

October 2009

**ECSD Series Current Switch
CurrentWatch Current Sensors****Contents**

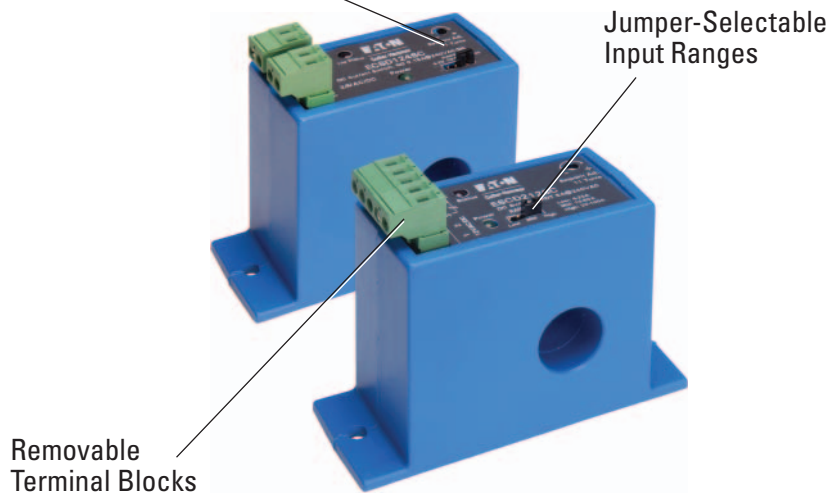
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The CurrentWatch ECSD Series current operated switches from Eaton's Cutler-Hammer® brand provide the same dependable indication of status offered by the CurrentWatch ECS Series, but with the added benefit of increased setpoint precision. A choice of three jumper-selectable input ranges allow the ECSD Series to be tailored to an application, providing more precise control through improved setpoint resolution. Features such as isolated solid-state or mechanical relay outputs; 4-20A, 10-50A, and 20-100A input ranges are standard.

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

Approvals

- UL Listed
- cUL Listed

**DC Switch with Solid-State or Mechanical Relay Output****Easy Set Up & Adjustment****Product Features**


- **Choice of Mechanical Relay or Solid-State Outputs**
 - SPDT (Form C) Relay, 5.0A @ 240V AC or 30V DC
 - Solid-State, N.O., 0.15A @ 240V AC/DC
- **Easily Adjustable Setpoint** — Speeds start-up and reduces inventory
- **Compact, One-Piece Design** — Easily fits in crowded control panels
- **Input Isolation** — Safer than shunt/relay combinations
- **Adaptive Hysteresis** — Hysteresis is five percent of setpoint, allowing closer control than fixed-hysteresis switches
- **Solid-Core Housings**
- **LED Indication** — Provides quick visual indication of output contact status
- **Built-In Mounting Feet** — Provides for a secure installation

Typical Applications


- **Electronic Proof of Flow** — Current operated switches eliminate the need for multiple pipe or duct penetrations and are more reliable than electromechanical pressure or flow switches
- **Welders** — Instant indication of equipment status
- **Large Drive Motors** — Provides monitoring for field loss protection
- **Power Supplies** — Detects and signals over-current condition before equipment damage
- **UPS** — Monitors battery output
- **Ancillary Equipment**

For Customer Service in the U.S. call **1-800-356-1243**,
in Canada call **1-800-268-3578**.
For Application Assistance in the U.S. and Canada
call **1-800-426-9184**.

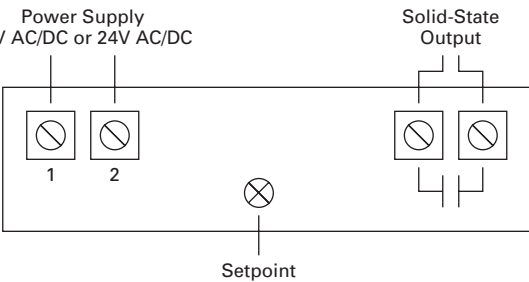
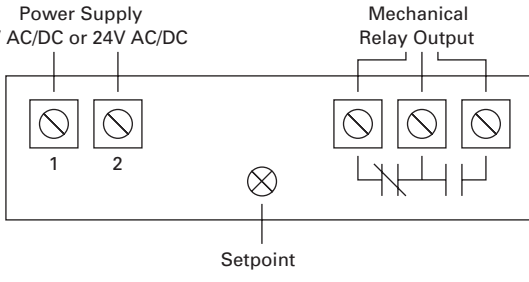
Model Selection — CurrentWatch ECSD Series

Top Terminal Switches	Aperture Size	Power Supply	Output Type, Voltage and Rating	Setpoint and LED Configuration	Catalog Number
	0.74 in. (19 mm)	12V AC/DC	Solid-State, Normally Open, 0.15A @ 240V AC/DC	Adjustable: 4-20, 10-50, 20-100A	ECSD112SC
			Mechanical Relay, SPDT (Form C), 5.0A @ 240V AC, 30V DC	Adjustable: 4-20, 10-50, 20-100A	ECSD212SC
		24V AC/DC	Solid-State, Normally Open, 0.15A @ 240V AC/DC	Adjustable: 4-20, 10-50, 20-100A	ECSD124SC
			Mechanical Relay, SPDT (Form C), 5.0A @ 240V AC, 30V DC	Adjustable: 4-20, 10-50, 20-100A	ECSD224SC

Accessories — CurrentWatch ECSD Series

	Description	Catalog Number
	DIN Rail Mounting Kit (sensor pictured for reference and not included with kit)	EDINKIT

Wiring Diagrams — CurrentWatch ECSD Series

Models	Wiring Diagram
Solid-State Output Models	
Mechanical Relay Models	

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Specifications — CurrentWatch ECSD Series

Description	Solid-State Output Models	Mechanical Relay Models
Power Supply	12V AC/DC (operates from 10-18V AC/DC) 24V AC/DC (operates from 20-28V AC/DC)	
Output	Isolated Solid-State Contact	Mechanical Relay (SPDT)
Output Rating	0.15A @ 240V AC/DC Normally Open	5.0A @ 240V AC 5.0A @ 30V DC
Off-State Leakage	< 10 μ A	—
Response Time	100 ms @ 10% Above Setpoint 20 ms @ 100% Above Setpoint	—
Setpoint Range	Adjustable: 4-20, 10-50, 20-100A	—
Hysteresis	5% of Setpoint	—
Overload	1,000% of Range for 5 sec.	—
Isolation Voltage	3 kV	—
Frequency Range	DC to 400Hz	—
Sensing Aperture	Solid-Core, 0.74 in. (19 mm)	—
Housing	UL94 V0 Flammability Rated	—
Environmental		
Operating Temperature	-40 to +140° F (-40 to +60° C)	-4 to +122° F (-20 to +50° C)
Humidity	0-95% RH, Non-Condensing	—
Approvals Pending:	UL, cUL, CE	—

Approximate Dimensions — CurrentWatch ECSD Series

Description	Approximate Dimensions in Inches (mm)
Solid-Core Models	<p>The diagram shows two views of the device. The top view is a square with a side length of 3.88 in. (98.4 mm). A central circular sensing aperture has a diameter of 0.75 in. (19.1 mm). A small rectangular component on the top edge has a height of 0.40 in. (10.2 mm). The bottom view shows the device's profile with a total height of 2.50 in. (63.5 mm) and a base width of 3.38 in. (86 mm). A circular feature on the right side has a diameter of 0.20 in. (5 mm). The front panel features a terminal block on the left and a status indicator on the right.</p>