catalog Number	
					N.O. Output	N.C. Output
2-Wire Sensors (Continued)						
30 mm Diameter End Sensing  Standard Range	20 – 250V AC	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**
 Extended Range	20 – 132V AC	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 – 250V AC 50/60 Hz② 20 – 250V DC	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**
3-Wire Sensors						
12 mm Diameter End Sensing  Standard Range	6 – 48V DC	2 mm (Standard Range)	Shielded (NPN)	2-meter Cable	**E57LAL12T110**	**E57LBL12T110**
				4-pin Micro DC Connector	**E57LAL12T110SD**	**E57LBL12T110SD**
				4-pin Micro DC Pigtail Connector	**E57LAL12T110SP**	**E57LBL12T110SP**
			Shielded (PNP)	2-meter Cable	**E57LAL12T111**	**E57LBL12T111**
				4-pin Micro DC Connector	**E57LAL12T111SD**	**E57LBL12T111SD**
				4-pin Micro DC Pigtail Connector	**E57LAL12T111SP**	**E57LBL12T111SP**
 Extended Range		4 mm (Standard Range)	Unshielded (NPN)	2-meter Cable	**E57LAL12T110E**	**E57LBL12T110E**
				4-pin Micro DC Connector	**E57LAL12T110ED**	**E57LBL12T110ED**
				4-pin Micro DC Pigtail Connector	**E57LAL12T110EP**	**E57LBL12T110EP**
			Unshielded (PNP)	2-meter Cable	**E57LAL12T111E**	**E57LBL12T111E**
				4-pin Micro DC Connector	**E57LAL12T111ED**	**E57LBL12T111ED**
				4-pin Micro DC Pigtail Connector	**E57LAL12T111EP**	**E57LBL12T111EP**
		6 mm (Extended Range)	Semi-shielded (NPN)	2-meter Cable	**E57-12LE06-C**	**E57-12LE06-C1**
				4-pin Micro DC Connector	**E57-12LE06-CD**	**E57-12LE06-C1D**
				4-pin Micro DC Pigtail Connector	**E57-12LE06-CP**	**E57-12LE06-C1P**
			Semi-shielded (PNP)	2-meter Cable	**E57-12LE06-B**	**E57-12LE06-B1**
				4-pin Micro DC Connector	**E57-12LE06-BD**	**E57-12LE06-B1D**
				4-pin Micro DC Pigtail Connector	**E57-12LE06-BP**	**E57-12LE06-B1P**
		10 mm (Extended Range)	Non-embeddable (NPN)	2-meter Cable	**E57-12LE10-C**	**E57-12LE10-C1**
				4-pin Micro DC Connector	**E57-12LE10-CD**	**E57-12LE10-C1D**
				4-pin Micro DC Pigtail Connector	**E57-12LE10-CP**	—
			Non-embeddable (PNP)	2-meter Cable	**E57-12LE10-B**	**E57-12LE10-B1**
				4-pin Micro DC Connector	**E57-12LE10-BD**	**E57-12LE10-B1D**
				4-pin Micro DC Pigtail Connector	**E57-12LE10-BP**	—

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 Cutler-Hammer Applications Engineering at 1-800-426-9184 with questions.

Fast turn product with typical one business day lead-time to shipment.

See listing of compatible connector cables on **Page 3-20**.

Model Selection — E57 Premium+ Sensors (Continued)

