

ECSD Series CurrentWatch Current Switches



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ECSD Series CurrentWatch Current Switches

Product Description

The CurrentWatch ECSD Series current operated switches from Eaton’s electrical sector provides 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 on this page.

Application Description

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**—Provide monitoring for field loss protection
- **Power Supplies**—Detect and signal over-current condition before equipment damage
- **UPS**—Monitors battery output
- **Ancillary Equipment**

Features

- **Choice of Mechanical Relay or Solid-state Outputs**
 - SPDT (Form C) relay, 5.0A at 240 Vac or 30 Vdc
 - Solid-state, NO, 0.15A at 240 Vac/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**—Provide for a secure installation

Standards and Certifications

- UL Listed
- cUL Listed
- CE



⚠ 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.

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.

Product Selection

ECSD Series CurrentWatch Current Switches

Top Terminal Switches

Solid-Core Housing with Top Terminal



Power Supply	Aperture Size	Output Type, Voltage and Rating	Setpoint and LED Configuration	Catalog Number
Solid-Core Housings with Top Terminal				
12 Vac/dc	0.74 in (19 mm)	Solid-state, normally open, 0.15A at 240 Vac/dc	Adjustable: 4–20, 10–50, 20–100A	ECSD112SC
		Mechanical relay, SPDT (Form C), 5.0A at 240 Vac, 30 Vdc		ECSD212SC
24 Vac/dc	0.74 in (19 mm)	Solid-state, normally open, 0.15A at 240 Vac/dc	Adjustable: 4–20, 10–50, 20–100A	ECSD124SC
		Mechanical relay, SPDT (Form C), 5.0A at 240 Vac, 30 Vdc		ECSD224SC

Accessories

DIN Rail Mounting Kit



ECSD Series CurrentWatch Current Switches

Description	Catalog Number
DIN rail mounting kit ①	EDINKIT

Technical Data and Specifications

ECSD Series CurrentWatch Current Switches

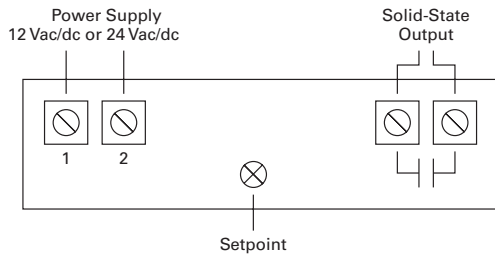
Description	Solid-State Output Models	Mechanical Relay Models
Power supply	12 Vac/dc (operates from 10–18 Vac/dc) 24 Vac/dc (operates from 20–28 Vac/dc)	12 Vac/dc (operates from 10–18 Vac/dc) 24 Vac/dc (operates from 20–28 Vac/dc)
Output	Isolated solid-state contact	Mechanical relay (SPDT)
Output rating	0.15A at 240 Vac/dc Normally open	5.0A at 240 Vac 5.0A at 30 Vdc
Off-state leakage	<10 μ A	—
Response time	100 ms at 10% above setpoint 20 ms at 100% above setpoint	—
Setpoint range	Adjustable: 4–20, 10–50, 20–100A	—
Hysteresis	5% of setpoint	—
Overload	1000% of range for 5 sec.	—
Isolation voltage	3 kV	—
Frequency range	DC to 400 Hz	—
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) Humidity: 0–95% RH, non-condensing	Operating temperature: –4° to 122°F (–20° to 50°C) Humidity: 0–95% RH, non-condensing

Note

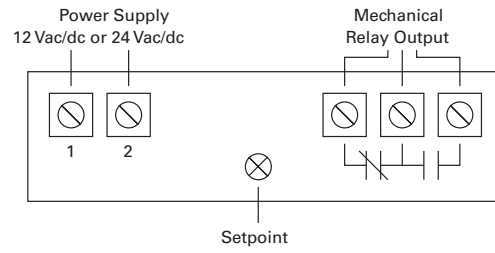
① Sensor pictured for reference and not included with kit.

Wiring Diagrams

Solid-State Output Models



Mechanical Relay Models



Dimensions

Approximate Dimensions in Inches (mm)

Solid-Core Models

