CURRENT AND VOLTAGE SENSORS
BUYING GUIDE



WHAT DO THEY DO?

Current, voltage, and ground fault sensors provide valuable information about the operating condition of electrical equipment and power systems. They can be used to measure electrical loads, confirm equipment operation, detect abnormal conditions, and identify leakage current that may indicate developing electrical faults.

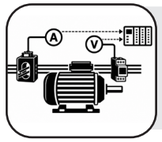
Topics

» What do they do?
» Applications
» How to Choose
» Product Category Overview
» Product Lineup

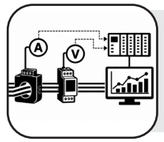
Product Types

- **Current and Voltage Transducers**: Transducers continuously measure current or voltage and convert the measurement to a proportional analog signal for a PLC, meter, data acquisition system, or other monitoring device. They are ideal when current or voltage values need to be monitored, displayed, recorded, or used for process control.
- **Current Switches**: Current switches monitor current flow and change the state of a discrete output when current crosses a specified threshold. They can confirm equipment operation or detect abnormal conditions such as undercurrent, overcurrent, loss of load, or equipment jams.
- **Current Indicators**: Current indicators provide a simple visual indication that AC current is flowing through a conductor. Unlike transducers or switches, they do not provide a measurement or control-system output, making them well suited for basic local equipment status indication.
- **Current Transducer/Switch Combinations**: Combination devices provide both continuous current measurement and a discrete switching output, allowing an analog signal to be used for monitoring and a separate output for an alarm, interlock, or control function.
- **Ground Fault Sensors**: Ground fault sensors detect AC current flowing through an unintended path to ground and provide an output when leakage reaches a specified level.
- **Residual Current Monitors**: Residual current monitors provide more extensive monitoring of AC and DC leakage currents, with adjustable warning and alarm thresholds that can provide early indication of developing insulation or wiring faults.

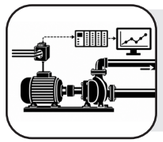
APPLICATIONS



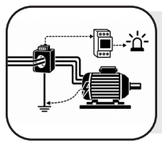
Motor Monitoring: Monitoring motor current and voltage can help detect overloads, loss of load, phase loss, and other abnormal operating conditions. Sensor outputs can be used by control systems to initiate alarms or equipment shutdowns.



Electrical Load Monitoring: Current and voltage transducers provide continuous load measurements for monitoring and trending, helping identify changes in equipment operation and electrical demand.



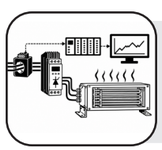
Process Monitoring: Monitoring current provides feedback on the operation of pumps, compressors, conveyors, and other equipment. Changes in electrical load can indicate changing process conditions or developing problems.



Ground Fault Monitoring: Ground fault and residual current monitoring can detect leakage caused by insulation deterioration, wiring problems, or other faults, allowing warning, alarm, or control action when abnormal leakage occurs.



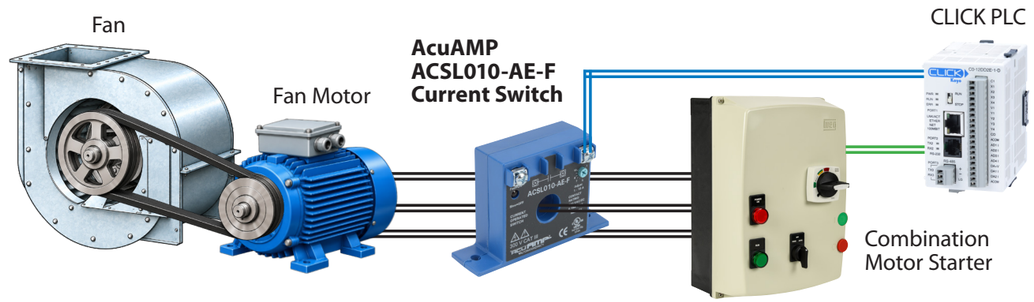
Voltage Monitoring: Voltage transducers provide continuous measurement to help identify undervoltage, overvoltage, phase loss, and other supply conditions that could affect equipment operation.



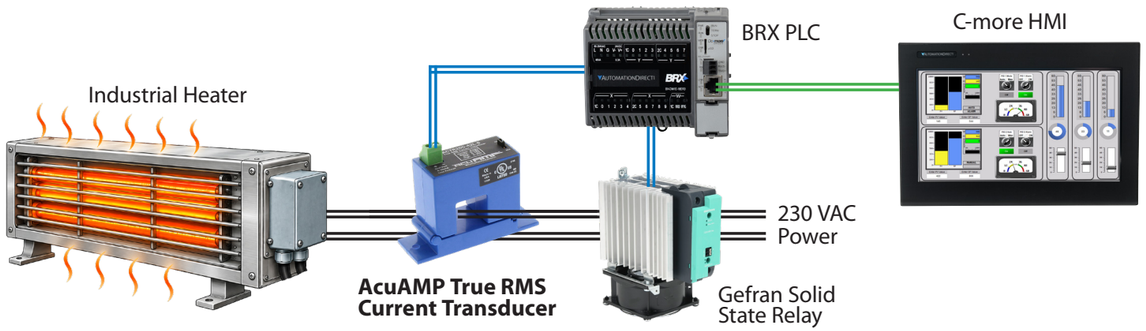
Heater Monitoring: Current monitoring can confirm heater operation and help detect failed heating elements or abnormal loads. Specialized transducers provide accurate monitoring of SCR-controlled heating systems.

