

# ACUAMP™ Switches and Transducers

## Overview

The ACUAMP series is a family of high performance current sensors offering outstanding features, flexibility and durability at an incredible price. Choose from a wide selection of Current Transducer and Current Switch models, all designed in a rugged industry standard feed-through package, consisting of both fixed core and split core models. Each model

has multiple input ranges (set by movable jumpers) for maximum flexibility across many current ratings. The current transducer output choices include 4-20 mA, 24 VDC loop-powered and 0-10 volt self-powered analog outputs. The Current Switch outputs are isolated solid state switches and are available in Normally Open configurations. A unit featuring

field adjustable time delay is also offered in the Current Switch series. All models are panel-mountable as standard, and convenient DIN-rail adapter accessories are available. Use the selection guide to find the best sensor module for your requirements.



ACUAMP Specifications by Model Type					
Specifications	Transducer	Transducer with True RMS	Switch	Switch	Switch
Model	ACT	ACTR	ACS150	ACS200	ACSX
<b>Input Range</b>	Jumper selectable: ACT005: 0 to 2 A, 0 to 5 A ACT050: 0 to 10 A, 0 to 20 A, 0 to 50 A ACT200: 0 to 100 A, 0 to 150 A, 0 to 200 A	Jumper selectable: ACTR005: 0 to 2 A, 0 to 5 A ACTR050: 0 to 10 A, 0 to 20 A, 0 to 50 A ACTR200: 0 to 100 A, 0 to 150 A, 0 to 200 A	-F core: 1 to 150 A -S core: 1.75 to 150 A	Jumper Selectable: -F core: 1 to 6 A, 6 to 40 A, 40 to 175 A -S core: 1.75 to 6 A, 6 to 40 A, 40 to 200 A	Jumper Selectable: -F core: 1 to 12 A, 12 to 55 A, 55 to 175 A -S core: 2 to 12 A, 12 to 55 A, 55 to 200 A
<b>Output Range</b>	-10 models: 0 - 10 VDC -42L models: 4 - 20 mA, loop-powered	4 - 20 mA, loop-powered true RMS	0.15 A @ 240 VAC or VDC	-AA Model: 1A @ 240 VAC -AD Model: 0.15A @ 30 VDC	-AA Model: 1A @ 240 VAC -AE Model: 0.15A @ 240 VAC/VDC
<b>Frequency Range</b>	-10 models: 50 to 60 Hz sinusoidal waveforms only -42L models: 20 - 100 Hz	10 to 400 Hz non-sinusoidal waveforms	6 to 100 Hz	6 to 100 Hz	50 to 100 Hz
<b>Response Time</b>	-10 models: 100 ms -42 models: 300 ms	600 ms	120 ms	40 to 120 ms	Field adjustable time delay: 0.2 to 15 seconds
<b>Sensing Aperture</b>	-F core: 0.75" (19mm) dia. -S core: 0.85" (21.6mm) sq.	-F core: 0.75" (19mm) dia. -S core: 0.85" (21.6mm) sq.	-F core: 0.75" (19mm) dia. -S core: 0.85" (21.6mm) sq.	-F core: 0.75" (19mm) dia. -S core: 0.85" (21.6mm) sq.	-F core: 0.75" (19mm) dia. -S core: 0.85" (21.6mm) sq.



The ACSX series high-performance current-operated switch has a field-adjustable time delay feature that minimizes nuisance trips during start-up and operation. These switches are designed for motor status applications where setpoint accuracy and repeatability are critical and offer a linear setpoint characteristic and constant hysteresis.

## Applications

### Motor Protection

- Serves as an electronic proof-of-operation; detects current draw changes in motors when they encounter problems such as pumps running dry or impending bearing failure
- Non-intrusive; less expensive to install than differential pressure flow sensors or thermal switches
- Much quicker response time than Class 10 overload relays

### High Inrush or Temporary Overload Current

- Adjustable start-up/delay timer allows 0-15 second delay to eliminate nuisance trips from high inrush or short overload conditions

## Features

Standard features include self-powering, jumper-selectable ranges and a choice of outputs and core styles

- Five-year warranty
- Adjustable start-up/delay timer is field-adjustable from 0.2 to 15 seconds to eliminate nuisance alarms caused by start-up inrush or temporary overcurrent conditions.
- Choice of N.O. AC or AC/DC outputs: Contact ratings of 1.0A @ 240 VAC or universal outputs of 0.15A @ 240 VAC/VDC for use with most standard motor control systems.
- Improved ease of installation and use:
  - 1.0A rating eliminates need for time delay relay
  - Self-powered, split-core models simplify installation
  - Status LED provides visual indication of setpoint trip and contact action
- Industrial grade performance - constant hysteresis and linear setpoint response for greater accuracy

