Current Sensing Switches

AS3 SERIES
Current Sensing Switches

AS3 Series Current Sensing Switches provide the same dependable indication of status offered by the AS1, but with the added benefit of increased setpoint accuracy. A choice of three, jumper-selectable input ranges allows the AS3 to be tailored to an application, providing more precise control through improved setpoint resolution. Self-powering, isolated solid-state outputs, 1–6 A, 6–40 A and 40–200 A input ranges, and a choice of split- or solid-core case are standard.

Current Sensing Switch Applications

Electronic Proof of Flow
- No need for pipe or duct penetrations.
- More reliable than electromechanical pressure or flow switches.

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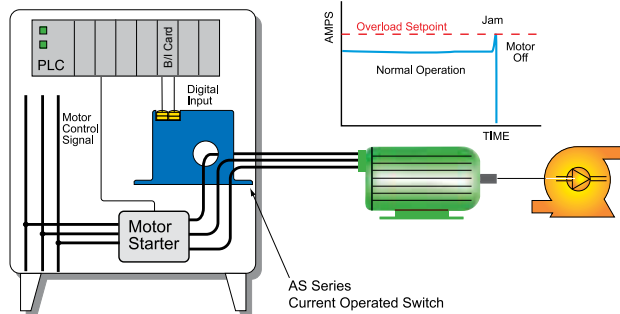- Detects jams and overloads.
- Interlocks multiple conveyor sections.

Lighting Circuits
- Easier to install and more accurate than photocells.

Electrical Heaters
- Faster response than temperature sensors.

Pump Jam & Suction Loss Protection

AS Series Current Operated Switch

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

Current Sensing Switch Features

Choice of N.O. or N.C. Solid-state Outputs
- 1 A @ 240 VAC, 0.15 A @ 30 VDC.
- 15 A @ 120 VAC (-15 model).
- 3 A @ 120 VAC (-03 model).

Self-powered
- Cuts installation and operating costs.

Easily Adjustable Setpoint
- Speeds startup.

Solid- or Split-core Case
- Choose the appropriate version for each installation.

LED Indication
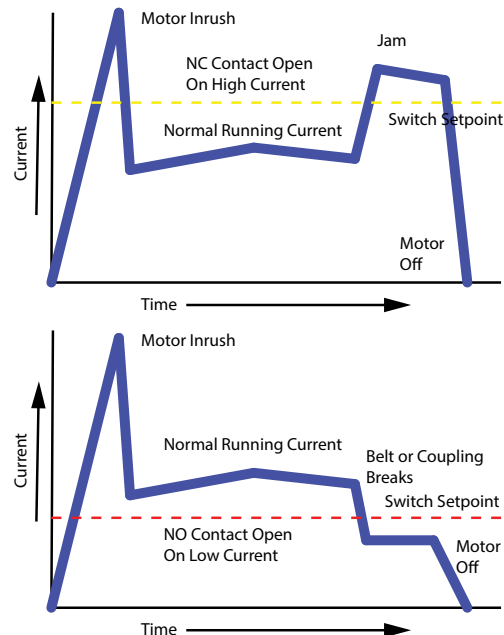- Provides quick visual indiction of contact status.

Built-in Mounting Feet
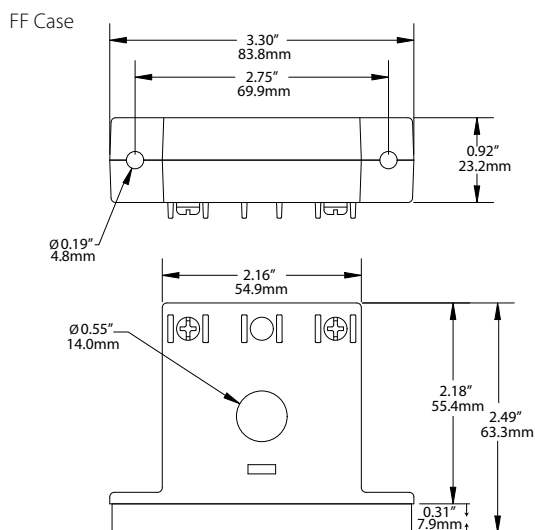- Provides the secure installation inspectors require.

UL/cUL and CE Approved
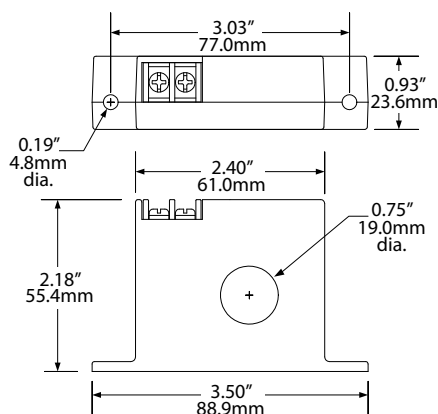- Accepted worldwide.