APPLICATION EXAMPLES:

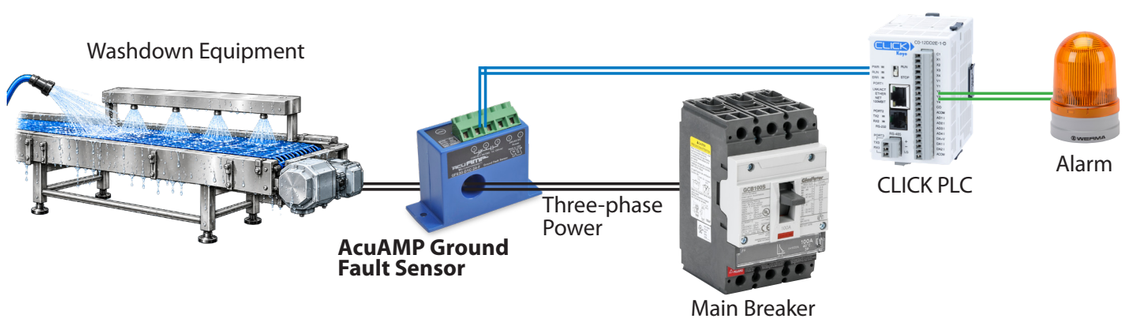
- **HVAC Fan Status Monitoring**: AcuAMP current switches detect current drawn by HVAC fan motors to confirm operation. A PLC can compare fan commands with motor status and flag unexpected shutdowns.



- **Industrial Heater Monitoring**: AcuAMP ACTR true RMS current transducers monitor heater loads, including SCR-controlled heating systems. A BRX PLC and C-more HMI provide current indication and alarms for failed elements or abnormal loads.



- **Ground Fault Monitoring**: AcuAMP ground fault sensors detect leakage current that may result from moisture intrusion or insulation damage. A CLICK PLC provides warning or control action when leakage exceeds the sensor's threshold.



HOW TO CHOOSE

Selecting the right current or voltage sensor for your automation project depends on your application's electrical characteristics, safety needs, and monitoring requirements. Use the following guidance to match product capabilities to your system's technical and operational demands.

1. Measurement Type: Determine whether you need to monitor AC or DC current or voltage. Select a sensor designed for the required measurement type, or an AC/DC sensor that can measure either.
2. Single vs. Three Phase: Determine whether your power system is single-phase or three-phase to select the appropriate sensor model.
3. Sensing Range: Match the sensor's input range (e.g., 5 A to 2000 A for current) to the maximum expected value in your circuit.
4. Output Type: Choose based on your control system's input—common outputs are voltage, current (4–20 mA), or relay contact closure.
5. Mounting Style: Consider if a split-core, solid-core, or panel-mount sensor best fits your enclosure and wiring constraints.
6. Response Time: Faster response sensors are needed for quickly changing loads or protective tripping applications.
7. Accuracy Requirements: Match the sensor's accuracy rating to your monitoring or control tolerance needs for precise measurements.
8. Isolation Needs: If electrical isolation is critical, select sensors with galvanic or optical isolation between input and output.



9. Environmental Conditions: Verify the transducer's operating temperature range and provide suitable enclosure protection against dust, moisture, and other environmental hazards.
10. Power Supply: Note the required supply voltage (e.g., 24 VDC, 120 VAC) and ensure compatibility with your panel or site power.
11. Switch vs. Transducer: Use a switch for simple status indication (over/under current), or a transducer for real-time analog measurement.
12. Physical Size: Evaluate available panel or DIN rail space for sensor body and wiring access during installation.
13. Integration Features: Look for options like adjustable thresholds, built-in time delays, or LED status indicators for easier setup and diagnostics.
14. Accessory Requirements: Identify if accessories such as DIN rail adapters or fuse blocks are needed to complete your installation.
15. Regulatory Compliance: Ensure sensors meet relevant safety and performance standards for your industry or local requirements.

Taking time to review these selection criteria ensures the sensor you choose will reliably serve your monitoring or automation needs. If uncertain, consult datasheets or seek technical support for specific applications and product compatibility.