## Agency Approvals

UL, cUL Listed  
CE approval pending

ACSX Current Operated Switches				
Part Number	Description	Pcs/Pkg	Wt/lb	Price
ACSX200-AA-F	N.O. AC adjustable current switch, fixed core	1	0.30	<--->
ACSX200-AA-S	N.O. AC adjustable current switch, split core	1	0.40	<--->
ACSX200-AE-F	N.O. AC/DC adjustable current switch, fixed core	1	0.30	<--->
ACSX200-AE-S	N.O. AC/DC adjustable current switch, split core	1	0.40	<--->
Accessories				
DRA-2	DIN rail adapters, 1.69"x0.39"x0.75" (43x10x19 mm)	2	0.40	<--->

ACSX Series Specifications	
Power Supply	None - Self-powered
Output	Isolated solid-state switch
Output Rating	N.O. AC: 1A @ 240 VAC N.O. AC/DC: 0.15 A @ 240 VAC/VDC
Response Time	Adjustable 0.2 to 15 seconds
Off State Leakage	< 10 $\mu$ A
Input Ranges	Jumper Selectable: Fixed core: 1 to 175 A Split core: 2 to 200 A
Hysteresis	5% constant
Overload (1 second duration)	2 to 12 A Range: 600 A; 12 to 55 A Range: 800 A; 50 to 200 A Range: 1200 A
Isolation Voltage	UL listed to 1,270VAC. Tested to 5,000 VAC (1 minute max)
Frequency Range	50 to 100 Hz
Case	UL 94V-0 flammability rated
Environmental	Temperature
	Humidity
Agency Listings	UL listed 508, UL file E222847, CE approval pending

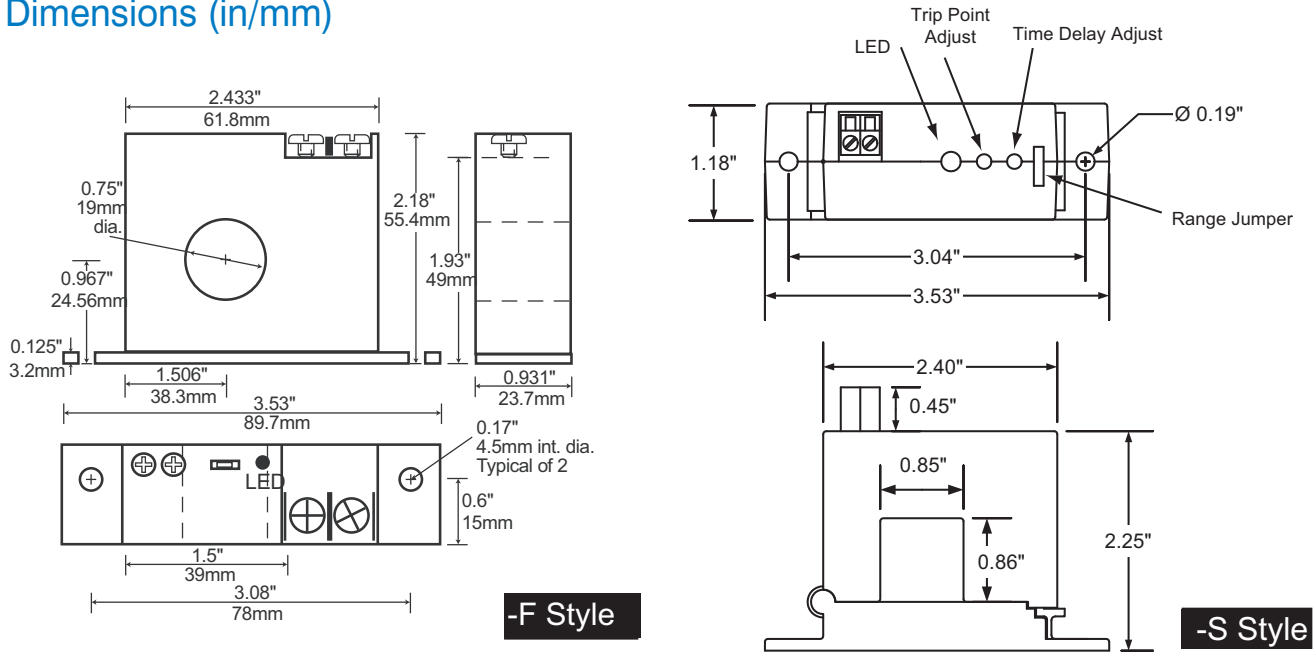
Maximum Input Ranges				
Type	Range - Adjustable	Maximum Input Amps		
		Continuous	6 Sec max	1 Sec max
Fixed Core	1-175 A	150	400	1000
Split Core	2-200 A	150	400	1000

