

**EAC Series Current Sensor
CurrentWatch Current Sensors**

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The CurrentWatch EAC Series from Eaton’s electrical business combines a current transformer and signal conditioner into a single package. The EAC Series has jumper-selected current input ranges and industry standard outputs: 4 – 20 mA, 0 – 5V DC or 0 – 10V DC. This family of sensors is designed for application on “linear” or sinu-soidal AC loads. Available in split-core or solid-core housings.

For typical applications of the Current-Watch EAC Series, see listing to the right.

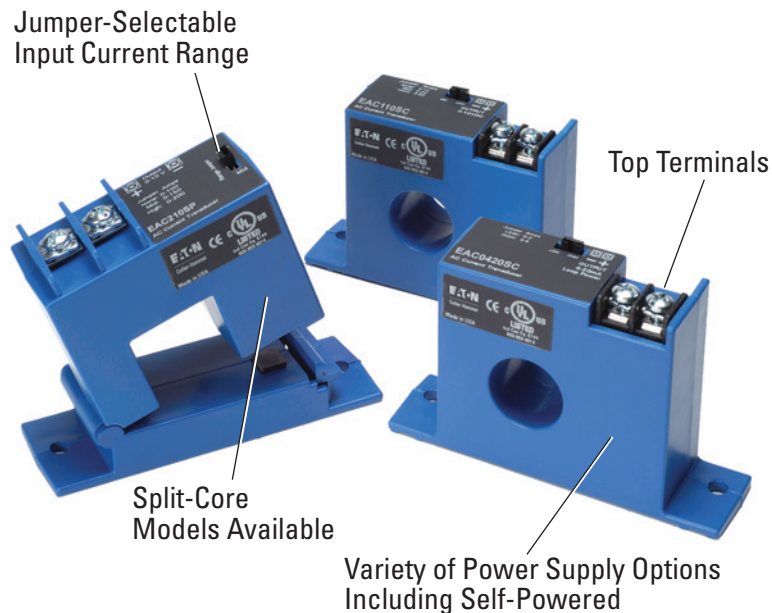
Approvals ①

- UL Listed
- C-UL Listed



① EACP models not listed.

AC Current Sensor with Analog Outputs and Power Supply Options

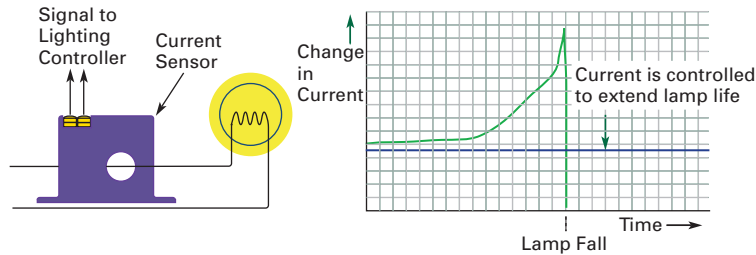


Product Features

- **Highly Accurate** — Factory matched and calibrated single-piece sensor is more accurate than traditional two-piece, field-installed solutions
- **Average Responding** — “Average Responding” algorithm gives an RMS output on pure sine waves, perfect for constant speed (linear) loads
- **Jumper Selectable Ranges** — The ability to change input ranges reduces inventory and eliminates zero and span
- **Isolation** — Output is magnetically isolated from the input for safety and elimination of insertion loss (voltage drop)
- **UL, C-UL and CE Approved** — Accepted worldwide

Typical Applications

- **Automation Equipment** — Analog current reading for remote monitoring and software alarms
- **Data Loggers** — Self-powered sensor helps conserve data logger batteries
- **Panel Meters** — Simple connection displays power consumption

Example Application — CurrentWatch EAC Series
Preventative Maintenance of a Critical Lighting System

Model Selection — CurrentWatch EAC Series

	Power Supply	Aperture Size	Output Signal	Current Range	Catalog Number
Top Terminal Current Sensors					
Solid-Core Housings 	Self-Powered (No External Power Needed)	0.74 in. (19 mm)	0 – 5V DC	10, 20 or 50A	EAC105SC
					100, 150 or 200A
	24V DC Loop-Powered		0 – 10V DC	10, 20 or 50A	EAC110SC
				100, 150 or 200A	EAC210SC
			4 – 20 mA	2 or 5A	EAC0420SC
				10, 20 or 50A	EAC1420SC
	100, 150 or 200A	EAC2420SC			
Split-Core Housings 	Self-Powered (No External Power Needed)	0.85 in. (21.6 mm)	0 – 5V DC	10, 20 or 50A	EAC105SP
					100, 150 or 200A
	24V DC Loop-Powered		0 – 10V DC	10, 20 or 50A	EAC110SP
				100, 150 or 200A	EAC210SP
			4 – 20 mA	2 or 5A	EAC0420SP
				10, 20 or 50A	EAC1420SP
	100, 150 or 200A	EAC2420SP			
Split-Core Housings 	120V AC		4 – 20 mA	2 or 5A	EACP0420120SP ①
				10, 20 or 50A	EACP1420120SP ①
				100, 150 or 200A	EACP2420120SP ①
	24V AC/DC		4 – 20 mA	2 or 5A	EACP042024USP ①
				10, 20 or 50A	EACP142024USP ①
				100, 150 or 200A	EACP242024USP ①

