

ATS SERIES

AC Current Transducer/Switch with Digital Setpoint Display

ATS Series AC Current Sensors combine a current operated switch and transducer into a single package. The FL model features a digital display that gives visual indication of the setpoint for greater accuracy. The sensor provides a solid-state contact which will change state when the current exceeds an adjustable level or falls below the normal running current. This means reduced installation time, plus the option to have local control of a starter coil while at the same time sending the analog signal back to a controller housed in a separate cabinet.



Applications

Electronic Proof of Operation

- Current operated switches eliminate the need for multiple pipe or duct penetrations and are more reliable than electromechanical pressure or flow switches.

Conveyors

- Detects jams and overloads.
- Interlocks multiple conveyor sections.

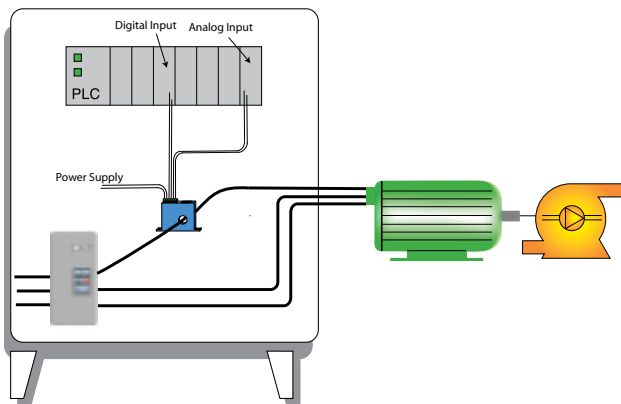
Pump Control

- Provides signal to measure current and shuts down the pump if the current rises over the setpoint.

Cooling Towers

- Analog monitors time of use and contact opens if a filter clogs.

Pump Jam & Suction Loss Protection



Features

Solid-State Output

- N.O. or N.C. solid-state switch for control circuits up to 240 VAC.
- Compatible with most automation systems.

Externally Powered

- Allows for higher accuracy.

Easily Adjustable and Precise Setpoint

- Speeds startup.

Analog Output

- Measure the current used at all times.

LED Display

- Provides quick visual indication of where the contact changes. Display flashes on and off when current has exceeded the setpoint.
- Easiest and most accurate setpoint adjustment available.

Built-in Mounting Feet

- Simple, two-screw panel mounting or attach with optional DIN rail brackets.*

Designed for UL/cUL and CE Approval

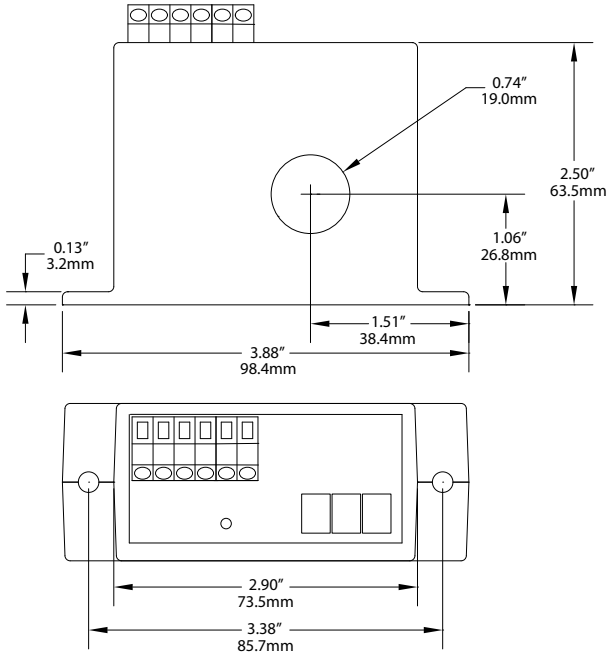
- Accepted worldwide.

*For information on the DIN rail accessories kit, see page 122.

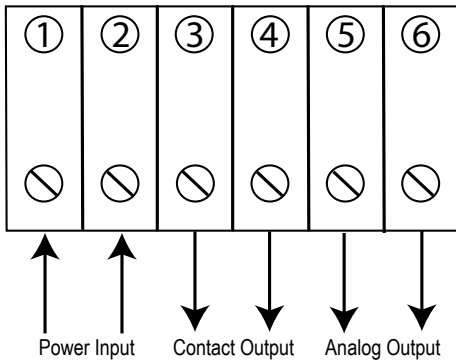
- For additional Application Examples, go to www.nktechnologies.com/applications

OEMs Test & Evaluation Units for OEMs
Free program expedites evaluation process. See page 1 for details.

AC Current Transducer Dimensions



AC Current Transducer Connections



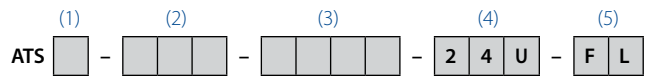
Display shows the trip point, and flashes when AC current exceeds that value. A trip point of 15 A is displayed as 015.

AC Current Transducer Specifications

Power Supply	24 VDC (18–30 V)
Power Consumption	40–70 mA
Input Range	<ul style="list-style-type: none"> • ATS1: 0–50 A • ATS2: 0–200 A
Output Signal	<ul style="list-style-type: none"> • 4–20 mA 500 Ω max. • 0–5 or 0–10 VDC: 5 KΩ max.
Output Limit	5/10 VDC; 20 mA
Output Impedance	<ul style="list-style-type: none"> • 4–20 mA 500 Ω max. • 0–5 or 0–10 VDC: 5 KΩ max.
Accuracy	+/-1.0% FS
Analog Response Time	250ms to 90% step change
Switch Response Time	<ul style="list-style-type: none"> • <500ms for 5% over set point • <200ms for 50% over set point • <150ms for 100% over set point
Hysteresis	5%
Frequency Range	40–400 Hz
Setpoint Range	<ul style="list-style-type: none"> • ATS1: 1–50 A (adjustable) • ATS2: 4–200 A (adjustable)
Output	Isolated solid-state relay
Output Rating	1.0 A @ 240 VAC
Isolation Voltage	UL listed to 1270 VAC, tested to 5 KV
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	Designed for UL/cUL and CE approval

AC Current Transducer Ordering Information

Sample Model Number: ATS1-420-NOAC-24U-FL
Adjustable AC current operated switch/transducer, normally open, solid-core case.



(1) Range

1	0–50 Analog, 1–50 switch adjustment
2	0–200 Analog, 4–200 switch adjustment

(2) Analog Signal Type

420	4–20 mA (powered by sensor)
005	0–5 VDC
010	0–10 VDC

(3) Output Contact

NOAC	Normally Open, closes on current rise, AC control only
NCAC	Normally Closed, opens on current rise, AC control only

(4) Power Supply

24U	24 VAC or DC
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(5) Case Style

FL	Solid-core
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