CURRENT & VOLTAGE SENSORS OVERVIEW

Category	What it does	When to Choose This	Typical Applications	Key Selection Factors
1-Phase AC Current Transducers	Continuously measures AC current and converts it to an analog signal	Choose when the actual amount of current in a single AC circuit needs to be monitored by a PLC, meter, or data acquisition system	Motor load monitoring, heaters, pumps, energy monitoring, equipment diagnostics	Current range; waveform type; linear vs. True RMS sensing; output signal; fixed or split-core mounting
3-Phase AC Current Transducers	Continuously measures current on all three phases and provides separate analog outputs for each phase	Choose when all three currents in a 3-phase system need to be monitored with one device	3-phase motors, pumps, compressors, HVAC equipment, power monitoring	Current range; average responding vs. True RMS; output signal; conductor size
DC Current Transducers	Continuously measures DC current and converts it to an analog signal	Choose when the actual amount of DC current needs to be monitored by a PLC, data logger, or SCADA system	Battery systems, DC drives, solar equipment, charging systems, DC machinery	Current range; current direction; output signal; conductor size
AC Current Switches	Detects when AC current rises above or falls below a set level and changes a discrete output	Choose when the application only needs to know whether current is present or within an acceptable limit, rather than its exact value	Motor or heater proof-of-operation, belt or fan status, overload/underload detection, alarm signaling	Current range; trip point; adjustable vs. fixed setpoint; output type; time delay; fixed or split-core mounting
DC Current Switches	Monitors DC current and changes a discrete output when a selected current level is reached	Choose for DC equipment status or alarm monitoring when a continuous current measurement is not required	DC motors, battery systems, chargers, solar equipment, DC load monitoring	Current range; trip point; output type; switching requirements
AC Current Indicator	Provides a simple visual indication that AC current is flowing through a conductor	Choose when only a local visual indication of current flow is needed, with no PLC or control signal required	Control panels, fans, heaters, pumps, lighting circuits	Current range; conductor size; visibility and mounting location
Current Transducer & Switch Combination	Provides both a continuous analog current signal and a discrete alarm/status output from one device	Choose when the application needs both current measurement and a current-based alarm or status signal	Motor load monitoring with alarms, pump monitoring, process equipment, preventive maintenance	Current range; analog output; trip point; switch output; conductor size
Voltage Transducers	Continuously measures AC or DC voltage and converts it to an isolated analog signal	Choose when the actual voltage level needs to be sent to a PLC, data logger, or SCADA system	Power supply monitoring, battery systems, equipment diagnostics, line-voltage monitoring	AC vs. DC; voltage range; True RMS requirement for AC; output signal
3-Phase AC Voltage Transducers	Measures voltage on all three phases and provides individual phase outputs plus an average voltage output	Choose when all three voltages in a 3-phase system need to be monitored with one device	3-phase machinery, motor systems, power distribution, industrial power monitoring	Voltage range; Delta vs. Wye system; output signal; wiring configuration

PRODUCT LINEUP

1-PHASE AC CURRENT TRANSDUCERS

Series/Type	Best For	Key Attributes	Primary Benefit	Price Tier
ACT Series	General-purpose AC current monitoring	Average responding; fixed/split core; 0–10 VDC or 4–20 mA output	Cost-effective current measurement for standard sinusoidal AC loads	$
ACTR Series	VFDs, SCRs, and other nonlinear AC loads	True RMS; fixed/split/flexible core; 4–20 mA output	Accurately measures distorted as well as sinusoidal waveforms	$$$
ACTH Series	Burst-fired SCR-controlled heating loads	Adaptive True RMS; time-integration sensing; split core; 4–20 mA output	Accurately monitors pulsed current that conventional transducers may not measure well	$$$$





ACUAMP ACT SERIES
AC CURRENT TRANSDUCERS

STARTING AT $105.00

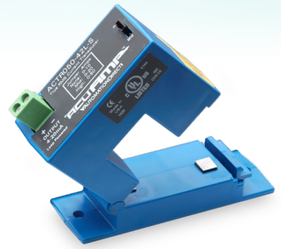
AcuAMP ACT series AC current transducers provide reliable current monitoring for sinusoidal AC loads, including constant-speed motors and ON/OFF equipment. They offer a simple, cost-effective solution for adding current measurement to industrial monitoring and control systems.

- Sensing ranges from 2 to 2000 A support current monitoring across a wide range of industrial equipment
- Selectable input ranges on some models reduce the need for multiple transducers
- 0–10 VDC self-powered or 4–20 mA loop-powered output options provide industry-standard analog signals for easy integration with control and monitoring systems
- 1% full-scale accuracy provides dependable current measurement for monitoring and control applications
- Fixed-core and split-core models simplify installation in new equipment and retrofit applications

ACUAMP ACTR SERIES
TRUE RMS AC CURRENT TRANSDUCERS

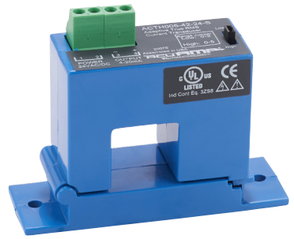
STARTING AT $178.00

AcuAMP ACTR series AC current transducers provide True RMS current measurement for industrial monitoring and control systems. They are ideal for applications with nonlinear loads or other operating conditions that require accurate measurement of complex AC waveforms.





- Sensing ranges from 2 to 2000 A accommodate a wide range of current-monitoring applications
- True RMS technology provides accurate current measurement on distorted waveforms, including VFD and phase-angle fired SCR outputs
- Selectable input ranges on some models reduce the need for multiple transducers
- 4–20 mA loop-powered output provides a proportional current signal for remote monitoring and control
- 1% full-scale accuracy provides dependable current measurement for monitoring and control applications
- Fixed-core and split-core models simplify installation in new equipment and retrofit applications



ACUAMP ACTH SERIES
ADAPTIVE TRUE RMS AC TRANSDUCERS

STARTING AT $227.00

AcuAMP ACTH series AC current transducers provide True RMS current measurement for zero-crossing burst-fired SCR-controlled loads. Designed especially for electric heating applications, they accurately monitor pulsed current that can be difficult to measure with conventional current transducers.

- Selectable sensing ranges from 2 to 50 A allow each model to accommodate multiple current levels
- Adaptive True RMS measurement provides accurate current monitoring of sinusoidal and pulsed waveforms
- Time-integration sensing produces an output proportional to RMS current even when SCR controllers supply power in one-cycle increments
- 4–20 mA output provides a proportional current signal for monitoring pulsed heating loads
- 1% full-scale accuracy provides dependable current measurement for monitoring and control applications
- Split-core design simplifies installation in new equipment and retrofit applications

3-PHASE AC CURRENT TRANSDUCERS

Series/Type	Best For	Key Attributes	Primary Benefit
3ACT/3ACTR Series	Three-phase motors, machines, and building systems	Average responding or True RMS; individual phase and average 4–20 mA outputs	Monitors overall current draw while helping identify phase load imbalances



ACUAMP 3ACT/3ACTR SERIES 3-PHASE AC CURRENT TRANSDUCERS

STARTING AT $396.00

AcuAMP 3ACT and 3ACTR series AC current transducers provide three-phase current monitoring for motors, machines, building systems, and other industrial loads. Separate outputs for each phase plus an average output make it easy to monitor overall current draw and identify load imbalances.