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ①	Catalog Number	
					N.O. Output	N.C. Output
3-Wire Sensors (Continued)						
18 mm Diameter End Sensing  Standard Range  Extended Range	6 – 48V DC	5 mm (Standard Range)	Shielded (NPN)	2-meter Cable	E57LAL18T110	E57LBL18T110
				4-pin Micro DC Connector	E57LAL18T110SD ⊛	E57LBL18T110SD ⊛
				4-pin Micro DC Pigtail Connector	E57LAL18T110SP ⊛	E57LBL18T110SP ⊛
				4-pin Mini-Connector	E57MAL18T110B1 ⊛	E57MBL18T110B1 ⊛
			Shielded (PNP)	2-meter Cable	E57LAL18T111	E57LBL18T111
				4-pin Micro DC Connector	E57LAL18T111SD ⊛	E57LBL18T111SD ⊛
				4-pin Micro DC Pigtail Connector	E57LAL18T111SP ⊛	E57LBL18T111SP ⊛
				4-pin Mini-Connector	E57MAL18T111B1 ⊛	E57MBL18T111B1 ⊛
		8 mm (Standard Range)	Unshielded (NPN)	2-meter Cable	E57LAL18T110E	E57LBL18T110E
				4-pin Micro DC Connector	E57LAL18T110ED ⊛	E57LBL18T110ED ⊛
				4-pin Micro DC Pigtail Connector	E57LAL18T110EP ⊛	E57LBL18T110EP ⊛
				4-pin Mini-Connector	E57MAL18T110EB1 ⊛	E57MBL18T110EB1 ⊛
			Unshielded (PNP)	2-meter Cable	E57LAL18T111E	E57LBL18T111E
				4-pin Micro DC Connector	E57LAL18T111ED ⊛	E57LBL18T111ED ⊛
				4-pin Micro DC Pigtail Connector	E57LAL18T111EP ⊛	E57LBL18T111EP ⊛
				4-pin Mini-Connector	E57MAL18T111EB1 ⊛	E57MBL18T111EB1 ⊛
		12 mm (Extended Range)	Semi-shielded (NPN)	2-meter Cable	E57-18LE12-C	E57-18LE12-C1
				4-pin Micro DC Connector	E57-18LE12-CD ⊛	E57-18LE12-C1D ⊛
				4-pin Micro DC Pigtail Connector	E57-18LE12-CP ⊛	E57-18LE12-C1P ⊛
				4-pin Mini-Connector	E57-18LE12-CB ⊛	E57-18LE12-C1B ⊛
			Semi-shielded (PNP)	2-meter Cable	E57-18LE12-B	E57-18LE12-B1
				4-pin Micro DC Connector	E57-18LE12-BD ⊛	E57-18LE12-B1D ⊛
				4-pin Micro DC Pigtail Connector	E57-18LE12-BP ⊛	E57-18LE12-B1P ⊛
				4-pin Mini-Connector	E57-18LE12-BB ⊛	E57-18LE12-B1B ⊛
		20 mm (Extended Range)	Non-embeddable (NPN)	2-meter Cable	E57-18LE20-C	E57-18LE20-C1
				4-pin Micro DC Connector	E57-18LE20-CD ⊛	E57-18LE20-C1D ⊛
				4-pin Micro DC Pigtail Connector	E57-18LE20-CP ⊛	E57-18LE20-C1P ⊛
				4-pin Mini-Connector	E57-18LE20-CB ⊛	E57-18LE20-C1B ⊛
			Non-embeddable (PNP)	2-meter Cable	E57-18LE20-B	E57-18LE20-B1
				4-pin Micro DC Connector	E57-18LE20-BD ⊛	E57-18LE20-B1D ⊛
				4-pin Micro DC Pigtail Connector	E57-18LE20-BP ⊛	E57-18LE20-B1P ⊛
				4-pin Mini-Connector	E57-18LE20-BB ⊛	E57-18LE20-B1B ⊛
18 mm Diameter Right Angle Sensing 		5 mm	Shielded (NPN)	2-meter Cable	E57RAL18T110	E57RBL18T110
				4-pin Micro DC Connector	E57RAL18T110SD ⊛	E57RBL18T110SD ⊛
				4-pin Micro DC Pigtail Connector	E57RAL18T110SP ⊛	E57RBL18T110SP ⊛
				4-pin Mini-Connector	E57RAL18T110B1 ⊛	E57RBL18T110B1 ⊛
			Shielded (PNP)	2-meter Cable	E57RAL18T111	E57RBL18T111
				4-pin Micro DC Connector	E57RAL18T111SD ⊛	E57RBL18T111SD ⊛
				4-pin Micro DC Pigtail Connector	E57RAL18T111SP ⊛	E57RBL18T111SP ⊛
				4-pin Mini-Connector	E57RAL18T111B1 ⊛	E57RBL18T111B1 ⊛
		8 mm	Unshielded (NPN)	2-meter Cable	E57RAL18T110E	E57RBL18T110E
				4-pin Micro DC Connector	E57RAL18T110ED ⊛	E57RBL18T110ED ⊛
				4-pin Micro DC Pigtail Connector	E57RAL18T110EP ⊛	E57RBL18T110EP ⊛
				4-pin Mini-Connector	E57RAL18T110EB1 ⊛	E57RBL18T110EB1 ⊛
			Unshielded (PNP)	2-meter Cable	E57RAL18T111E	E57RBL18T111E
				4-pin Micro DC Connector	E57RAL18T111ED ⊛	E57RBL18T111ED ⊛
				4-pin Micro DC Pigtail Connector	E57RAL18T111EP ⊛	E57RBL18T111EP ⊛
				4-pin Mini-Connector	E57RAL18T111EB1 ⊛	E57RBL18T111EB1 ⊛

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**.

Fast turn product with typical one business day lead-time to shipment.

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⊛ See listing of compatible connector cables on **Page 3-20**.

Model Selection — E57 Premium+ Sensors (Continued)

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ①	Catalog Number	
					N.O. Output	N.C. Output
3-WireSensors (Continued)						
30 mm Diameter End Sensing  Standard Range  Extended Range	6 – 48V DC	10 mm (Standard Range)	Shielded (NPN)	2-meter Cable	E57LAL30T110	E57LBL30T110
				4-pin Micro DC Connector	E57LAL30T110SD ⊛	E57LBL30T110SD ⊛
				4-pin Micro DC Pigtail Connector	E57LAL30T110SP ⊛	E57LBL30T110SP ⊛
				4-pin Mini-Connector	E57MAL30T110B1 ⊛	E57MBL30T110B1 ⊛
			Shielded (PNP)	2-meter Cable	E57LAL30T111	E57LBL30T111
				4-pin Micro DC Connector	E57LAL30T111SD ⊛	E57LBL30T111SD ⊛
				4-pin Micro DC Pigtail Connector	E57LAL30T111SP ⊛	E57LBL30T111SP ⊛
				4-pin Mini-Connector	E57MAL30T111B1 ⊛	E57MBL30T111B1 ⊛
		15 mm (Standard Range)	Unshielded (NPN)	2-meter Cable	E57LAL30T110E	E57LBL30T110E
				4-pin Micro DC Connector	E57LAL30T110ED ⊛	E57LBL30T110ED ⊛
				4-pin Micro DC Pigtail Connector	E57LAL30T110EP ⊛	E57LBL30T110EP ⊛
				4-pin Mini-Connector	E57MAL30T110EB1 ⊛	E57MBL30T110EB1 ⊛
			Unshielded (PNP)	2-meter Cable	E57LAL30T111E	E57LBL30T111E
				4-pin Micro DC Connector	E57LAL30T111ED ⊛	E57LBL30T111ED ⊛
				4-pin Micro DC Pigtail Connector	E57LAL30T111EP ⊛	E57LBL30T111EP ⊛
				4-pin Mini-Connector	E57MAL30T111EB1 ⊛	E57MBL30T111EB1 ⊛
		22 mm (Extended Range)	Semi-shielded (NPN)	2-meter Cable	E57-30LE22-C	E57-30LE22-C1
				4-pin Micro DC Connector	E57-30LE22-CD ⊛	E57-30LE22-C1D ⊛
				4-pin Micro DC Pigtail Connector	E57-30LE22-CP ⊛	E57-30LE22-C1P ⊛
				4-pin Mini-Connector	E57-30LE22-CB ⊛	E57-30LE22-C1B ⊛
			Semi-shielded (PNP)	2-meter Cable	E57-30LE22-B	E57-30LE22-B1
				4-pin Micro DC Connector	E57-30LE22-BD ⊛	E57-30LE22-B1D ⊛
				4-pin Micro DC Pigtail Connector	—	E57-30LE22-B1P ⊛
				4-pin Mini-Connector	E57-30LE22-BB ⊛	E57-30LE22-B1B ⊛