① Not UL listed.

■ Stocked product, typical order quantities guaranteed in stock.

Specifications — CurrentWatch EAC Series (Does Not Apply to EACP Series)

Description	Models with 0 – 5V DC Output	Models with 0 – 10V DC Output	Models with 4 – 20 mA Output
Power Supply	Self-Powered — No Power Supply Needed		12 – 40V DC Loop-Powered
Output Signal	0 – 5V DC	0 – 10V DC	4 – 20 mA
Output Limit	8.2V DC	15V DC	23 mA
Accuracy	1.0% FS		
Response Time	100 mS		300 mS
Frequency Range	50 – 60 Hz		20 – 100 Hz
Loading	1 mΩ Min. Rated Accuracy 100 kΩ Add 1.3% Error		See Power Supply Above
Isolation Voltage	UL Listed to 1,270V AC (Tested to 5kV)		
Input Ranges	Field Selectable Ranges from 0 – 200A, Additional Custom Ranges Available from Factory		
Sensing Aperture	Solid-Core: 0.74 in. (19 mm) dia. Split-Core: 0.85 in. (21.6 mm) sq.		
Housing	UL94 V0 Flammability Rated		
Environmental	Operating Temperature: -4 to 122°F (-20 to 50°C) Humidity: 0 – 95% RH, Non-condensing		
Approvals	UL 508 Industrial Control Equipment (USA and Canada), CE Certified		

Specifications — CurrentWatch EACP Series

Description	Specification
Power Supply	Models Ending -OSP: 120V AC Models Ending -USP: 24V AC/DC (40V Max.)
Output Signal	4 – 20 mA
Output Limit	22.4 mA
Accuracy	0.25% FS
Response Time	100 mS
Frequency Range	40 – 100 Hz
Loading	50 kΩ min. 500 kΩ max.
Isolation Voltage	UL Listed to 1,270V AC (Tested to 5kV)
Input Range	0 – 200A Jumper Selectable
Sensing Aperture	0.85 in. (21.6 mm)
Housing	UL94 V0 Flammability Rated
Environmental	Operating Temperature: -4 to 122°F (-20 to 50°C) Humidity: 0 – 95% RH, Non-condensing
Approvals	UL 508 Industrial Control Equipment (USA and Canada), CE Certified

Approximate Dimensions — CurrentWatch EAC Series

Description	Approximate Dimensions in Inches (mm)
Solid-Core Housing	<p>Technical drawing of the Solid-Core Housing. The top view shows a rectangular component with a length of 3.03 inches (77.0 mm). It features a central hole with a diameter of 0.19 inches (4.8 mm) and a larger hole on the right side with a diameter of 0.74 inches (19 mm). The height of the component is 0.93 inches (23.6 mm). The side view shows a total width of 3.50 inches (88.9 mm) and a height of 2.18 inches (55.4 mm). A feature on the side has a width of 2.40 inches (61.0 mm).</p>
EACP Series	<p>Technical drawing of the EACP Series. The top view shows a component with a height of 1.18 inches (30 mm) and a length of 3.04 inches (77.2 mm). It has a hole with a diameter of 0.19 inches (4.8 mm) on the right side. The overall length is 3.53 inches (89.7 mm). The side view shows a total width of 2.40 inches (61 mm) and a height of 0.45 inches (11.4 mm). Two side features have widths of 0.85 inches (21.6 mm) and 0.85 inches (21.7 mm). The total height of the component is 2.25 inches (57.2 mm).</p>
All Other Models	<p>Technical drawing of All Other Models. The top view shows a component with a height of 1.19 inches (30.2 mm) and a length of 3.04 inches (77.2 mm). It has a hole with a diameter of 0.19 inches (4.8 mm) on the right side. The overall length is 3.53 inches (89.7 mm). The side view shows a total width of 2.40 inches (61 mm) and a height of 2.25 inches (57.2 mm). Two side features have widths of 0.85 inches (21.6 mm) and 0.85 inches (21.6 mm).</p>