- Selectable sensing ranges from 10 to 200 A accommodate a wide range of three-phase current-monitoring applications
- Average-responding models provide reliable measurement of sinusoidal AC loads, while True RMS models accurately measure sinusoidal and distorted waveforms
- Four 4–20 mA outputs provide individual current signals for each phase plus an average for comprehensive three-phase monitoring
- 1% full-scale accuracy provides dependable current measurement for monitoring and control applications
- Large triple-aperture fixed core design allows for quick and easy installation

DC CURRENT TRANSDUCERS

Series/Type	Best For	Key Attributes	Primary Benefit
DCT Series	DC motors, heating loads, batteries, transportation, and renewable energy systems	Unidirectional or bidirectional sensing; 4–20 mA or ±10 VDC output; fixed/split core	Flexible DC current monitoring, including charging and discharging applications



ACUAMP DCT SERIES DC CURRENT TRANSDUCERS

STARTING AT $166.00

AcuAMP DCT series DC current transducers provide reliable current measurement for industrial DC power and equipment monitoring. Unidirectional and bidirectional options support applications ranging from DC motors and heating loads to battery charging, transportation, and renewable energy systems.

- Sensing ranges up to 750 A accommodate a wide range of applications
- Selectable input ranges on many models reduce the need for multiple transducers
- 4–20 mA or ±10 VDC output options accommodate a variety of control and monitoring systems
- Bidirectional models measure current in both directions, making them ideal for monitoring battery charging and discharging
- Fixed-core and split-core models simplify installation in new equipment and retrofit applications

AC CURRENT SWITCHES

Series/Type	Best For	Key Attributes	Primary Benefit	Price Tier
ACSN100 Series	Basic AC load status indication	Fixed 0.5 A trip point; self-powered; fixed core	Simple, low-cost Go/No-Go current detection	$
ACSN250 Series	Basic load status across a wider current range	Fixed trip points; self-powered; fixed/split core	Simple current detection with no adjustment required	$
ACS150 Series	General equipment and load monitoring	Adjustable trip point; NO/NC options; fixed/split core	Adjustable switching for overload, jam, or loss-of-load detection	$
ACS200 Series	Applications requiring more precise trip adjustment	Selectable ranges; coarse or fine setpoint adjustment; fixed/split core	Greater adjustment resolution for changing load conditions	$$
ACS035/ACS400 Series	High/low current limit monitoring	Two independent trip points; dual SPDT relay outputs	Detects operation above or below an acceptable current range	$$$$
ACS050/ACS200 Series	Applications requiring easy, precise setpoint setup	Adjustable trip point; digital setpoint display	Allows the trip point to be viewed and set before operation	$$
ACSL Series	Motors and loads with startup inrush	Presettable trip point; built-in startup delay; self-powered	Prevents motor inrush from triggering the output	$$
ACSX Series	Loads with startup current or temporary overloads	Adjustable trip point and time delay; fixed/split core	Adjustable delay helps prevent nuisance trips	$$

ACUAMP ACSN100 SERIES FIXED RANGE AC CURRENT SWITCHES

PRICED AT $42.00

AcuAMP ACSN100 series AC current sensing switches provide a simple, cost-effective way to confirm current flow to motors, heaters, pumps, lighting, and other AC-powered equipment. Their compact form factor is ideal for control panels and other space-constrained applications where basic load status indication is required.



- 0–100 A sensing range supports current detection across a wide range of AC-powered equipment
- Fixed 0.5 A trip point provides Go/No-Go current indication without adjustment or multiple conductor passes
- Normally open solid-state output provides a discrete signal for PLCs, relays, and control circuits
- Self-powered operation eliminates the need for a separate power supply
- Fixed-core housing slides directly onto the monitored conductor for quick installation



ACUAMP ACSN250 SERIES
SINGLE RANGE AC CURRENT SWITCHES

STARTING AT $64.00

AcuAMP ACSN250 series AC current sensing switches provide a simple, cost-effective way to confirm the operating status of motors, conveyors, heaters, lighting, and other AC-powered equipment.

- 0–250 A sensing range accommodates a wide range of current-monitoring requirements
- Fixed trip points provide simple Go/No-Go current indication with no adjustment required
- Normally open solid-state output provides a discrete signal for PLCs, relays, and control circuits
- Self-powered operation eliminates the need for a separate power supply
- Fixed-core models provide a compact solution for new installations, while split-core models simplify installation around existing conductors

ACUAMP ACS150 SERIES
SINGLE RANGE AC CURRENT SWITCHES

STARTING AT $86.00

AcuAMP ACS150 series AC current sensing switches provide adjustable current detection for monitoring equipment status and abnormal load conditions. They are well suited for motors, conveyors, heating circuits, and other equipment where changes in current can indicate overloads, jams, or loss of load.

