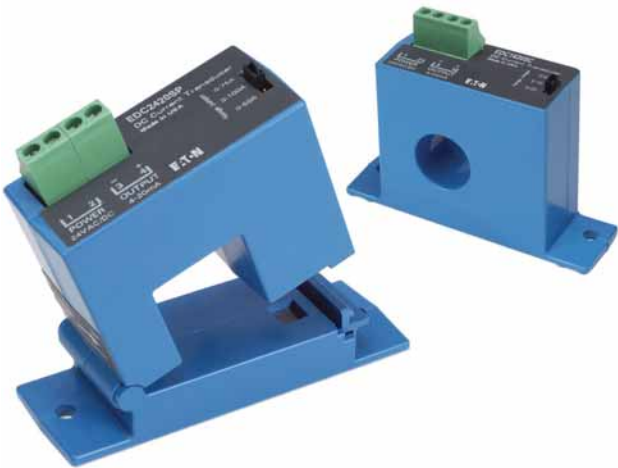


EDC Series CurrentWatch Current Sensors



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EDC Series CurrentWatch Current Sensors

Product Description

The CurrentWatch EDC Series from Eaton's electrical sector combines a hall effect sensor and signal conditioner into a single package for use in DC current applications up to 300A. The EDC Series has jumper-selected current input ranges and industry standard outputs: 4–20 mA, 0–5 Vdc or 0–10 Vdc. Available in split-core models for quick and easy installation.

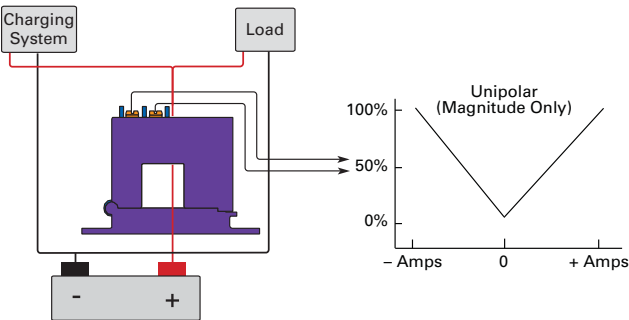
For typical applications of the CurrentWatch EDC Series, see listing on this page.

Application Description

Typical Applications

- **Battery Banks**—Monitor load current, monitor charging current and verify operation
- **Transportation**—Measures traction power or auxiliary loads
- **Electric Heating Elements**—Monitor heater loads with a faster response time than temperature sensors

Example Application—Battery Charging System



Features

- **Jumper-Selectable Ranges**—Reduce inventory and eliminate zero or span pots
- **Isolation**—Output is magnetically isolated from the input for safety, also eliminating insertion loss (voltage drop)
- **Internal Power Regulation**—Cuts installation costs and works well, even with unregulated power
- **Split Core Design and Built-In Mounting Brackets**—Make installation quick and easy
- **UL and CE Approved**

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.




Standards and Certifications

- UL Listed
- cUL Listed
- CE Certified
- UL 508 Industrial Control Equipment (USA and Canada)


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.

Product Selection**EDC Series CurrentWatch Current Sensors****Top Terminal Current Sensors**

	Power Supply	Aperture Size	Output Signal	Current Range	Catalog Number
	Split-Core Housing—Uni-Polar Output, see Output Graph on Page V8-T7-35				
	24 Vac/dc	0.85 in (21.6 mm)	0–5 Vdc	50, 75 or 100A	EDC205SP
				100, 150 or 200A	EDC305SP
				150, 225 or 300A	EDC405SP
			0–10 Vdc	50, 75 or 100A	EDC210SP
				100, 150 or 200A	EDC310SP
				150, 225 or 300A	EDC410SP
	4–20 mA			50, 75 or 100A	EDC2420SP
				100, 150 or 200A	EDC3420SP
				150, 225 or 300A	EDC4420SP
	Split-Core Housing—Bidirectional Output, see Output Graph on Page V8-T7-35				
	24 Vac/dc	0.85 in (21.6 mm)	–10 to +10 Vdc	0–100A	EDCB100SP
				0–200A	EDCB200SP
				0–300A	EDCB300SP
				0–400A	EDCB400SP
	Solid-Core Housing—Single-Polarity Output, see Output Graph on Page V8-T7-35				
	24 Vac/dc	0.75 in (19 mm)	4–20 mA	5, 10 or 20A	EDC1420SC

