Current and Voltage Sensors

CurrentWatch ECSD Series

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ECSD Series CurrentWatch Current Switches



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 set point precision. A choice of three jumperselectable input ranges allow the ECSD Series to be tailored to an application, providing more precise control through improved set point resolution. Features such as isolated solid-state or mechanical relay outputs; 4-20 A, 10-50 A, and 20-100 A input ranges are standard.

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

Contents

Description

- Choice of Mechanical Relay or Solid-state Outputs
 - SPDT (Form C) relay, 5.0 A at 240 Vac or 30 Vdc
 - Solid-state, NO, 0.15 A at 240 Vac/Vdc
- Easily Adjustable Set Point—Speeds start-up and reduces inventory
- Compact, One-Piece Design—Easily fits in crowded control panels
- Input Isolation—Safer than shunt/relay combinations
 Adaptive Hystoresia
- Adaptive Hysteresis— Hysteresis is five percent of set point, allowing closer control than fixedhysteresis 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
- UL tested to Canadian safety standards
- CE
- RoHS Compliant



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 safetyrelated 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

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Solia-Core	nousing
with Ton Te	erminal



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



ECSD Series CurrentWatch Current Switches	
Description	Catalog Number
DIN rail mounting kit $^{\textcircled{1}}$	EDINKIT

Technical Data and Specifications

ECSD Series CurrentWatch Current Switches

Description	Solid-State Output Models	Mechanical Relay Models 12 Vac/Vdc (operates from 10–18 Vac/Vdc) 24 Vac/Vdc (operates from 20–28 Vac/Vdc)	
Power supply	12 Vac/Vdc (operates from 10–18 Vac/Vdc) 24 Vac/Vdc (operates from 20–28 Vac/Vdc)		
Output	Isolated solid-state contact	Mechanical relay (SPDT)	
Output rating 0.15 A at 240 Vac/Vdc Normally open		5.0 A at 240 Vac 5.0 A at 30 Vdc	
Off-state leakage <10 µA		_	
Response time 100 ms at 10% above set point 20 ms at 100% above set point		_	
Set point range Adjustable: 4–20, 10–50, 20–100 A		_	
-lysteresis 5% of set point		—	
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) Operating temperature: 4 to 122 °F (-20 to 50 °C) Humidity: 0-95% RH, non-condensing Humidity: 0-95% RH, non-condensing		

Note

1 Sensor pictured for reference and not included with kit.

CurrentWatch ECSD Series

Wiring Diagrams

Solid-State Output Models





Dimensions

Approximate Dimensions in Inches (mm)

Solid-Core Models