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**.

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⊛ See listing of compatible connector cables below.

Model Selection — Compatible Connector Cables ②

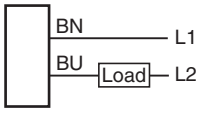
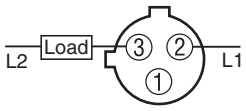
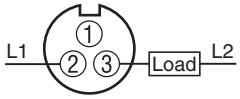
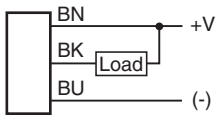
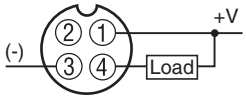
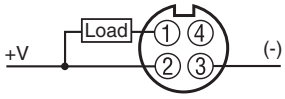
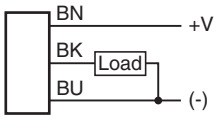
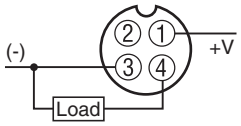
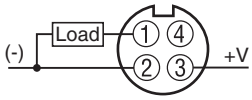
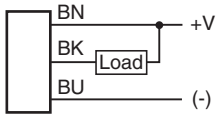
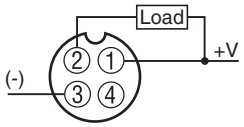
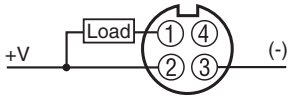
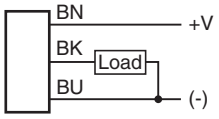
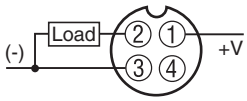
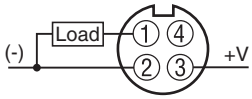
	Voltage Style	Number of Pins	Gauge	Length	Catalog Number			Pin Configuration/Wire Colors (Face View Female Shown)
					PVC Jacket	PUR Jacket	IRR PUR Jacket	
Standard Cables — Micro Style								
Micro Style Straight Female 	AC	3-pin 3-wire	22 AWG	6.0 feet (2m)	CSAS3F3CY2202	CSAS3F3RY2202	—	 1-Green 2-Red/Black 3-Red/White
	DC	4-pin 4-wire	22 AWG	6.0 feet (2m)	CSDS4A4CY2202	CSDS4A4RY2202	CSDS4A4IO2202	 1-Brown 2-White 3-Blue 4-Black

	Voltage Style	Number of Pins	Gauge	Length	Catalog Number	Pin Configuration/Wire Colors (Face View Female Shown)
Standard Cables — Mini Style						
Mini Style Straight Female Current Rating @ 600V 3-pin: 13A 4-pin: 10A 	—	3-pin	16 AWG	6 feet (2m)	CSMS3F3CY1602	 1-Green 2-Black 3-White
	AC/DC	4-pin, 4-wire	16 AWG	6 feet (2m)	CSMS4A4CY1602	 1-Black 2-Blue 3-Brown 4-White

② For a full selection of connector cables, see **Section 10**.

Stocked product, typical order quantities guaranteed in stock.

Wiring Diagrams (Pin numbers are for reference, rely on pin location when wiring)

Operating Voltage	Output	Cable Models	Connector Models (Face View Male Shown)	
			Micro	Mini
2-Wire Sensors				
20 – 250V AC	N.O. and N.C.			
3-Wire Sensors				
6 – 48V DC	N.O. (NPN)			
	N.O. (PNP)			
	N.C. (NPN)			
	N.C. (PNP)			

Specifications — E57 Premium+ Series

	2-Wire AC Sensors	2-Wire Sensors AC/DC	3-Wire Sensors DC Only Models
Operating Voltage	20 – 250V AC	40 – 240V AC ① 20 – 250V DC	6 – 48V DC
Maximum Load Current	500 mA @ 25°C 250 mA @ 70°C	250 mA @ 25°C 200 mA @ 70°C	500 mA @ 6 – 30V DC
Switching Frequency	20 Hz	60 Hz	12 mm: 800 Hz 18 mm: 500 Hz 30 mm: 300 Hz
Leakage Current	1.7 mA maximum @ 70°C	≤2.0 mA	≤100 µA
Voltage Drop	7V maximum	12V @ <10 mA ≤4V @ >25 mA	≤2.5V
Holding Current	5 mA minimum	5 mA minimum	—
Burden Current	—	—	≤10 mA
Protection	—	Resettable short circuit; overload protection	Auto reset
Switching Hysteresis	2 to 20% of rated sensing range	<15% rated sensing distance	
Repeat Accuracy	<3% sensing distance	Shielded models: <1% sensing distance; unshielded and extended range: <3%	
Time Delay Before Availability	—	<200 mS	
Output Indicator LED	360° viewable LED		
Operating Temperature	-13° to 158°F (-25° to 70°C) Mini: -13° to 122°F (-25° to 50°C)		
Enclosure Ratings	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67)		
Shock	30g, 11 mS per IEC 68-2-76		
Vibration	10 to 55 Hz, 1 mm amplitude		
Housing Material	303 stainless steel ②; Polycarbonate end bells; Ryton® front ends		
Cable	AWM Style 20387 (PVC)		

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

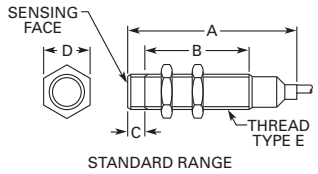
① Note: 40 – 240V AC @ <-20°C.
② Semi-shielded models are nickel-plated brass.

