

Current Switch: Auto Calibration, Narrow Limit Process Control

H10F



H10F



SPECIFICATIONS

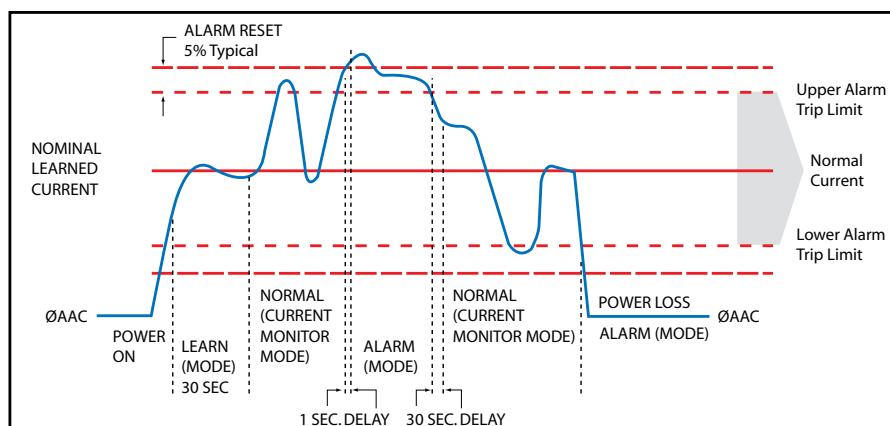
5 Year
Warranty

Sensor Power	Induced from monitored conductor
Isolation	600VAC RMS (UL); 300VAC RMS (CE)
Temperature Range	-15° to 60° C (5° to 140°F)
Humidity Range	10-90% RH non-condensing
Frequency Range	50/60 Hz
Trip Point Calibration Learn Period	30 sec. learn period
Normal-to-Alarm Status Output Delay	1 second max.
Alarm-to-Normal Status Output Delay	30 seconds nominal*
Status Output	±20% of learned current to trigger alarm; ±15% of learned current to release alarm (see graph)
Terminal Block Wire Size	24-14 AWG (0.2 to 2.1 mm ²)
Terminal Block Torque	3.5 to 4.4 in-lbs (0.4 to 0.5 N-m)
Agency Approvals	UL 508 open device listing; CE: EN61010-1, CAT III, pollution degree 2, basic insulation

*If current switch experiences a momentary loss of power, 30 second delay may or may not apply.

Do not use the LED status indicators as evidence of applied voltage.

PRODUCT FUNCTIONS



Automatically Learns At Initial Power-Up

FEATURES

- Automatic adjustable trip point (3.5-100A)...precise control of current trip point
- 100% solid state...no moving parts to fail
- Removable mounting bracket for installation flexibility
- 5-year warranty
- Automatic calibration...reduced errors and installation costs
- Microcontroller based learning technology...automatically learns load upon initial power-up...eliminates labor associated with calibration
- Monitors current for both under- and over-load in one package
- Small size fits easily inside small starter enclosures...saves space

DESCRIPTION

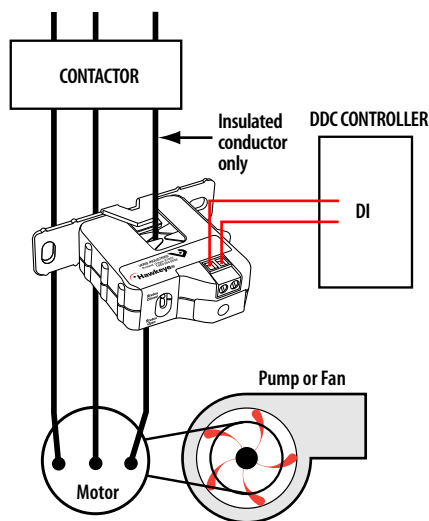
The **Hawkeye TruStat H10F** is a microprocessor based, self-learning, self-calibrating current switch. It provides calibration-free status, for both under-current and over-current conditions. At initial power-up, the H10F automatically learns the average current on the line with no action required by the installer. Once a current is learned, the switch monitors for changes in current greater than ±20% of the learned load.

APPLICATIONS

- Verifying lighting circuit and other electrical service run times
- Monitoring status of industrial process equipment
- Monitoring status of critical motors (compressor, fuel, etc.)

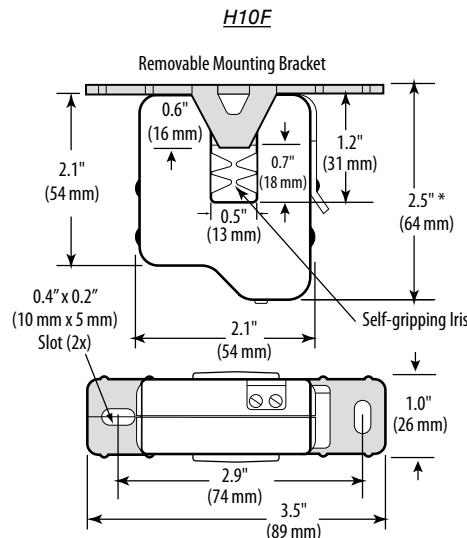
WIRING DIAGRAM

Monitoring Fan / Pump Motors for Positive Proof of Flow



* Terminal block may extend up to 1/8" over the height dimensions shown.

DIMENSIONAL DRAWING



HOW IT WORKS

The compact split-core H10F current switch monitors a learned load current to detect power loss and electrical overload. The push-button initiated LEARN MODE allows resetting of the monitored current when the load changes due to system alterations.

LEARN MODE

- Unit automatically enters LEARN MODE upon initial power-up
- Auto-calibration is achieved by averaging the load current for 30 seconds
- During this stage, green and red LEDs alternately blink on/off
- STATUS OUTPUT contacts are closed
- LEARN MODE may be initiated manually

NORMAL MODE

- Initiated after the 30-second learning period, or immediately upon power-up if sensor has already learned a load
- The red LED is off, and the green LED is blinking
- STATUS OUTPUT contacts are closed

ALARM MODE

- The ALARM state signals low current, high current, or power loss conditions
- Initiated within 1 second when any load current excursion exceeds a nominal $\pm 20\%$
- ALARM will persist until the load current returns to within a nominal $\pm 15\%$ of the learned current value, or when power is restored to normal
- The 5% ALARM-to-NORMAL MODE reentry margin prevents alarm signal oscillations. This feature is enhanced by a 30 second delay, to insure true nominal load current conditions when returning to NORMAL MODE from an ALARM state
- The green LED is off, and the red LED blinks
- STATUS OUTPUT contacts are open

OPERATING MODES	STATUS LEDs		STATUS OUTPUT
	GREEN	RED	
LEARN (30 secs)	Alternating Blink On/Off		Contacts Closed
NORMAL	Blink	Off	Contacts Closed
ALARM*	Off	Blink	Contacts Open

* 1 sec maximum after detection.

ORDERING INFORMATION



MODEL	AMPERAGE RANGE	STATUS OUTPUT	NOMINAL TRIP POINT TARGET RANGE*	NOMINAL ALARM RESET RANGE*	HOUSING	STATUS LED	UL	CE	RoHS
H10F	3.5 - 100A	N.O. 1.0A@30VAC/DC	$\pm 20\%$	$\pm 15\%$	Split-core	●	● ¹	●	●

*For best performance, monitor 5A or more current. At currents less than 5A, these ranges are approximate.

¹ Listed for use on 75°C insulated conductors.

ACCESSORIES

DIN Rail Clip Set (AH01)
DIN Rail (AV01) and DIN Stop Clip (AV02)