Accessories

DIN Rail
Mounting Kit

CurrentWatch EDC Series

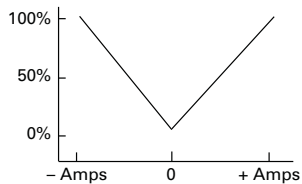
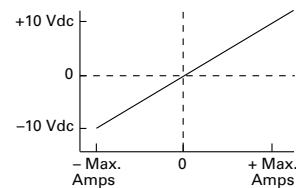
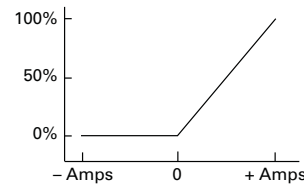
Description	Catalog Number
DIN rail mounting kit ①	EDINKIT

Technical Data and Specifications

EDC Series CurrentWatch Current Sensors

Description	Models with 0–5 Vdc Output Specification	Models with 0–10 Vdc Output Specification	Models with 4–20 mA Output Specification
Power supply	24 Vac/dc (22–38 Vac/dc) 2 VA maximum	24 Vac/dc (22–38 Vac/dc) 2 VA maximum	24 Vac/dc (22–38 Vac/dc) 2 VA maximum
Output signal	0–5 Vdc	0–10 Vdc	4–20 mA
Output limit	5.75 Vdc	11.5 Vdc	23 mA
Accuracy	Solid-core models: 1% FS Split-core models: 2% FS 300A models: 1.5% FS	Solid-core models: 1% FS Split-core models: 2% FS 300A models: 1.5% FS	Solid-core models: 1% FS Split-core models: 2% FS 300A models: 1.5% FS
Response time	Solid-core models: 20 ms (to 90% of step change) Split-core models: 100 ms (to 90% of step change)	Solid-core models: 20 ms (to 90% of step change) Split-core models: 100 ms (to 90% of step change)	Solid-core models: 20 ms (to 90% of step change) Split-core models: 100 ms (to 90% of step change)
Frequency range	DC	DC	DC
Loading	25 kohms minimum	50 kohms minimum	650 ohms maximum
Isolation voltage	3 kV (monitored line to output)	3 kV (monitored line to output)	3 kV (monitored line to output)
Linearity	0.75% FS	0.75% FS	0.75% FS
Current ranges	Field selectable ranges from 0–300A	Field selectable ranges from 0–300A	Field selectable ranges from 0–300A
Sensing aperture	Solid-core housings: 0.75 in (19 mm) dia. Split-core housings: 0.85 in (21.6 mm) sq.	Solid-core housings: 0.75 in (19 mm) dia. Split-core housings: 0.85 in (21.6 mm) sq.	Solid-core housings: 0.75 in (19 mm) dia. Split-core housings: 0.85 in (21.6 mm) sq.
Environmental	Operating temperature: –4° to 122°F (–20° to 50°C) Humidity: 0–95% RH, non-condensing	Operating temperature: –4° to 122°F (–20° to 50°C) Humidity: 0–95% RH, non-condensing	Operating temperature: –4° to 122°F (–20° to 50°C) Humidity: 0–95% RH, non-condensing

Output Graphs

Uni-Polar Output for
Split-CoreBidirectional Output for
Split-CoreStandard Analog Output for
Solid-Core

Note

① Sensor pictured for reference and not included in kit.

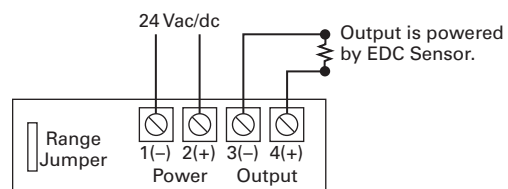
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Current and Voltage Sensors

CurrentWatch EDC Series

Wiring Diagram

EDC Series CurrentWatch Current Sensors

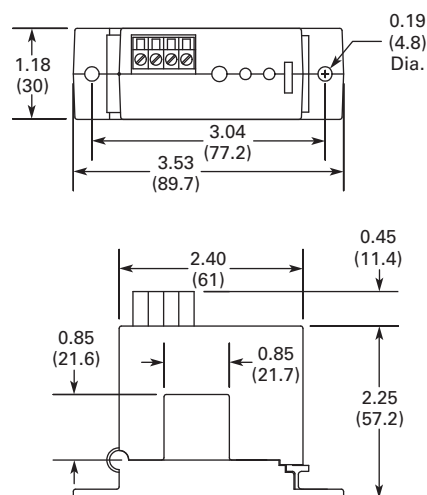


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Dimensions

Approximate Dimensions in Inches (mm)

Split-Core Housing



Solid-Core Housing