Model Selection — Accessories

Description	Reference
Mounting Brackets	See **Section 8**
Replacement Mounting Nuts and Other Accessories	See **Section 8**
Connector Cables	See **Section 10**

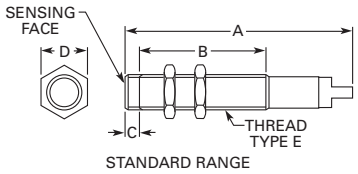
Approximate Dimensions — E57 Premium+ Series, End Sensing Models in Inches (mm)①②

Cable Models



STANDARD RANGE

Connector Models



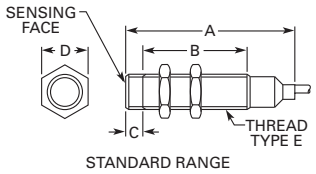
STANDARD RANGE

Size	Shielding	Dimensions in Inches (mm)				
		Overall Length A	Threaded Length B	C	Nut Width D	Thread Size E
2-Wire AC Sensors — Cable Models						
12 mm	Shielded Semi-shielded Unshielded	2.46 (62.4) 2.87 (72.8) 2.87 (72.7)	1.98 (50.3) 2.28 (57.9) 1.98 (50.3)	— 0.06 (1.62) 0.36 (9.14)	0.67 (16.8) 0.67 (16.8) 0.67 (16.8)	M12 x 1 M12 x 1 M12 x 1
18 mm	Shielded Semi-shielded Unshielded	2.54 (64.5) 2.60 (66.1) 2.60 (66.0)	2.00 (50.9) 1.90 (48.2) 1.47 (37.2)	— 0.10 (2.54) 0.56 (14.1)	0.94 (23.8) 0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1 M18 x 1
30 mm	Shielded Semi-shielded Unshielded	2.73 (69.3) 2.67 (67.8) 2.73 (69.3)	1.98 (50.3) 1.90 (48.2) 1.49 (37.8)	— 0.13 (3.30) 0.52 (13.26)	1.41 (35.9) 1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5 M30 x 1.5
2-Wire AC Sensors — Micro-Connector Models						
12 mm	Shielded Semi-shielded Unshielded	2.69 (68.4) 3.04 (77.2) 3.06 (77.7)	1.98 (50.3) 2.28 (57.9) 1.98 (50.3)	— 0.06 (1.62) 0.36 (9.14)	0.67 (16.8) 0.67 (16.8) 0.36 (9.14)	M12 x 1 M12 x 1 M12 x 1
18 mm	Shielded Semi-shielded Unshielded	2.72 (69.06) 2.72 (69.1) 2.74 (69.4)	2.00 (50.9) 1.90 (48.2) 1.47 (37.2)	— 0.10 (2.54) 0.56 (14.1)	0.94 (23.8) 0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1 M18 x 1
30 mm	Shielded Semi-shielded Unshielded	2.91 (73.8) 2.78 (70.6) 2.91 (73.8)	1.98 (50.3) 1.90 (48.2) 1.49 (37.8)	— 0.13 (3.30) 0.52 (13.26)	1.41 (35.9) 1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5 M30 x 1.5
2-Wire AC/DC Sensors — Cable Models						
12 mm	Shielded Unshielded	2.45 (62.4) 2.45 (62.4)	1.98 (50.3) 1.80 (45.8)	— 0.20 (5)	0.67 (16.8) 0.67 (16.8)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	2.54 (64.5) 2.54 (64.5)	2.00 (50.9) 1.75 (44.4)	— 0.28 (7)	0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	2.72 (69.3) 2.72 (69.3)	1.98 (50.3) 1.49 (37.8)	— 0.52 (13.26)	1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5
2-Wire AC/DC Sensors — Micro-Connector Models						
12 mm	Shielded Unshielded	2.69 (68.4) 2.69 (68.4)	1.98 (50.3) 1.80 (45.8)	— 0.20 (5)	0.67 (16.8) 0.67 (16.8)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	2.72 (69.06) 2.72 (69.06)	2.00 (50.9) 1.75 (44.4)	— 0.28 (7)	0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	2.91 (73.8) 2.91 (73.8)	1.98 (50.3) 1.49 (37.8)	— 0.52 (13.26)	1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5
2-Wire AC/DC Sensors — Mini-Connector Models						
12 mm	Shielded	3.36 (85.3)	1.98 (50.3)	0.02 (0.5)	0.67 (16.8)	M12 x 1
18 mm	Shielded Semi-shielded Unshielded	3.39 (86.1) 3.39 (86.0) 3.39 (86.1)	2.00 (50.8) 1.90 (48.2) 1.46 (37.0)	0.02 (0.5) 0.10 (2.54) 0.57 (14.5)	0.94 (23.8) 0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1 M18 x 1
30 mm	Shielded Semi-shielded Unshielded	3.39 (86.1) 3.44 (87.4) 3.39 (86.1)	2.1 (53.3) 1.90 (48.2) 1.55 (39.4)	0.03 (0.8) 0.13 (3.30) 0.55 (14.0)	1.41 (35.9) 1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5 M30 x 1.5

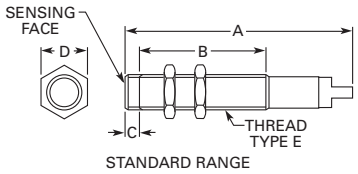
① These dimensions apply to the Premium+ Series models in this section. Not indicated Premium Series models.
② For short barrel model dimensions (E57SAL ...) refer to **Page 3-25**.

