

# AS1 SERIES

## Current Sensing Switches

AS1 Series Current Sensing Switches combine a current transformer, signal conditioner and limit alarm into a single package for use in status monitoring or proof of operation applications. Offering an extended set point range of 1–150 A and universal, solid-state outputs, the self-powered AS1 can be tailored to provide accurate and dependable digital indication of over-current conditions across a broad range of applications. Available in solid-core enclosure styles or in a split-core case to maximize ease of installation.



### Current Sensing Switch Applications

#### Electronic Proof of Flow

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

#### Conveyors

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

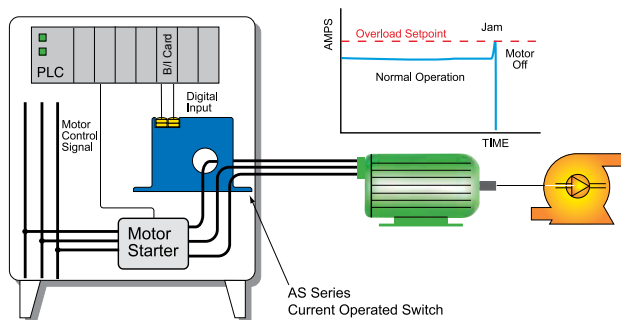
#### Lighting Circuits

- Easier to install and more accurate than photocells.

#### Electrical Heaters

- Faster response than temperature sensors.

#### Pump Jam & Suction Loss Protection



For additional Application Examples, see page 110 and [www.nktechnologies.com](http://www.nktechnologies.com)

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

### Current Sensing Switch Features

#### Universal Output

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

#### Self-powered

- Cuts installation and operating costs.

#### Easily Adjustable Setpoint

- Speeds startup.

#### Solid or Split-core Case

- Versions tailored for each installation.

#### LED Indication

- Provides quick visual indication of contact status.

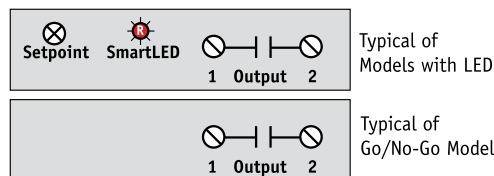
#### Built-in Mounting Feet

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

#### UL, CUL and CE Approval

- Accepted worldwide.