- 1 to 150 A sensing range accommodates a wide range of current-monitoring requirements
- Adjustable trip points allow switching thresholds to be tailored to specific load conditions
- Normally open or normally closed solid-state output options provide discrete signals for PLCs, relays, and control circuits
- Status LED provides visual indication of trip-point and output status for simplified setup and troubleshooting
- Self-powered operation eliminates the need for a separate power supply
- Fixed-core models provide a compact solution for new installations, while split-core models simplify installation around existing conductors





ACUAMP ACS200 SERIES
MULTI RANGE AC CURRENT SWITCHES

STARTING AT $93.00

AcuAMP ACS200 series AC current sensing switches provide accurate detection of changing load conditions where more precise switching thresholds are needed. They are ideal for monitoring equipment operation and identifying conditions such as undercurrent, overcurrent, or changes in normal operating load.

- Selectable sensing ranges accommodate current monitoring up to 200 A while providing greater setpoint adjustment resolution
- Adjustable trip points with 4- or 15-turn potentiometers provide convenient coarse or fine setpoint adjustment to suit application requirements
- Normally open or normally closed solid-state output options provide discrete signals for PLCs, relays, and control circuits
- Status LED provides setpoint trip and output status indication for simplified setup and troubleshooting
- Self-powered operation eliminates the need for a separate power supply
- Fixed-core models provide a compact solution for new installations, while split-core models simplify installation around existing conductors

ACUAMP ACS035/ACS400 SERIES
AC CURRENT SWITCHES WITH TWO TRIP POINTS

PRICED AT $237.00

AcuAMP ACS035/ACS400 series AC current sensing switches monitor equipment current against independently adjustable high and low limits. They are ideal for applications where detecting operation outside an acceptable current range can identify conditions such as loss of load, jams, or overloads.

- 2 to 35 A and 25 to 400 A sensing ranges accommodate a wide range of current-monitoring requirements
- Two independently adjustable trip points allow separate setpoint configuration for each relay output
- Dual SPDT electromechanical relay outputs provide normally open and normally closed contacts for AC or DC control circuits
- Relay outputs can be wired in series or parallel to indicate operation within or outside the established current range
- Status LEDs provide trip-point and output status indication for simplified setup and troubleshooting
- Fixed-core design with a large sensing aperture accommodates bus bars and single or multiple conductors





ACUAMP ACS050/ACS200 SERIES
AC CURRENT SWITCHES WITH LED DISPLAY

PRICED AT $124.00

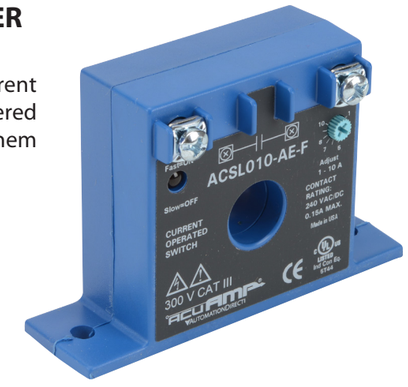
AcuAMP ACS050/ACS200 series AC current sensing switches provide adjustable current detection with a digital setpoint display for precise setup. The trip point can be configured before installation or before the monitored circuit is energized, simplifying setup and commissioning.

- 1 to 50 A and 4 to 200 A sensing ranges accommodate a wide range of current-monitoring requirements
- Single-turn potentiometer provides convenient trip-point adjustment, with the selected setpoint shown directly on the digital display
- Digital display flashes when monitored current exceeds the setpoint for clear operating-status indication
- Normally open solid-state output provides a discrete signal for control and monitoring circuits
- 1% accuracy provides precise current detection for monitoring and control applications
- Fixed-core design with a 0.75-inch sensing aperture accommodates a variety of conductor sizes

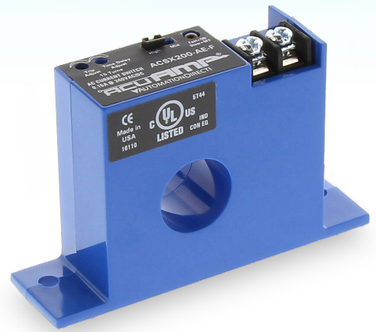
ACUAMP ACSL SERIES
AC CURRENT SWITCHES WITH SINGLE-TURN POTENTIOMETER

STARTING AT $94.00

AcuAMP ACSL series AC current sensing switches provide adjustable current detection for monitoring motors, heating loads, lighting, and other AC-powered equipment. Preset trip-point adjustment and a built-in startup delay make them well suited for equipment status and load monitoring applications.



- 0 to 150 A sensing range with adjustable setpoints from 1 to 50 A accommodates a wide range of equipment-monitoring requirements
- Single-turn potentiometer with labeled setpoint scale allows trip points to be preset without operating the monitored load
- 2-second startup delay prevents motor inrush current from triggering the output during initial energization
- Normally open solid-state output provides a discrete signal for PLCs, relays, and control circuits
- Status LED provides setpoint trip and output status indication for simplified setup and troubleshooting
- Self-powered operation eliminates the need for a separate power supply
- Fixed-core models provide a compact solution for new installations, while split-core models simplify installation around existing conductors



ACUAMP ACSX SERIES
MULTI RANGE AC CURRENT SWITCHES WITH TIME DELAY

STARTING AT $109.00

AcuAMP ACSX series AC current sensing switches provide reliable current detection with an adjustable time delay for motor and equipment monitoring applications. They are well suited for loads with high starting current or temporary overload conditions that could otherwise cause nuisance trips.

