

Specifications

| | |
|--------------------------|--|
| Power Supply | None - Self powered |
| Output | Isolated Solid State Switch |
| Output Rating (maximums) | NOU: 0.3 A @ 135 VAC/VDC NCU: 0.2 A @ 135 VAC/VDC |
| Off State Leakage | <10 μ A |
| Response Time | 0.12 Second (90% step change) |
| Setpoint Range | Solid-Core: 2-150 A (factory set) Split-Core: 3-150 A (factory set) |
| Precision | Better than 1% of setpoint |
| Hysteresis | 5% of setpoint |
| Isolation Voltage | Tested to 1270 VAC |
| Frequency | Calibrated for 50 or 60 Hz |
| Case | UL94 V-0 Flammability rated |
| Sensing Aperture | -FT: 0.74" (18.8 mm) diameter -SP: 0.85" (21.6 mm) square |
| Environmental | -4 to 122°F (-20 to 50°C) 0-95% RH, Non-condensing Pollution Degree 2 Altitude to 6561 ft (2000 meters) |
| Listings | Designed to meet UL/cUL and CE |

Ranges & Maximum Amps

| TYPE | RANGE | MAXIMUM INPUT AMPS | | |
|------------|---------|--------------------|--------|--------|
| | | CONTINUOUS | 6 SEC. | 1 SEC. |
| SOLID-CORE | 2-150 A | 150 A | 400 A | 1000 A |
| SPLIT-CORE | 3-150 A | 150 A | 400 A | 1000 A |

Model Number Key

ASC - NOU - 6 - FT - 090

TRIP POINT:

SSS - 002 - 150 (A) Solid-Core
- 003 - 150 (A) Split-Core

CASE STYLE:

FT - Solid-Core, Top Terminals
SP - Split-Core

FREQUENCY:

6 - 60 Hertz
5 - 50 Hertz

OUTPUT:

NOU - Normally Open
NCU - Normally Closed

SENSOR TYPE:

ASC - Factory Calibrated Current Operated Switch

Know Your Power



Other NK Technologies Products Include:

AC & DC Current Transducers
AC & DC Current Operated Switches
1 ϕ & 3 ϕ Power Transducers
Current & Potential Transformers (CTs & PTs)



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INSTRUCTIONS



ASC SERIES Factory Calibrated Current Operated Switch Universal (AC or DC) Output

Quick "How To" Guide

- Run the wire you are monitoring through aperture.
- Mount the sensor to a surface if needed or secure to conductor with a nylon tie.
- Connect output wiring.
 - Use 22-14 AWG copper wires rated 75°C minimum and tighten to 9 in-lbs torque.
 - Make sure the load matches the output shown on the sensors' label.
- Output will change state when current rises to setpoint.
 - Turn load "On".
 - LED will flash slowly with current present, lower than setpoint.
 - LED will flash quickly with current over the setpoint.

Description

ASC Series are solid-state current operated switches. They operate (switch) when the AC current level through the hole exceeds the factory set amount. The output contacts are rated 0.3 A up to 135 VAC or VDC for N.O. version. This “Universal” output makes them well suited for application in automation systems.

Installation

For All Versions

Run wire to be monitored through opening in the sensor.

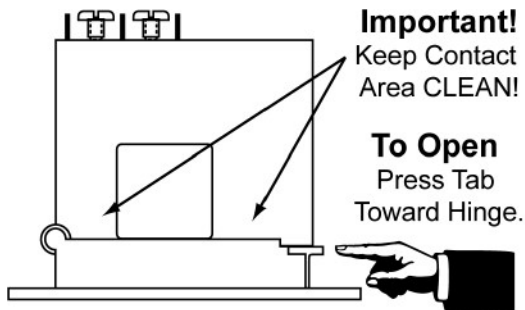
ASC switches work in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures. They can be mounted in any position or hung directly on wires with a wire tie. Just leave at least one inch distance between sensor and other magnetic devices.

Split-Core Versions (SP Suffix)

Press the tab in the direction as shown to open the sensor. After placing the wire in the opening, press the hinged portion firmly downward until a definite click is heard and the tab pops out fully.

KEEP SPLIT-CORE SENSORS CLEAN.

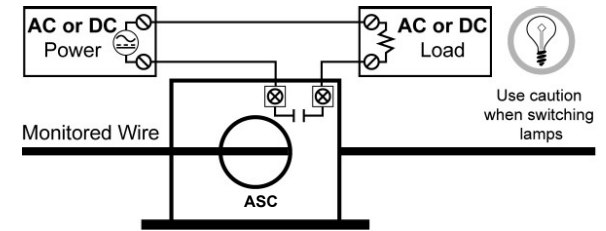
Silicone grease is factory applied on the mating surfaces to prevent rust and improve performance. Be careful not to allow grit or dirt onto the grease in the contact area. Operation can be impaired if the mating surfaces do not have good contact. Check visually before closing.



Output Wiring

Connect control or monitoring wires to the sensor. Use up to 22-14 AWG rated 75°C minimum copper wire and tighten terminals to 9 inch-pounds torque. Be sure the output load does not exceed the switch rating.

CAUTION Incandescent lamps can have “Cold Filament Inrush” current of up to 10 times their rated amperage. Use caution when controlling lamps.



Setpoint Adjustment

ASC Series will be shipped factory set with your desired trip point. There is no field adjustment available. At AC current above the preset magnitude, the models with a normally open contact will close and the normally closed will open the solid state contact. The sensor will return to the original condition when the current falls to 95% of the setpoint.

Operation

The ASC series current operated switches provide a solid-state contact designed to be used as an input to a programmable logic controller, DCS or other solid state device. The normally open models will close the contact when AC current exceeds the factory set value, and the normally closed models will open the contact at this pre-determined level. The output will stay in the tripped condition (open or closed) as long as the current remains higher than the setpoint, and it will return to the original condition when current falls below 95% the setpoint.

As an example, the load draws 50 amps at 60 hertz, and the ASC is ordered as ASC-NOU-6-FT-050. When the current rises to a level between 49.5 and 50.5 amps, the solid state output closes. It will open again when current falls to a level between 47.03 and 47.98 amps. This 5% hysteresis is designed into the sensor so voltage fluctuations do not cause the output to change.

Trouble Shooting

1. Sensor is always tripped

A. Switch has been overloaded and contacts are burned out. *Check the output load, remembering to include inrush on inductive loads (coils, motors, ballasts).*

2. Sensor will not trip

A. Split-Core models: The core contact area may be dirty. *Open the sensor and clean the contact area.*
B. Switch has been overloaded and contacts are burned out. *Check the output load, remembering to include inrush on inductive loads (coils, motors, ballasts).*