# 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.

### 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.

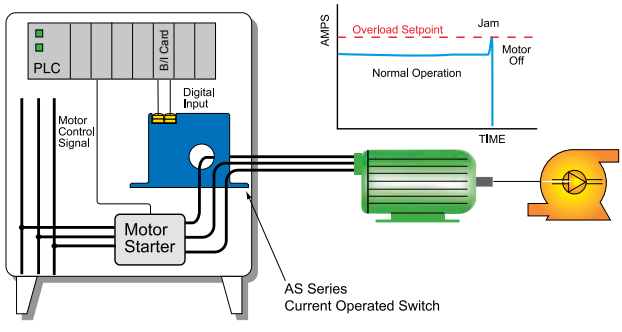
**Solid- or Split-core Case**
- Choose the appropriate version for each installation.

**LED Indication**
- Provides quick visual indiction of contact status.

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

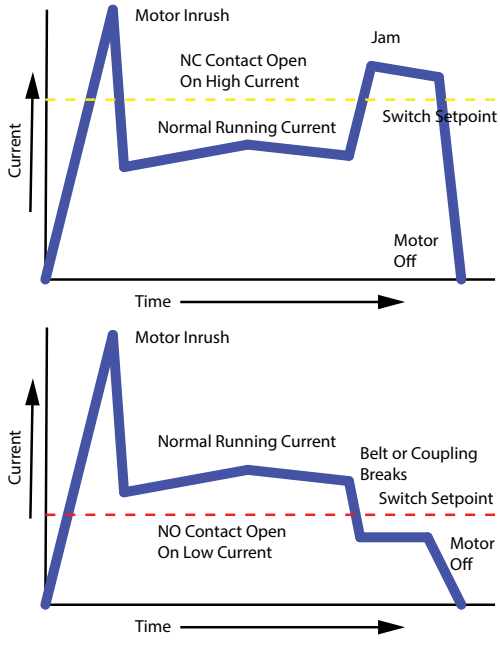
**UL/cUL and CE Approved**
- Accepted worldwide.

Pump Jam & Suction Loss Protection




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

### AS1, AS3, ASX, ASXP Series Sample Output




**OEMs** Test & Evaluation Units for OEMs
Free program expedites evaluation process. See page 3 for details.

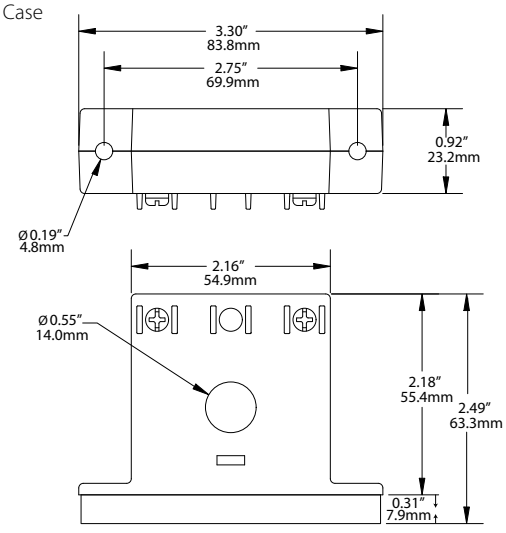


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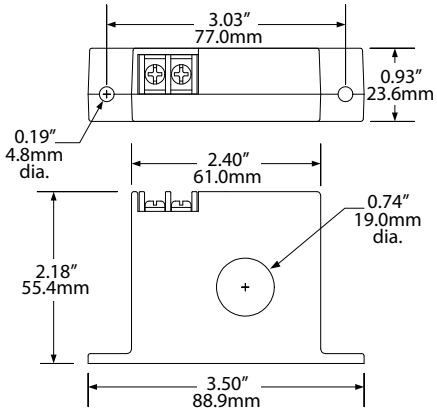
## Current Sensing Switch Dimensions

FF Case

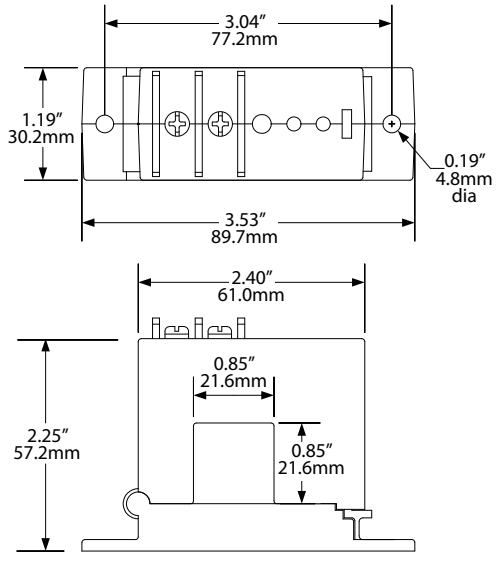



Note: The bottom 0.31″ applies to -15 option only.

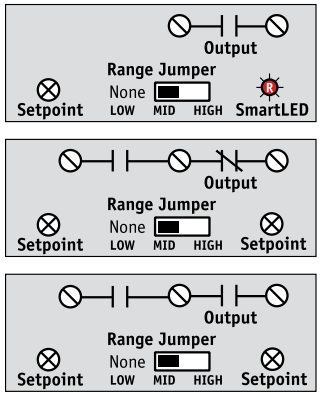
FT Case




SP Case




## 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)<br>• 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)<br>• 0.15 A @ 30 VDC (standard DC & multi-pole units)<br>• 3A @ 120 VAC (-03 option)<br>• 15 A @ 120 VAC, 10 A @ 240 VAC (-15 option) | | |
| **Off-state Leakage** | • NOAC: <10 µA<br>• NCAC: 2.5 mA<br>• AADC: <10 µA | • NODC: <10 µA<br>• NCDC: 1.4 mA<br>• CCDC: 0.3 mA (N.C. Terminal) | |
| **Response Time** | 2.5 sec. max. | | |
| **Time Delay** | None | | |
| **Hysteresis** | 5% | | |
| **Overload** | RANGE | 6 SEC. | 1 SEC. |
| | • 1–6 A<br>• 6–40 A<br>• 40–175 A | • 400 A<br>• 500 A<br>• 800 A | • 600 A<br>• 800 A<br>• 1200 A |
| **Isolation Voltage** | UL listed to 1270 VAC, tested to 5 KV | | |
| **Frequency Range** | 6–100 Hz | | |
| **Case** | UL94 V-0 Flammability Rated | | |
| **Environmental** | -4 to 122°F (-20 to 50°C)<br>0–95% RH, non-condensing | | |
| **Listings** | UL/cUL, CE | | |

*UL listing for -FF and -SP models only.



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## 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)

AS3 – (1) – (2) – (3)

(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, not UL listed) |
| 15 | 15 A @ 120 VAC (-FF only) |
| | (Blank is standard) |

*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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