- Selectable sensing ranges up to 200 A accommodate a wide range of current-monitoring requirements
- Adjustable trip points with 4- or 15-turn potentiometers provide convenient coarse or fine setpoint adjustment to suit application requirements
- Field-adjustable 0.12 to 15 second time delay prevents nuisance trips caused by startup inrush or temporary overcurrent conditions
- Normally open or normally closed isolated solid-state output options provide discrete signals for motor control and monitoring systems
- Constant hysteresis and linear setpoint response provide accurate, repeatable switching
- Status LED provides setpoint trip and output status indication for simplified setup and troubleshooting
- Self-powered operation eliminates the need for a separate power supply
- Fixed-core models provide a compact solution for new installations, while split-core models simplify installation around existing conductors

DC CURRENT SWITCHES

Series/Type	Best For	Key Attributes	Primary Benefit
DCS100 Series	DC power supplies, battery systems, welders, and other DC equipment	Selectable ranges; adjustable trip point; solid-state or relay output; polarity-independent sensing	Provides adjustable DC load monitoring regardless of current direction

ACUAMP DCS100 SERIES
DC CURRENT SWITCHES

STARTING AT $124.00

AcuAMP DCS100 series DC current sensing switches monitor current in DC-powered systems and provide an adjustable trip point for detecting changes in equipment operation. They are suited for power supplies, battery systems, welders, and other DC equipment where current variations can indicate operating problems.



- Jumper-selectable sensing ranges up to 100 A accommodate a wide range of DC current-monitoring applications
- Adjustable trip points with an 11-turn potentiometer provide fine setpoint adjustment for precise switching
- Normally open solid-state or SPDT relay output options support a variety of control and monitoring requirements
- Polarity-independent sensing allows positive or negative DC current to be monitored regardless of conductor direction
- 5% adaptive hysteresis provides consistent switching close to the selected setpoint
- Fixed-core design with a 0.75-inch sensing aperture accommodates a variety of conductor sizes

AC CURRENT INDICATOR

Series/Type	Best For	Key Attributes	Primary Benefit
ACL1	Simple local indication of AC equipment operation	Flashing LED; fixed turn-on point; self-powered; compact fixed core	Provides an immediate visual indication that current is flowing



ACUAMP ACL1 AC CURRENT INDICATOR

PRICED AT $23.00

The AcuAMP ACL1 AC current indicator provides a simple, cost-effective way to visually confirm current flow to motors, heaters, pumps, lighting, and other AC-powered quipment. Its compact design is ideal for control panels and other applications where local indication of load operation is needed.

- 0.5 to 100 A indicating range supports a wide range of AC-powered equipment
- Fixed 0.5 A turn-on point provides indication without adjustment or multiple conductor passes
- High-visibility flashing red LED provides clear indication from multiple viewing angles and in daylight conditions
- Self-powered operation eliminates the need for a separate power supply
- Compact fixed-core design slides directly onto the monitored conductor for quick installation

CURRENT TRANSDUCER & SWITCH COMBINATION

Series/Type	Best For	Key Attributes	Primary Benefit
ACTS Series	Applications needing both continuous current monitoring and switching	4–20 mA analog output; adjustable trip point; discrete output; digital setpoint display	Combines current measurement and load-status/ alarm switching in one device



ACUAMP ACTS SERIES CURRENT TRANSDUCER AND SWITCH COMBINATION

PRICED AT $165.00

AcuAMP ACTS series AC current transducer/switches combine continuous current measurement and adjustable current switching in a single device. The analog output supports remote monitoring while the switched output can provide local control or alarm signaling for applications such as pumps, conveyors, and other AC-powered equipment.

- 0 to 50 A and 0 to 200 A sensing ranges accommodate a wide range of applications
- 4–20 mA analog output provides a proportional current signal for continuous remote monitoring
- Adjustable trip points from 1 to 200 A allow switching thresholds to be tailored to specific load conditions
- Normally open solid-state output provides a discrete signal for control, alarm, or equipment interlocking
- Digital setpoint display and single-turn potentiometer offer easy setpoint adjustment
- Display flashes when the current exceeds the setpoint for clear status indication
- Fixed-core design with a 0.75-inch sensing aperture accommodates a variety of conductor sizes

VOLTAGE TRANSDUCERS

Series/Type	Best For	Key Attributes	Primary Benefit	Price Tier
VACT Series	Single-phase AC power monitoring	True RMS AC measurement; 4–20 mA output	Accurately monitors sinusoidal and nonsinusoidal AC voltage	$
VADT Series	Applications requiring AC or DC voltage monitoring	AC/DC measurement; True RMS AC; wide frequency range; 4–20 mA output	One series handles a broad range of AC and DC monitoring applications	$
VDCT Series	DC power and equipment monitoring	DC voltage measurement; 4–20 mA output	Straightforward monitoring of common industrial DC systems	$



ACUAMP VACT SERIES SINGLE-PHASE AC VOLTAGE TRANSDUCERS

PRICED AT $190.00

AcuAMP VACT series AC voltage transducers provide True RMS voltage measurement for single-phase industrial power monitoring applications. They accurately monitor sinusoidal and nonsinusoidal waveforms, making them suitable for detecting voltage conditions that can affect motors, drives, and other electrical equipment.

