The Eaton CurrentWatch™ family of current sensors provides high-performance AC or DC current sensing for industrial use. These devices are ideal for providing status information or protection for electrified equipment. The CurrentWatch series is accurate, highly reliable and perfect for new or retrofit applications.

With models measuring up to 2,000A AC and 300A DC, CurrentWatch products can be used in a wide range of applications such as equipment monitoring, fan status, pump status and equipment protection. Target applications for current sensors include detecting locked rotors, loss of load, open heater or lamp load, pump jams, suction loss, motor wellness, belt loss or slippage, and general mechanical wear or failure.

A family of switches and sensors
CurrentWatch products are available as both switches and sensors. Understanding this distinction is key to choosing the right product for your application.

Current switches are set to trip at an overcurrent or undercurrent condition. A change in current will send an output signal notifying of an unwanted event. Current switches are designed with fixed or adjustable trip points and are ideal for providing information on AC electrified equipment.

Current sensors operate by monitoring current flow in equipment. The current magnitude is converted into a linear and proportional analog signal (4–20 mA, 0–5 V or 0–10 V). Small changes in current can be detected, avoiding costly repairs and mechanical problems before they occur. These sensors are magnetically isolated, contain internal signal conditioning, are safer to use than current transformers, do not require additional circuitry, and are completely self-contained in one compact package.

Solid or split-core housings
CurrentWatch products are available in either solid- or split-core housing types. Solid-core housing models are ideal for new equipment installations where the conductor wire is run through the fixed aperture. Split-core models are perfect for retrofit applications because the housing can be opened to fit around an existing conductor. As such, split-core current sensors are easy to install, without re-wiring and shutting down a process for long periods of time. The simplicity of installing split-core models reduces overall installation costs.

Self-powered
Some CurrentWatch products are self-powered, requiring no external power supply to function. Instead, the power required is induced from the monitored conductor. With self-powered sensors, just connect the output to a PLC, DDC or some overall management controller.

Performance and flexibility
Many applications can benefit from measuring current flow. Because of this, the use of current sensors has grown beyond just circuit protection and reporting. Now, technological advances in current sensing provide more ways to monitor, improve performance and control power consumption. And with the straightforward installation of CurrentWatch products, current sensing has never been easier to implement.

Warranty backed, industry approved
CurrentWatch products carry a five-year warranty and meet UL and CE approvals. The proven technology of CurrentWatch is the right choice for your processes, equipment and overall continuous improvement approach to business.
### Key features
- AC current sensing up to 2,000A, DC current sensing up to 300A
- Solid- or split-core housings for easy installation in new or retrofit applications
- DIN rail mountable housings and DIN rail mounting accessory
- Visual LED indicators for easy setup and status
- Self-powered models available

### Industrial segments for CurrentWatch
- Agriculture
- Biotech and biofuels
- Industrial car wash

### CurrentWatch General Features and Capabilities

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### Current Sensors
- **EAC Series**
  - AC current sensor
  - Self-Powered
  - Loop Powered
  - Auxiliary Powered
  - Analog
  - Fixed or adjustable set point, 1–150A

- **EACR Series**
  - AC current sensor
  - True RMS

- **EDC Series**
  - DC current sensor
  - Fixed or adjustable set point, 1–150A

- **EPRE Series**
  - AC current sensor
  - With true RMS and DIN rail mount

### Ground Fault Sensors
- **EGF Series**
  - Ground fault sensor
  - Fixed or adjustable set point, 1–150A

### Example applications
- **Pump Jam and Suction Loss Protection**
- **Current Sensing for Non-Linear AC Loads**