Approximate Dimensions — E57 Premium+ Series, End Sensing Models in Inches (mm) (Continued) ①②

Cable Models



Connector Models

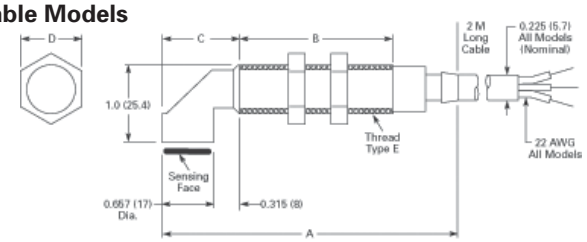


Size	Shielding	Dimensions in Inches (mm)				
		Overall Length A	Threaded Length B	C	Nut Width D	Thread Size E
3-Wire DC Sensors — Mini-Connector Models						
18 mm	Shielded Semi-shielded Unshielded	3.39 (86.1) 3.39 (86.0) 3.39 (86.1)	2.00 (50.8) 1.90 (48.2) 1.46 (37.0)	0.02 (0.5) 0.10 (2.54) 0.57 (14.5)	0.94 (23.8) 0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1 M18 x 1
30 mm	Shielded Semi-shielded Unshielded	3.39 (86.1) 3.44 (87.4) 3.39 (86.1)	2.1 (53.3) 1.90 (48.2) 1.55 (39.4)	0.03 (0.8) 0.13 (3.30) 0.55 (14.0)	1.41 (35.9) 1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5 M30 x 1.5
3-Wire DC Sensors — Cable Models						
12 mm	Shielded Semi-shielded Unshielded	2.46 (62.4) 2.87 (72.8) 2.87 (72.7)	1.98 (50.3) 2.28 (57.9) 1.98 (50.3)	— 0.06 (1.62) 0.36 (9.14)	0.67 (16.8) 0.67 (16.8) 0.67 (16.8)	M12 x 1 M12 x 1 M12 x 1
18 mm	Shielded Semi-shielded Unshielded	2.54 (64.5) 2.60 (66.1) 2.60 (66.0)	2.00 (50.9) 1.90 (48.2) 1.47 (37.2)	— 0.10 (2.54) 0.56 (14.1)	0.94 (23.8) 0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1 M18 x 1
30 mm	Shielded Semi-shielded Unshielded	2.73 (69.3) 2.67 (67.8) 2.73 (69.3)	1.98 (50.3) 1.90 (48.2) 1.49 (37.8)	— 0.13 (3.30) 0.52 (13.26)	1.41 (35.9) 1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5 M30 x 1.5
3-Wire DC Sensors — Micro-Connector Models						
12 mm	Shielded Semi-shielded Unshielded	2.71 (68.7) 3.04 (77.2) 3.06 (77.7)	1.98 (50.3) 2.28 (57.9) 1.98 (50.3)	— 0.06 (1.62) 0.36 (9.14)	0.67 (16.8) 0.67 (16.8) 0.67 (16.8)	M12 x 1 M12 x 1 M12 x 1
18 mm	Shielded Semi-shielded Unshielded	2.73 (69.3) 2.72 (69.1) 2.74 (69.4)	2.00 (50.9) 1.90 (48.2) 1.47 (37.2)	— 0.10 (2.54) 0.56 (14.1)	0.94 (23.8) 0.94 (23.8) 0.94 (23.8)	M18 x 1 M18 x 1 M18 x 1
30 mm	Shielded Semi-shielded Unshielded	2.92 (74.1) 2.78 (70.6) 2.92 (74.1)	1.98 (50.3) 1.90 (48.2) 1.49 (37.8)	— 0.13 (3.30) 0.52 (13.26)	1.41 (35.9) 1.41 (35.9) 1.41 (35.9)	M30 x 1.5 M30 x 1.5 M30 x 1.5

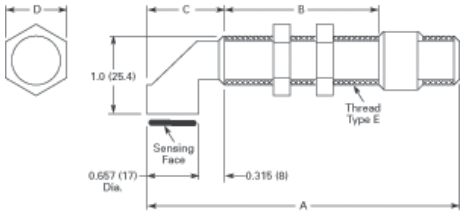
① These dimensions apply to the Premium+ Series models in this section. Not indicated Premium Series models.
② For short barrel model dimensions (E57SAL ...) refer to **Page 3-25**.

Approximate Dimensions — E57 Premium+ Series, Right Angle Sensing Models in Inches (mm)

Cable Models



Connector Models



Size	Dimensions in Inches (mm)				
	Overall Length A	Thread B	Cap C	Nut Width D	Thread Size E
Cable Models					
18 mm	3.465 (88)	1.97 (50)	0.98 (25)	0.94 (24)	M18 x 1
Micro-Connector Models					
18 mm	3.65 (93)	1.97 (50)	0.98 (25)	0.94 (24)	M18 x 1
Mini-Connector Models					
18 mm	4.303 (109)	1.97 (50)	0.98 (25)	0.94 (24)	M18 x 1

Premium+ Series Short Barrel Inductive Proximity Sensors

Contents

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Model Selection, Compatible Connector Cables 3-27
Wiring Diagrams 3-27
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Model Selection, Accessories . . 3-28
Dimensions 3-29

The new Cutler-Hammer® Premium+ Series Short Barrel Inductive Proximity Sensors from Eaton's electrical business feature the same sensing ranges as our standard length sensors, but in a body with a substantially shorter length. This allows the sensors to be used in applications where mounting space is limited.