- 0 to 150 VAC and 0 to 500 VAC sensing ranges support common industrial voltages from 120 to 480 VAC
- True RMS technology provides accurate measurement of nonsinusoidal waveforms, ncluding VFD and SCR outputs
- 4–20 mA loop-powered output provides an industry-standard analog signal for PLCs, data loggers, and SCADA systems
- Less than 1% accuracy provides dependable voltage measurement for monitoring applications

ACUAMP VADT SERIES AC/DC VOLTAGE TRANSDUCERS

PRICED AT $190.00

AcuAMP VADT series AC/DC voltage transducers provide versatile voltage monitoring for AC- and DC-powered systems. True RMS measurement and a wide frequency range support sinusoidal and nonsinusoidal AC waveforms, while multiple sensing ranges accommodate common industrial AC and DC voltages.

- 0 to 15, 0 to 50, 0 to 150, and 0 to 500 VAC/VDC sensing ranges accommodate a wide range of industrial power-monitoring applications
- True RMS technology provides accurate measurement of nonsinusoidal AC waveforms, including VFD outputs
- 0 to 5 kHz frequency range supports voltage monitoring in variable-frequency and other challenging applications
- 4–20 mA output provides a proportional voltage signal for control and monitoring applications
- Less than 1% full-scale accuracy provides dependable voltage measurement for monitoring applications





ACUAMP VDCT SERIES
DC VOLTAGE TRANSDUCERS

PRICED AT $190.00

AcuAMP VDCT series DC voltage transducers provide reliable voltage measurement for DC-powered equipment and systems. They are suited for monitoring under- and overvoltage conditions that can indicate power problems or potentially damaging equipment operating conditions.

- 0 to 15 VDC and 0 to 50 VDC sensing ranges support common 12, 24, 36, and 48 VDC systems
- 4–20 mA output provides a proportional voltage signal for monitoring DC power systems
- Less than 1% accuracy provides dependable voltage measurement for monitoring applications

3-PHASE AC VOLTAGE TRANSDUCERS

Series/Type	Best For	Key Attributes	Primary Benefit
3VACT Series	Three-phase industrial power monitoring	True RMS; Delta/Wye options; individual phase and average outputs; phase-loss detection	Provides comprehensive three-phase voltage and phase-condition monitoring



ACUAMP 3VACT SERIES
3-PHASE AC VOLTAGE TRANSDUCERS

PRICED AT $687.00

AcuAMP 3VACT series AC voltage transducers provide True RMS voltage monitoring for three-phase power systems. Line-to-line and line-to-neutral models support Delta and Wye configurations for monitoring supply voltage and phase conditions in industrial power systems.

- 0 to 150, 0 to 300, and 0 to 600 VAC sensing ranges accommodate common three-phase industrial power systems
- True RMS technology provides accurate measurement of sinusoidal and nonsinusoidal waveforms
- Four 4–20 mA outputs provide individual voltage signals for each phase plus an average for comprehensive three-phase monitoring
- Built-in phase-loss detection provides a normally open relay output when voltage falls below the specified threshold

GROUND FAULT SENSORS OVERVIEW

Category	What it does	When to Choose This	Typical Applications	Key Selection Factors
AC Ground Fault Sensors	Detects AC leakage current and provides a relay output at the selected trip point	For straightforward ground fault detection in AC systems	Motors, pumps, heaters, machinery, electrical panels	Trip point; auto/manual reset; relay output; sensing aperture
AC/DC Residual Current Monitors	Detects AC/DC leakage and insulation faults with separate warning and alarm outputs	For AC/DC fault monitoring or when adjustable warning and alarm levels are needed	Industrial machinery, drives, power conversion equipment, battery/DC systems	Residual current range; warning/alarm settings; time delays; operating voltage; transformer size

AC GROUND FAULT SENSORS

Series/Type	Best For	Key Attributes	Primary Benefit
GFS/GFSL Series	Ground fault detection in single- and three-phase AC systems	Selectable trip points; automatic/manual reset options; relay output	Provides sensitive AC leakage detection for personnel and equipment protection



ACUAMP GFS/GFSL SERIES
AC GROUND FAULT SENSORS

STARTING AT $193.00

AcuAMP GFS/GFSL series AC ground fault sensors detect current leakage to ground in single- and three-phase AC systems. They provide sensitive ground fault detection for personnel and equipment protection applications, including motors, pumps, heating systems, and other industrial equipment.

- Jumper-selectable 5, 10, or 30 mA trip points accommodate personnel and equipment protection requirements
- Automatic-reset models reset the output when the ground fault clears, while manual-reset models latch the output until externally reset
- SPST or SPDT relay output options support alarm, control, and shunt-trip breaker applications
- Normally energized models can detect both ground faults and loss of control power
- 0.75-inch and 1.76-inch sensing apertures accommodate different conductor sizes and installation requirements

AC/DC RESIDUAL CURRENT MONITORS

Series/Type	Best For	Key Attributes	Primary Benefit
RN5883 Series	Early detection of AC/DC leakage and insulation faults	Adjustable warning/alarm thresholds; time delays; 0–10 VDC output; LED bar graph	Provides early fault indication to help prevent equipment damage and unplanned downtime