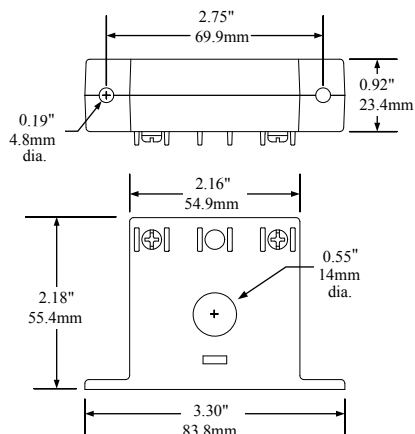
### Current Sensing Switch Connections



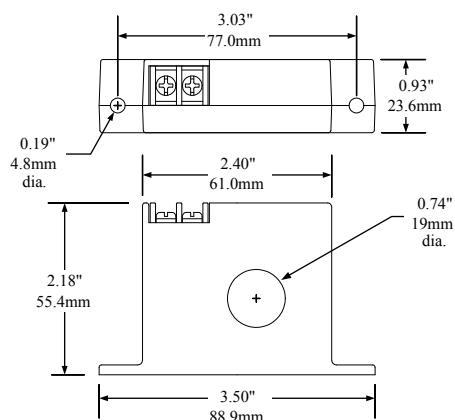


Current Sensing Switch Dimensions

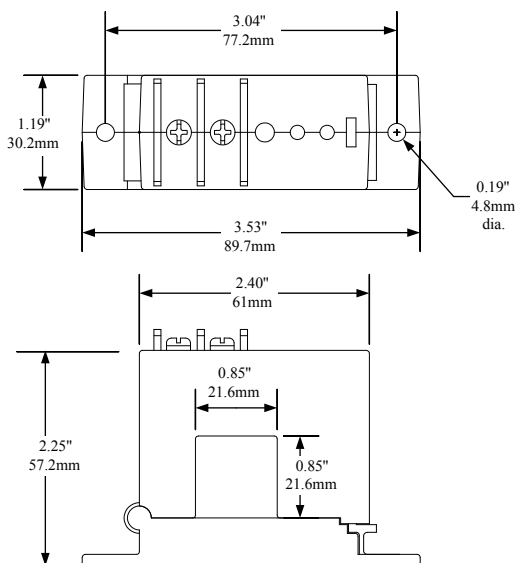
FF Case



FT Case



SP Case

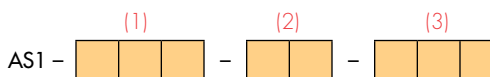


Current Sensing Switch Specifications

|                   |                                                                                                                                                                       |                                                                                       |                                                                                          |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Power Supply      | None—Self-powered                                                                                                                                                     |                                                                                       |                                                                                          |
| Output            | Magnetically Isolated Solid-State Switch                                                                                                                              |                                                                                       |                                                                                          |
| Output Rating     | <ul style="list-style-type: none"> <li>N.O. Version: 0.15 A @ 240 VAC or VDC</li> <li>N.C. Version: 0.2 A @ 135 VAC or VDC</li> <li>Not polarity sensitive</li> </ul> |                                                                                       |                                                                                          |
| Off-State Leakage | <10 µA                                                                                                                                                                |                                                                                       |                                                                                          |
| Response Time     | 120 ms                                                                                                                                                                |                                                                                       |                                                                                          |
| Setpoint Range    | <ul style="list-style-type: none"> <li>Solid-core: 1–150 A (adjustable)</li> <li>Split-core: 1.75–150 A (adjustable)</li> </ul>                                       |                                                                                       |                                                                                          |
| Hysteresis        | 5% of Setpoint                                                                                                                                                        |                                                                                       |                                                                                          |
| Overload          | MODEL                                                                                                                                                                 | 6 SEC                                                                                 | 1 SEC                                                                                    |
|                   | <ul style="list-style-type: none"> <li>-GO (NOU)</li> <li>-GO (NCU)</li> <li>All other</li> </ul>                                                                     | <ul style="list-style-type: none"> <li>500 A</li> <li>400 A</li> <li>400 A</li> </ul> | <ul style="list-style-type: none"> <li>1000 A</li> <li>1000 A</li> <li>1000 A</li> </ul> |
| Isolation Voltage | UL listed to 1270 VAC, tested to 5000 VAC                                                                                                                             |                                                                                       |                                                                                          |
| Frequency Range   | 6–100 Hz                                                                                                                                                              |                                                                                       |                                                                                          |
| Sensing Aperture  | <ul style="list-style-type: none"> <li>-FF Case: 0.55" (14 mm) dia.</li> <li>-FT Case: 0.74" (19 mm) dia.</li> <li>-SP Case: 0.85" (21.6 mm) sq.</li> </ul>           |                                                                                       |                                                                                          |
| Case              | UL94 V0 Flammability Rated                                                                                                                                            |                                                                                       |                                                                                          |
| Environmental     | -4 to 122°F (-20 to 50°C)<br>0–95% RH, non-condensing                                                                                                                 |                                                                                       |                                                                                          |
| Listings          | UL 508 Industrial Control Equipment (USA & Canada), CE                                                                                                                |                                                                                       |                                                                                          |

Current Sensing Switch Ordering Information

Sample Model Number: AS1-NOU-SP  
Adjustable AC current sensing switch, normally open, split-core.



(1) Output Rating

|     |                 |
|-----|-----------------|
| NOU | Normally Open   |
| NCU | Normally Closed |

(2) Case Style

|    |                         |
|----|-------------------------|
| FF | Solid-core, Front Term. |
| FT | Solid-core, Top Term.   |
| SP | Split-core              |

(3) Options

|     |                                                                                                    |
|-----|----------------------------------------------------------------------------------------------------|
| GO  | Non-adjustable; output changes with minimum current present (solid-core 0.75 A, split-core 1.25 A) |
| NL  | No LED                                                                                             |
| Y39 | Output Bypass Switch (not UL listed) – available for FT case only                                  |
|     | With LED (Blank)                                                                                   |

