

# Current and Voltage Sensors

**EVT Series VoltageWatch**



**ECSJ Series CurrentWatch Current Switch**



**EACR Series CurrentWatch Current Sensor**



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**Unless otherwise noted, the products contained in this section should not be used for functional safety applications. These products were not designed or tested to IEC 60947-5-3 or recommended for functional safety.**

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 Guide

#### EVT Series VoltageWatch Voltage Sensors



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#### Overview

Eaton's VoltageWatch™ sensor is a high-performance, true RMS sensor for sensing voltage in single- and three-phase installations.

#### Applications

Detect below normal or "brown out" voltage conditions; protect against possible motor overheating

Identify phase-loss conditions by detecting voltage reduction in one or more phases of a three-phase motor

Monitor overvoltage conditions associated with regenerative voltage to help in diagnosing/avoiding motor drive issues

Detect voltage conditions that may cause stress in or damage to soft starter components (SCRs)

#### Product Features

True RMS output—allows for use in situations where power supplied is non-sinusoidal

Standard 4–20 mA loop powered output—industry standard output works easily and reliably with existing controllers

Input/output isolation—input and output circuitry is electrically isolated for improved safety

Compact DIN rail mount enclosure—space-saving 35 mm wide enclosure mounts quickly for an attractive installation

#### Voltage Range

120, 240, 480V

#### Approvals

UL®  
CE (Pending)  
RoHS Compliant



#### ECS Series CurrentWatch AC Current Switches



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#### Overview

AC current switches for detecting overcurrent condition.

#### Applications

Electronic proof of flow—current operated switches eliminate the need for multiple pipe or duct penetrations and are more reliable than electro-mechanical pressure or flow switches

Conveyors—detect jams and overloads

Lighting circuits—easier to install and more accurate than photocells

Fans, pumps and heating elements—faster response than temperature sensors

Critical motors

Ancillary equipment

#### Product Features

Universal outputs—NO or NC solid-state switch for control circuits up to 240 Vac/dc, compatible with most automation systems

Self-powered—cuts installation and operating costs

Easily adjustable setpoint—increases application flexibility and speeds start-up

Solid- or split-core housings—versions tailored for each type of installation

LED indication—provides quick visual indication of contact status

Built-in mounting feet—simple, two-screw panel mount or attach with optional din-rail mounting kit accessory

#### Current Range

Fixed or adjustable set point, 1–150A

#### Approvals

UL Listed  
cUL® Listed  
cULus  
CE



#### ECSJ Series CurrentWatch AC Current Switches



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#### Overview

Jumper selectable AC switches with solid-state output.

#### Applications

Electronic proof of flow—current operated switches eliminate the need for multiple pipe or duct penetrations and are more reliable than electro-mechanical pressure or flow switches

Conveyors—detect jams and overloads

Lighting circuits—easier to install and more accurate than photocells

Fans, pumps and heating elements—faster response than temperature sensors

Critical motors

Ancillary equipment

#### Product Features

Choice of NO or NC solid-state outputs—  
1A at 240 Vac  
0.15A at 30 Vdc  
15A at 120 Vac  
3A at 120 Vac  
0.15A at 30 Vdc, dual contact

Self-powered—cuts installation and operating costs

Easily adjustable setpoint—speeds start-up and reduces inventory

Solid- or split-core housings—choose the appropriate version for your application

LED indication—provides quick visual indication of output contact status

Built-in mounting feet—provide for a secure installation

#### Current Range

Adjustable set point, 1.75–200A

#### Approvals

UL Listed  
cUL Listed  
cULus  
CE



#### ECS7 Series CurrentWatch AC Current Switches



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#### Overview

Self-calibrating AC current switch with solid-state outputs.

#### Applications

Conveyors—use current overload models to detect conveyor jams caused by scenarios such as side-by-sides

Electronic proof of flow—more reliable than electro-mechanical pressure or flow switches, with no need for pipe or duct penetrations

Pump protection—provides overload (jams) and underload (suction loss) indication

#### Product Features

Self-powered and self-calibrating—reduces installation costs

Status monitoring, overload and operating window options—choose the operating style that matches your application

Universal output—AC or DC compatibility with any automation system

#### Current Range

Self-calibrating set point, 1.5–150A

#### Approvals

UL Listed  
cUL Listed  
cULus  
CE