Our robust Premium+ Series design has been added to the short barrel line. This means these sensors have been upgraded to include rugged stainless steel barrels, polycarbonate end bells, shock-resistant front cap and potting compound. Plus, the short barrel line now includes a choice of AC, AC/DC and DC-only, 12, 18 and 30 mm sensors. Cable models feature an optional extra long 5-meter cable. Every sensor is designed with 360° LED.

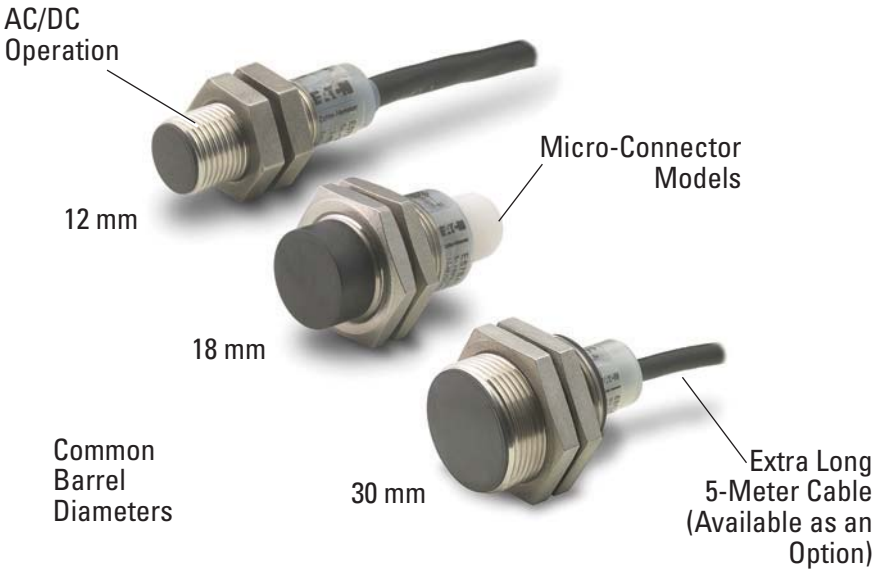
Approvals

- C-UL Listed

CE (AC/DC and DC-only models)

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

These Sensors Feature a Short Barrel Length to Fit into Tight Locations



Product Features

- Manufactured to take physical and environmental abuse
- Designed with stainless steel barrel and impact-absorbing new potting compound for robust, high temperature, high pressure washdown, as well as intense shock and vibration applications
- Unmatched high noise immunity eliminates problems associated with electrical noise (all models > 20V/meter)
- 360° output status indicator is visible from any angle and in any light condition
- Resettable short circuit protection in AC/DC and DC models
- Reverse polarity protection in 3-wire DC versions
- Small size to fit in tight spaces
- Choice of cable for low cost wiring, or micro-connector for quick installation or replacement
- Cable models include an extra long 5-meter cable as option

Model Selection — Short Barrel Length Proximity Sensors

	Operating Voltage	Sensing Range (Sn)	Shielding	Connection Type ①	Catalog Number	
					N.O. Output	N.C. Output
2-Wire Sensors						
12 mm Diameter 	20 – 250V AC	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 – 250V AC 50/60 Hz② 20 – 250V DC	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 Diameter 	20 – 250V AC	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 – 250V AC 50/60 Hz② 20 – 250V DC	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 Diameter 	20 – 250V AC	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 – 250V AC 50/60 Hz② 20 – 250V DC	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** ⓐ
3-Wire Sensors						
12 mm Diameter 	6 – 48V DC	2 mm	Shielded (NPN)	2-meter Cable	**E57SAL12T110**	—
				4-pin Micro DC Connector	**E57SAL12T110SD** ⓑ	—
			Shielded (PNP)	2-meter Cable	**E57SAL12T111**	**E57SBL12T111**
				4-pin Micro DC Connector	**E57SAL12T111SD** ⓑ	**E57SBL12T111SD** ⓑ
		4 mm	Unshielded (NPN)	2-meter Cable	**E57SAL12T110E**	**E57SBL12T110E**
				4-pin Micro DC Connector	**E57SAL12T110ED** ⓑ	**E57SBL12T110ED** ⓑ
			Unshielded (PNP)	2-meter Cable	**E57SAL12T111E**	**E57SBL12T111E**
				4-pin Micro DC Connector	**E57SAL12T111ED** ⓑ	**E57SBL12T111ED** ⓑ
18 mm Diameter 	6 – 48V DC	5 mm	Shielded (NPN)	2-meter Cable	**E57SAL18T110**	**E57SBL18T110**
				4-pin Micro DC Connector	**E57SAL18T110SD** ⓑ	**E57SBL18T110SD** ⓑ
			Shielded (PNP)	2-meter Cable	**E57SAL18T111**	**E57SBL18T111**
				4-pin Micro DC Connector	**E57SAL18T111SD** ⓑ	**E57SBL18T111SD** ⓑ
		8 mm	Unshielded (NPN)	2-meter Cable	**E57SAL18T110E**	**E57SBL18T110E**
				4-pin Micro DC Connector	**E57SAL18T110ED** ⓑ	**E57SBL18T110ED** ⓑ
			Unshielded (PNP)	2-meter Cable	**E57SAL18T111E**	**E57SBL18T111E**
				4-pin Micro DC Connector	**E57SAL18T111ED** ⓑ	**E57SBL18T111ED** ⓑ
30 mm Diameter 	6 – 48V DC	10 mm	Shielded (NPN)	2-meter Cable	**E57SAL30T110**	**E57SBL30T110**
				4-pin Micro DC Connector	**E57SAL30T110SD** ⓑ	**E57SBL30T110SD** ⓑ
			Shielded (PNP)	2-meter Cable	**E57SAL30T111**	**E57SBL30T111**
				4-pin Micro DC Connector	**E57SAL30T111SD** ⓑ	**E57SBL30T111SD** ⓑ
		15 mm	Unshielded (NPN)	2-meter Cable	**E57SAL30T110E**	**E57SBL30T110E**
				4-pin Micro DC Connector	**E57SAL30T110ED** ⓑ	**E57SBL30T110ED** ⓑ
			Unshielded (PNP)	2-meter Cable	**E57SAL30T111E**	**E57SBL30T111E**
				4-pin Micro DC Connector	**E57SAL30T111ED** ⓑ	**E57SBL30T111ED** ⓑ