ACSX200 Minimum Load/MTBF		
Part Number	Minimum Load Operating	MTBF (Mean Time Between Failure) x 10 <sup>6</sup>
ACSX200-AE-F	**	4.33 hours
ACSX200-AE-S	**	4.33 hours
ACSX200-AA-F	20 mA	4.29 hours
ACSX200-AA-S	20 mA	4.29 hours

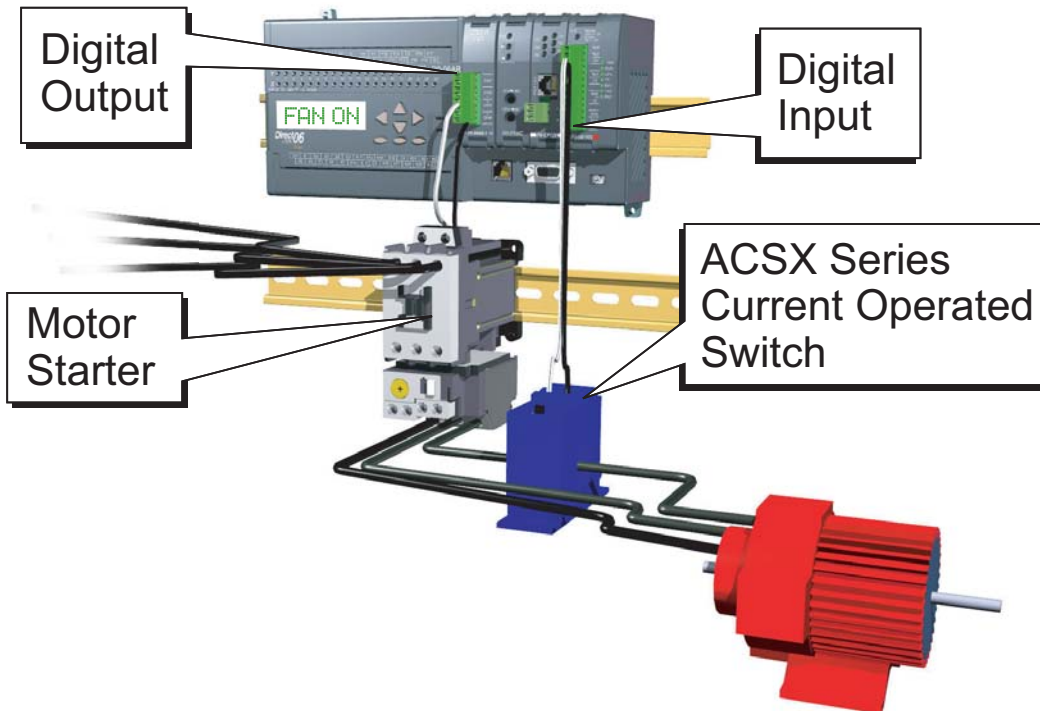
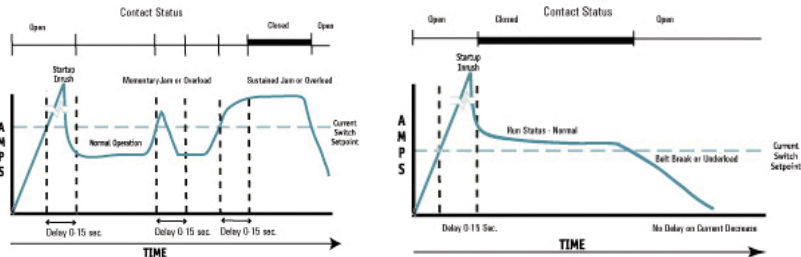
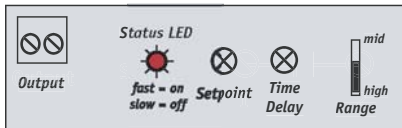
\*\* The AC/DC switch output has no specified minimum load required to operate the output. There is a maximum resistance of 5 ohms across the output when the switch is "on."

# ACUAMP™ ACSX Series Switches

## Dimensions (in/mm)



## Connections



- PLC Overview
- DL05/06 PLC
- DL105 PLC
- DL205 PLC
- DL305 PLC
- DL405 PLC
- Field I/O
- Software
- C-more HMIs
- Other HMI
- AC Drives
- Motors
- Steppers/Servos
- Motor Controls
- Proximity Sensors
- Photo Sensors
- Limit Switches
- Encoders
- Current Sensors
- Pushbuttons/Lights
- Process
- Relays/Timers
- Comm.
- TB's & Wiring
- Power
- Circuit Protection
- Enclosures
- Appendix
- Part Index