

**EAC Series Current Sensor**  
**CurrentWatch Current Sensors****Contents**

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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.

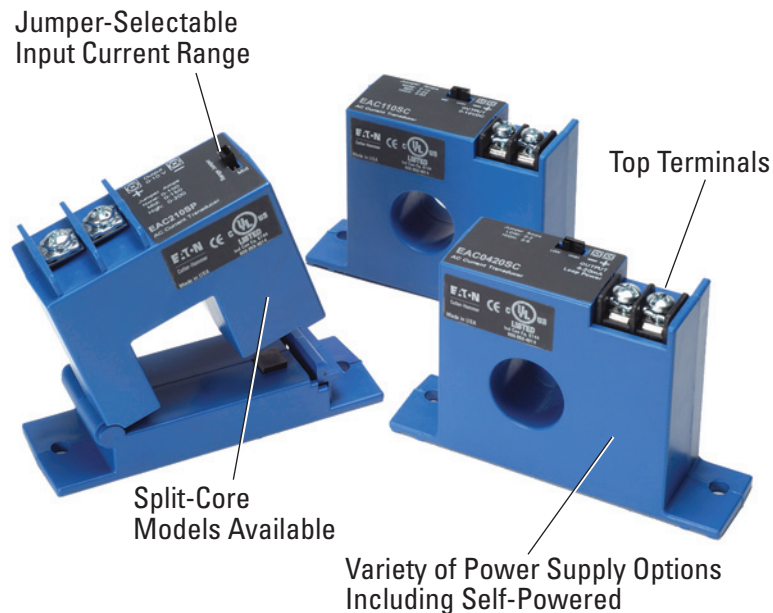
For typical applications of the CurrentWatch EAC Series, see listing to the right.

**Approvals** <sup>①</sup>

- UL Listed
- C-UL Listed



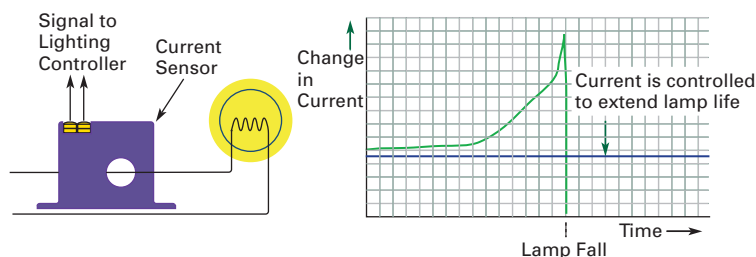
<sup>①</sup> EACP models not listed.

**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					
<div>Solid-Core Housings</div> <div></div>	Self-Powered (No External Power Needed)	0.74 in. (19 mm)	0 – 5V DC	10, 20 or 50A	EAC105SC
				100, 150 or 200A	EAC205SC
			0 – 10V DC	10, 20 or 50A	EAC110SC
	100, 150 or 200A			EAC210SC	
	24V DC Loop-Powered		4 – 20 mA	2 or 5A	EAC0420SC
				10, 20 or 50A	EAC1420SC
100, 150 or 200A		EAC2420SC			
<div>Split-Core Housings</div> <div></div>	Self-Powered (No External Power Needed)	0.85 in. (21.6 mm)	0 – 5V DC	10, 20 or 50A	EAC105SP
				100, 150 or 200A	EAC205SP
			0 – 10V DC	10, 20 or 50A	EAC110SP
	100, 150 or 200A			EAC210SP	
	24V DC Loop-Powered		4 – 20 mA	2 or 5A	EAC0420SP
				10, 20 or 50A	EAC1420SP
100, 150 or 200A		EAC2420SP			
<div>Split-Core Housings</div> <div></div>	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>Top View Dimensions: 3.03 (77.0) (total width), 0.93 (23.6) (right side width), 2.40 (61.0) (internal width), 0.19 Dia. (4.8) (left side hole), 0.74 Dia. (19) (right side hole), 3.50 (88.9) (bottom width).</p> <p>Side View Dimensions: 2.18 (55.4) (total height), 0.19 Dia. (4.8) (top hole).</p>
EACP Series	<p>Top View Dimensions: 1.18 (30) (left side height), 3.04 (77.2) (total width), 3.53 (89.7) (bottom width), 0.19 Dia. (4.8) (right side hole).</p> <p>Side View Dimensions: 2.40 (61) (top width), 0.45 (11.4) (right side height), 0.85 (21.6) (left side height), 0.85 (21.7) (right side height), 2.25 (57.2) (total height).</p>
All Other Models	<p>Top View Dimensions: 3.04 (77.2) (total width), 0.19 Dia. (4.8) (right side hole), 3.53 (89.7) (bottom width), 1.19 (30.2) (left side height).</p> <p>Side View Dimensions: 2.40 (61) (top width), 2.25 (57.2) (total height), 0.85 (21.6) (right side height), 0.85 (21.6) (bottom width).</p>