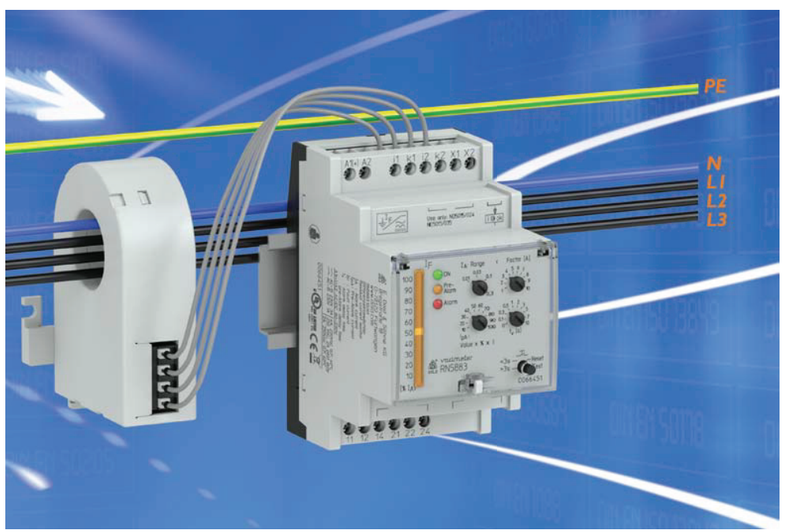


DOLD RN5883 SERIES AC/DC RESIDUAL CURRENT MONITORS

PRICED AT $478.00

Dold RN5883 series AC/DC residual current monitors work with external ND5015 series residual current transformers (sold separately) to detect insulation faults, leakage currents, and broken conductors. User-defined warning and alarm thresholds provide early indication of developing faults to help prevent equipment damage and unplanned downtime.

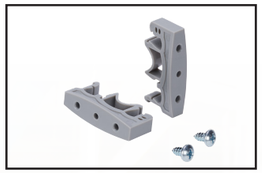
- Selectable measuring ranges from 10 mA to 3 A accommodate a wide range of residual current monitoring requirements
- User-configurable warning and alarm thresholds with separate SPDT relay outputs provide early fault indication and alarm signaling
- Adjustable time delays and manual reset options allow alarm behavior to be tailored to application requirements
- 0–10 VDC output provides a proportional signal for continuous residual current monitoring
- LED bar graph provides real-time visual indication of measured residual current relative to the selected alarm threshold
- Latching rotary switches simplify configuration and help prevent unintended setting changes



CURRENT AND VOLTAGE SENSOR ACCESSORIES

SPARE PARTS & ACCESSORIES

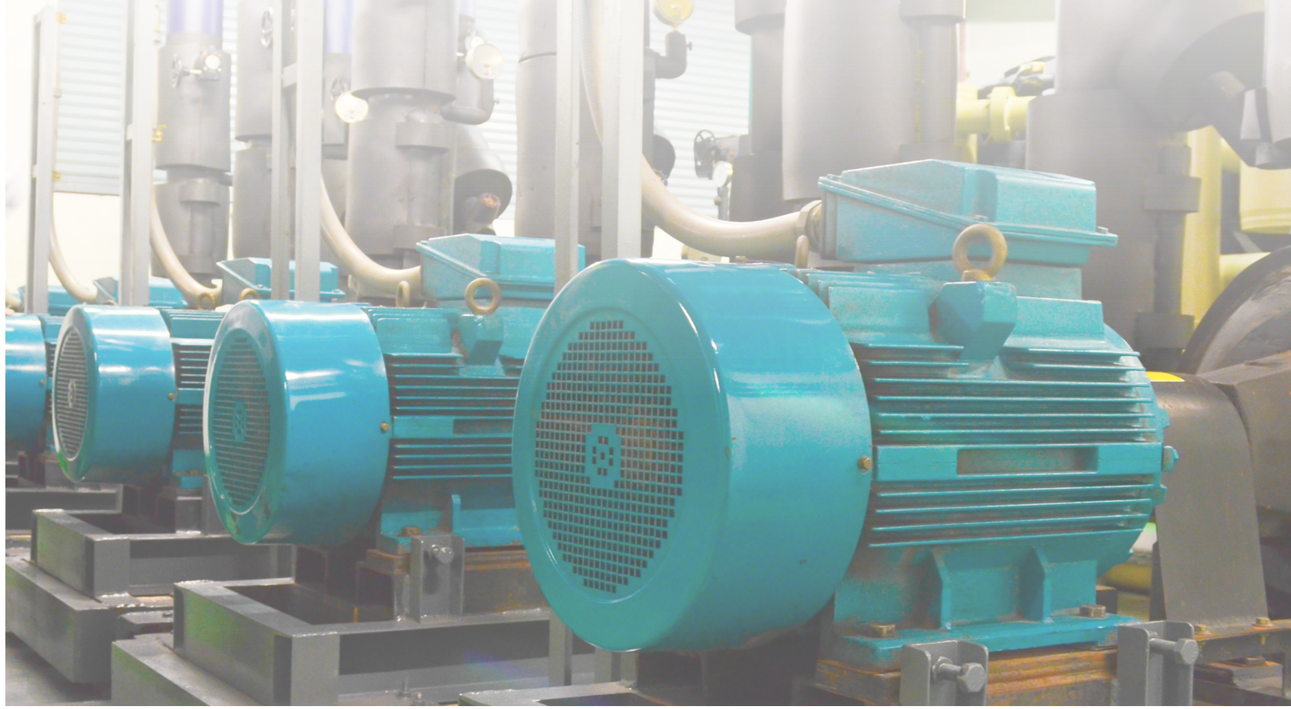
Accessories for current and voltage sensors include brackets for converting select panel-mount sensors to standard 35mm DIN-rail mounting and Hall effect AC/DC current transformers for DOLD RN5883 series residual current monitors.



AcuAMP DIN-rail adapters



Dold ND5015 series AC/DC Hall effect current transformers



This buying guide was drafted with AI assistance and edited by the AutomationDirect Technical Marketing Team