

Current Switch: Auto Calibration, Process Control

Automatically Learns At Initial Power-Up



Hawkeye® TruStat™

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 $\pm 20\%$ of the learned load.

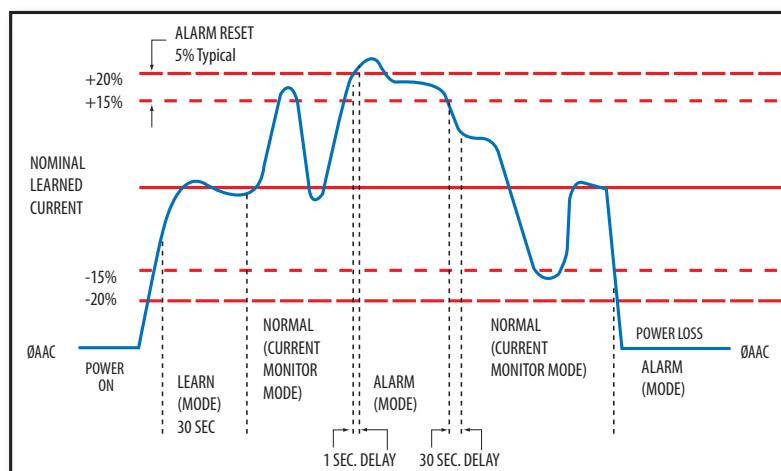
APPLICATIONS

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

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

PRODUCT FUNCTIONS



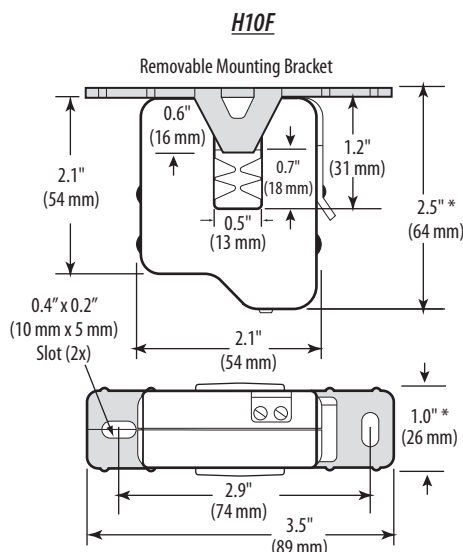
SPECIFICATIONS

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	$\pm 20\%$ of learned current to trigger alarm; $\pm 15\%$ 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: EN61010-1:2001-02, 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.

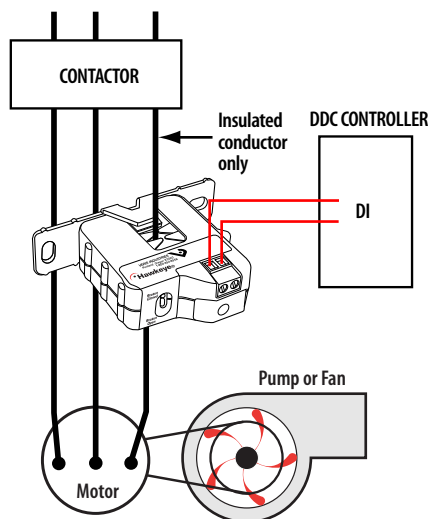
DIMENSIONAL DRAWING



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

APPLICATION/WIRING DIAGRAM

Monitoring Fan/Pump Motors for Positive Proof of Flow



HOW IT WORKS

The compact split-core H10F current switch monitors a learned load current to detect power loss and electrical overload of fans, blowers, pumps, chillers, or any other critical motor functions. 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 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 shuts 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)

