Specifications

Power Required	None - self powered
Output	Isolated Solid State Switch
Output Rating (maximums)	NOU: 0.3Amp @ 135 VAC/VDC NCU: 0.3Amp @ 135 VAC/VDC
Off State Leakage	NONE
Response Time	0.2 Second
Setpoint Ranges	Fixed Core: 1.5-150 A Split Core: 2.8-150A
Setpoint	Self Learning Microprocessor based.
-OL	Overload : 125% of load
-UL	Underload : 85% of load
-OU	Over/Underload (operating window): 85-125% of load
Hysteresis	Approximately 5% of Setpoint
Isolation Voltage	UL Listed to 1,270 VAC Tested to 5,000 VAC
Frequency Range	6-100Hz See Ordering Information for low Frequency operation
Sensing Aperture	-FT: 0.75" (19mm) -SP: 0.85" (21.5mm)
Environmental	-58 to 149 DegF (-50 to 65 DegC) 0-95% RH, Non Condensing
Listings	UL and ULC Listed CE Certified

Ranges & Maximum Amps

TYPE	RANGE	MAXIMUM INPUT AMPS		
		CONTINUOUS	6 SEC.	1 SEC.
FIXED CORE	1.5-150 A	150A	500A	1000A
SPLIT CORE	2.8 -150A	150A	500A	1000A

Model Number Key

ASM - NOU - OL - FT

CASE STYLE:
FT - Fixed Core, Top Terminals
SP - Split-Core

Operation
OL - Over Load
UL - Under Load
OU - Over/Under Load

OUTPUT:
NOU - Normally Open
NCU - Normally closed

SENSOR TYPE:
ASM - Self-Calibrating Current Operated Switch

Know Your Power

Other NK Technologies Products Include:
AC & DC Current Transducers
AC & DC Current Operated Switches
1ϕ & 3ϕPower Transducers
Current & Potential Transformers (CTs&PTs)

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NK Technologies

INSTRUCTIONS

ASM SERIES

Self-Calibrating Current Operated Switch
Universal (AC or DC) Output

Quick "How To" Guide

1. Run the wire you are monitoring through aperture.
2. Mount the sensor to a surface if needed or secure to conductor with a nylon tie.
3. Connect output wiring.
   A. Use up to 14 AWG copper wires.
   B. Make sure the load matches the output shown on the sensors' label
4. Allow Sensor to "Learn" the load
   A. Turn load "On"
   B. Slide the Function Switch from "RUN" to "CLEAR".
   C. Observe LED flash fast (>2/Sec) for a few seconds, then slow (~2 Sec) Sensor has "learned" the load and is calibrated.

ASM-Inst. Rev 5 04/12P/N 69-500-1101

Description

ASM Series are solid-state current operated switches. They operate (switch) when the current level through the hole falls within the setpoint "window". This "window" is automatically set at 85% to125% of the normal load current. Internal circuits are totally powered by induction from the line being monitored. The output contacts are rated 0.3A up to 135 VAC or VDC. This "Universal" output make them well suited for application in automation systems.

Installation

For All Versions

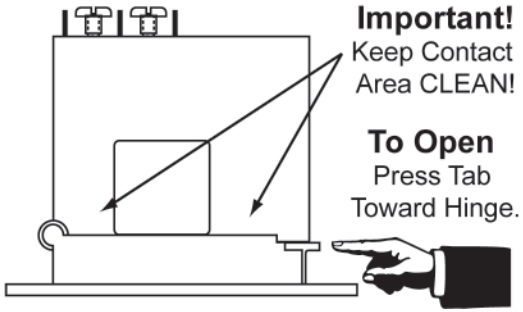
Run wire to be monitored through opening in the sensor.

ASM 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.

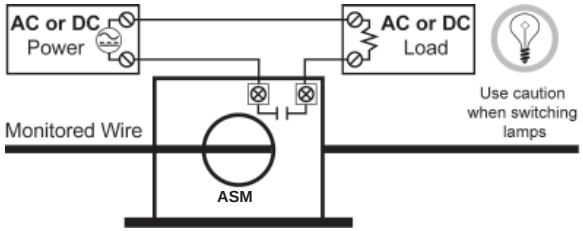


Silicone grease is factory applied on the mating surfaces to prevent rust and improve performance. Be careful not to allow grit or dirt onto the grease in the contact area. Operation can be impaired if the mating surfaces do not have good contact. Check visually before closing.

Output Wiring

Connect control or monitoring wires to the sensor. Use up to 14 AWG copper wire and tighten terminals to 7 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

ASM Series has an internal microprocessor that "Learns" your load characteristics and calibrates the setpoint and establishes where the output changes state.

Initial Calibration

1. The ASM is shipped with Function Switch in the "RUN" position.
2. After installation is complete and the load is operating properly, slide this switch to "CLEAR".
3. The LED will flash quickly (<2Sec/Flash) during the learning period. When the LED flashes slowly, the sensor is calibrated.
4. Once the calibration point is established, flip the Function Switch back to "RUN"
5. LED flashes quickly when there is current outside the normal operating range..

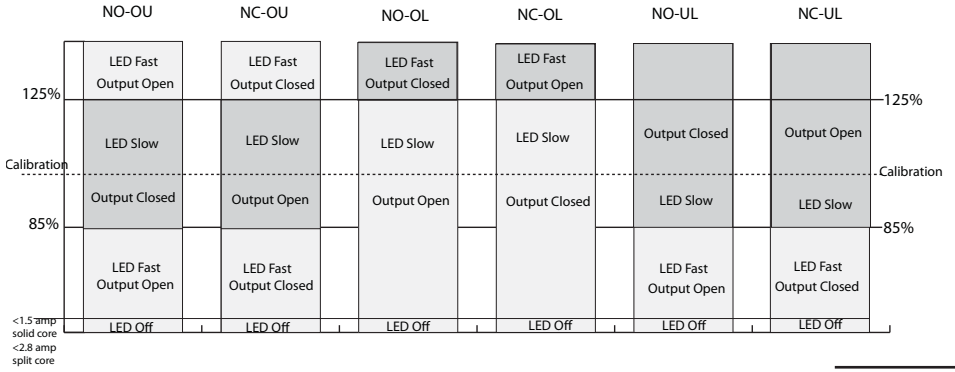
Re-Calibration

If the load or conditions change, you may need to recalibrate the sensor. Use the same procedure as for initial installation:

1. Slide the Function Switch to "CLEAR"
2. Keep the load running for a few seconds.
3. Slide the Function Switch back to "RUN". The sensor is recalibrated for your conditions.

Re-calibration will not be needed unless the motor or other drive components are changed, or the monitored load is modified. The ASM will hold the calibrated trip point in memory until the switch is pushed to the "CLEAR" position

Operation



Dark area shows where the sensor output has tripped, or changed state. Note that the monitored circuit may be energized with no LED showing.

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.*

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