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 Cutler-Hammer Applications Engineering at 1-800-426-9184 with questions.

Fast turn product with typical one business day lead-time to shipment.

Stocked product, typical order quantities guaranteed in stock.

ⓐⓑ See listing of compatible connector cables on **Page 3-27**.

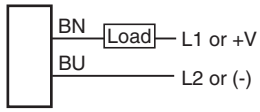
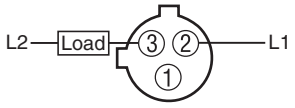
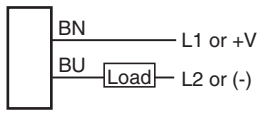
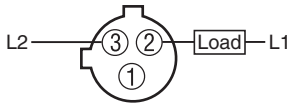
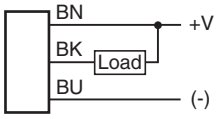
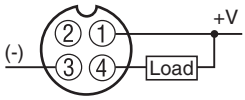
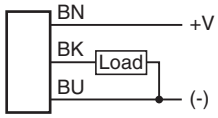
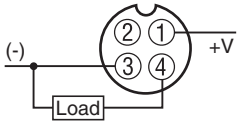
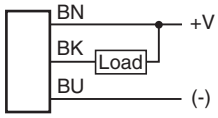
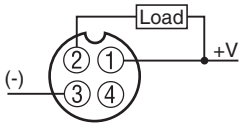
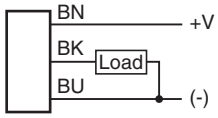
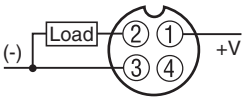
Model Selection — Compatible Connector Cables ①

	Voltage Style	Number of Pins	Gauge	Length	Catalog Number			Pin Configuration/Wire Colors (Face View Female Shown)
					PVC Jacket	PUR Jacket	IRR PUR Jacket	
Standard Cables — Micro Style								
Micro Style Straight Female 	AC	3-pin 3-wire	22 AWG	6.0 feet (2m)	**CSAS3F3CY2202**	**CSAS3F3RY2202**	—	 1-Green 2-Red/Black 3-Red/White
	DC	4-pin 4-wire	22 AWG	6.0 feet (2m)	**CSDS4A4CY2202**	**CSDS4A4RY2202**	**CSDS4A4I02202**	 1-Brown 2-White 3-Blue 4-Black

① For a full selection of connector cables, see **Section 10**.

Stocked product, typical order quantities guaranteed in stock.

Wiring Diagrams (Pin numbers are for reference, rely on pin location when wiring)

Operating Voltage	Output	Cable Models	Micro-Connector Models (Face View Male Shown)
2-Wire Sensors			
20 – 250V AC/DC 45/65 Hz	N.O. and N.C. (NPN)		
	N.O. and N.C. (PNP)		
3-Wire Sensors			
6 – 48V DC	N.O. (NPN)		
	N.O. (PNP)		
	N.C. (NPN)		
	N.C. (PNP)		

Specifications

	2 Wire AC Sensors	2-Wire AC/DC Sensors		3-Wire DC Sensors
		AC Operation	DC Operation	
Operating Voltage	40 – 250V AC	40 – 250V AC	20 – 250V DC	6 – 48V DC
Maximum Load Current	500 mA @ 25°C; 250 mA @ 70°C	250 mA @ 25°C ① 200 mA @ 70°C	250 mA @ 25°C 200 mA @ 70°C	500 mA @ 6 – 32V DC 250 mA @ 32 – 48V DC
Switching Frequency	20 Hz	60 Hz	60 Hz	12 mm: 800 Hz 18 mm: 500 Hz 30 mm: 300 Hz
Leakage Current	1.7 mA maximum @ 70°C	1.7V mA maximum @ 120V AC	≤2.0 mA	100 µA maximum
Voltage Drop	7V maximum	≤4V @ >25 mA	12V @ <10 mA	≤2.5V
Holding Current	5 mA minimum	5 mA minimum	5 mA maximum	≤10 mA
Protection	—	Resettable short circuit; overload protection	Resettable short circuit; overload protection	Auto reset
Switching Hysteresis	2 – 20% of rated sensing distance			
Repeat Accuracy	<3% sensing distance			
Output Indicator LED	360° viewable LED			
Operating Temperature	-13° to 158°F (-25° to 70°C) ①			
Enclosure Ratings	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67)			
Shock	30g sine wave, 11 mS per IEC68-2-76			
Vibration	10 to 55 Hz, 1 mm amplitude			
Material of Construction	Stainless steel, Polycarbonate end bells, Ryton® front cap			
Cable	AWM Style 20387 (PVC)			

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

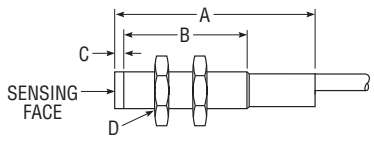
① Note: 240V AC operation is limited to less than 50°C in 2-wire AC/DC models.