AS1, AS3, ASX, ASXP Series Sample Output

NK Technologies

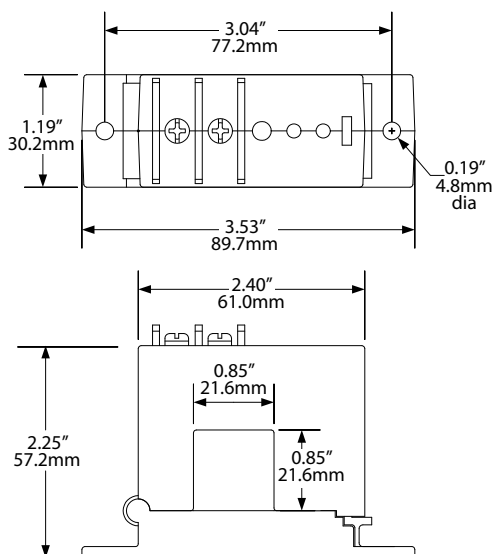3511 Charter Park Drive • San Jose, CA 95136
800.959.4014 • www.nktechnologies.com • sales@nktechnologies.com

Current Sensing Switch Dimensions

FF Case

Ø 0.19"
4.8mm

Ø 0.55"
14.0mm

Note: The bottom 0.31" applies to -15 option only.

FT Case

0.19"
4.8mm
dia.

0.75"
19.0mm
dia.

SP Case

0.19"
4.8mm
dia

Current Sensing Switch Connections

Typical of NOAC and NOAC-15

NCAC and NCAC-15 Similar

Typical of AS3-CCDC

Typical of AS3-AADC
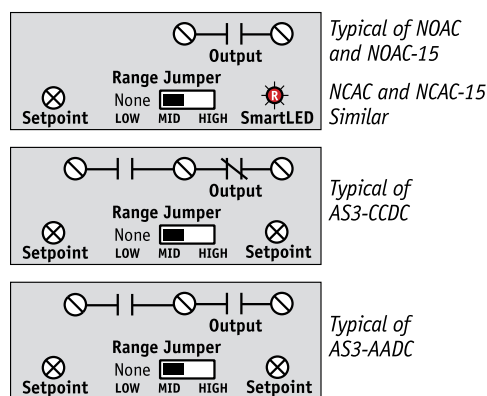
Note: Terminals are #6 screws. DC contacts are polarity sensitive.

Current Sensing Switch Specifications

Power Supply	None, self-powered
Setpoint Range	• Solid-core: 1–6, 6–40 & 40–175 A (adjustable) • Split-core: 1.75–6, 6–40 & 40–200 A (adjustable)
Output Description	Isolated solid-state relay
Output Rating	• 1.0 A @ 240 VAC (standard AC units) • 0.15 A @ 30 VDC (standard DC & multi-pole units) • 3 A @ 120 VAC (-03 option) • 15 A @ 120 VAC, 10 A @ 240 VAC (-15 option)
Off-state Leakage	• NOAC: <10 µA • NODC: <10 µA • NCAC: 2.5 mA • NCDC: 1.4 mA • AADC: <10 µA • CCDC: 0.3 mA (N.C. Terminal)
Response Time	0.40 to 2.5 sec. max.
Time Delay	None
Hysteresis	5%
Overload	RANGE 6 SEC. 1 SEC. • 1–6 A • 400 A • 600 A • 6–40 A • 500 A • 800 A • 40–175 A • 800 A • 1200 A
Isolation Voltage	UL listed to 1480 VAC
Frequency Range	6–100 Hz
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing 03/15 versions 40°C ambient
Listings	UL/cUL, CE

Current Sensing Switches

Current Sensing Switch Ordering Information

Sample Model Number: AS3-NOAC-FF-NL

Adjustable AC current sensing switch, normally open AC contacts, solid-core case, without indicating LED. (DIN rail adapters are included)

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          (1)           (2)       (3)
AS3 – [ ][ ][ ][ ] – [ ][ ] – [ ][ ]
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(1) Output Rating

NOAC	Normally Open, 1 A @ 240 VAC
NCAC	Normally Closed, 1 A @ 240 VAC
NODC	Normally Open, 0.15 A @ 30 VDC
NCDC	Normally Closed, 0.15 A @ 30 VDC
AADC	Dual, Normally Open, 30 VDC (-FF only)
CCDC	1 N.O., 1 N.C. Solid State, 0.15 A @ 30 VDC (-FF only)

(2) Case Style

FF	Solid-core, front terminal
SP	Split-core
FT	Solid-core, top terminal

(3) Options

NL	No LED
03	3 A @ 120 VAC (-FT only)
15	15 A @ 120 VAC (-FF only)
	(Blank is standard)

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The AS3 series current sensing switches are the go-to models for a huge variety of applications. The models designed to control AC circuits can be manufactured with 1, 3 or 15 A capacities. The models with DC capabilities can be manufactured with dual contacts, adjustable between the selected ranges. NK Technologies' original designs are refined to a wide range of application.

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