Model Selection — Accessories

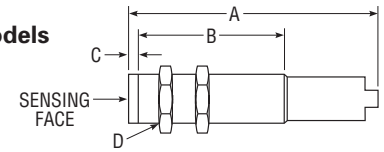
Description	Reference
Mounting Brackets	See **Section 8**
Replacement Mounting Nuts and Other Accessories	See **Section 8**
Connector Cables	See **Section 10**

Approximate Dimensions in Inches (mm)

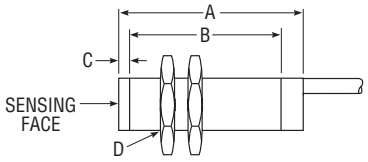
12 mm Cable Models



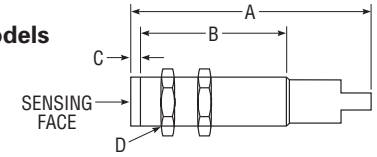
12 mm Micro-Connector Models



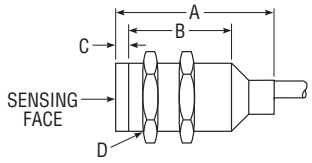
18 mm Cable Models



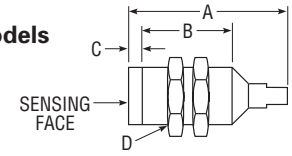
18 mm Micro-Connector Models



30 mm Cable Models



30 mm Micro-Connector Models



Size	Shielding	Dimensions in Inches (mm)			
		Overall Length A	Threaded Length B	C	Thread Size D
2-Wire AC Sensors — Cable Models					
12 mm	Shielded Unshielded	2.04 (51.7) 2.04 (51.7)	1.56 (39.6) 1.38 (35.1)	0.02 (0.5) 0.20 (5)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	1.39 (35.4) 1.39 (35.4)	0.86 (21.82) 0.60 (15.32)	0.02 (0.5) 0.28 (7)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	1.58 (40.2) 1.77 (44.9)	0.99 (25.15) 0.68 (17.27)	0.03 (0.8) 0.52 (13.26)	M30 x 1.5 M30 x 1.5
2-Wire AC Sensors — Micro-Connector Models					
12 mm	Shielded Unshielded	2.27 (57.8) 2.27 (57.8)	1.56 (39.6) 1.38 (35.1)	0.02 (0.5) 0.20 (5)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	1.57 (40.0) 1.57 (40.0)	0.86 (21.82) 0.60 (15.32)	0.02 (0.5) 0.28 (7)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	1.76 (44.8) 1.95 (49.5)	0.99 (25.15) 0.68 (17.27)	0.03 (0.8) 0.52 (13.26)	M30 x 1.5 M30 x 1.5
2-Wire AC/DC Sensors — Cable Models					
12 mm	Shielded Unshielded	2.46 (62.4) 2.46 (62.4)	1.98 (50.27) 1.80 (45.77)	— 0.20 (5)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	2.54 (64.5) 2.54 (64.5)	2.00 (50.9) 1.75 (44.4)	— 0.28 (7)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	2.72 (69.3) 2.72 (69.3)	2.12 (53.8) 1.63 (41.4)	— 0.52 (13.26)	M30 x 1.5 M30 x 1.5
2-Wire AC/DC Sensors — Micro-Connector Models					
12 mm	Shielded Unshielded	2.69 (68.4) 2.69 (68.4)	1.98 (50.27) 1.80 (45.77)	— 0.20 (5)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	2.72 (69.06) 2.72 (69.06)	2.00 (50.9) 1.75 (44.4)	— 0.28 (7)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	2.91 (73.8) 2.91 (73.8)	2.12 (53.8) 1.63 (41.4)	— 0.52 (13.26)	M30 x 1.5 M30 x 1.5
3-Wire DC Sensors — Cable Models					
12 mm	Shielded Unshielded	1.39 (35.2) 1.39 (35.2)	0.91 (23.09) 0.73 (18.59)	0.02 (0.5) 0.20 (5)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	1.39 (35.4) 1.39 (35.4)	0.86 (21.82) 0.60 (15.32)	0.02 (0.5) 0.28 (7)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	1.58 (40.2) 1.77 (44.9)	0.84 (21.26) 0.53 (13.46)	0.03 (0.8) 0.52 (13.26)	M30 x 1.5 M30 x 1.5
3-Wire DC Sensors — Micro-Connector Models					
12 mm	Shielded Unshielded	1.64 (41.5) 1.64 (41.5)	0.91 (23.09) 0.73 (18.59)	0.02 (0.5) 0.20 (5)	M12 x 1 M12 x 1
18 mm	Shielded Unshielded	1.59 (40.3) 1.59 (40.3)	0.86 (21.82) 0.60 (15.32)	0.02 (0.5) 0.28 (7)	M18 x 1 M18 x 1
30 mm	Shielded Unshielded	1.77 (45.0) 1.96 (49.7)	0.84 (21.26) 0.53 (13.46)	0.03 (0.8) 0.52 (13.26)	M30 x 1.5 M30 x 1.5