

H10F

Automatically Learns at Initial Power-Up



H10F
Hawkeye™

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.

SPECIFICATIONS

Sensor Power	Induced from monitored conductor
Isolation	600 Vac RMS (UL); 300 Vac RMS (CE ¹)
Temperature Range	-15 to 60 °C (5 to 140 °F)
Humidity Range	10 to 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 sec. nominal ²
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 to 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)

WARRANTY

Limited Warranty	5 years
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AGENCY APPROVALS

Agency Approvals	UL 508 open device listing; CE: EN61010-1, CAT III, Pollution Degree 2, basic insulation
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Adjustable trip point

Automatic adjustable trip point (3.5 to 100 A)...precise control of current trip point

Reduced costs

Automatic calibration...reduced errors and installation costs

100% solid state

No moving parts to fail

Flexibility

Removable mounting bracket for installation flexibility

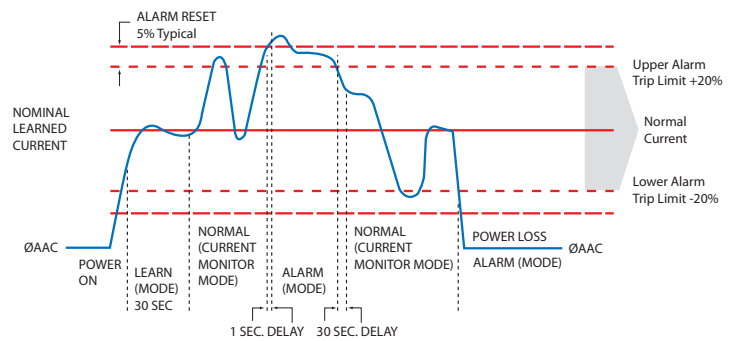
Microcontroller based learning technology

Automatically learns load upon initial power-up...minimizes calibration labor

APPLICATIONS

- Monitoring fans, pumps, motors, and other electrical loads for proper operation
- Detecting belt loss and motor failure...ideal for fan and pump status
- Verifying lighting circuit loads
- Monitoring critical motors (compressor, fuel, etc.)
- Monitoring industrial process equipment status (OEM)

PRODUCT FUNCTIONS

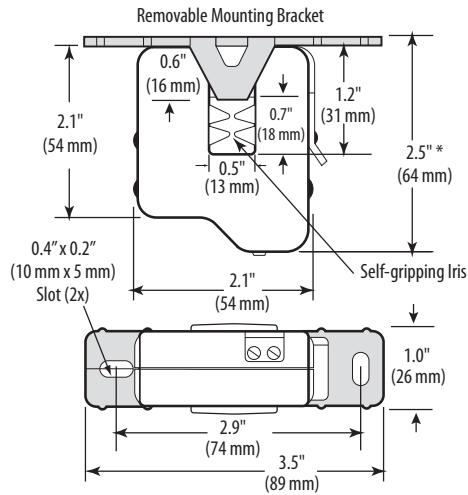


- The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.
- If current switch experiences a momentary loss of power, 30 second delay may or may not apply.

Note: 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.

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

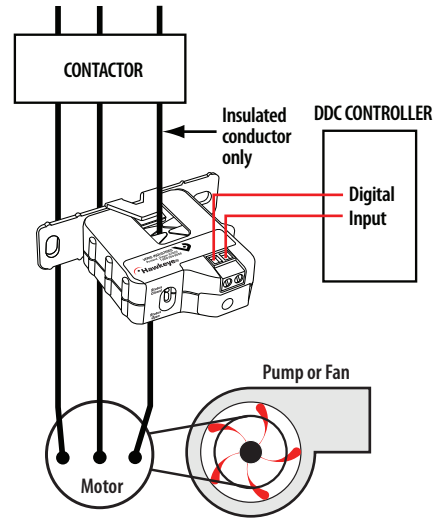
- Unit automatically enters LEARN MODE upon initial power-up
- Auto-calibration is achieved by averaging the load current for 30 seconds
- During this stage, green and red LEDs alternately blink on/off
- STATUS OUTPUT contacts are closed
- LEARN MODE may be initiated manually

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

MONITORING FAN/PUMP MOTORS FOR POSITIVE PROOF OF FLOW (H11D)

Wiring Diagram



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 ¹	NOMINAL ALARM RESET RANGE ¹	HOUSING	STATUS LED	UL	CE
H10F	3.5 to 100 A	N.O.1.0 A @ 30 Vac/ dc	$\pm 20\%$	$\pm 15\%$	Split-core	•	• ²	•

1. For best performance, monitor 5 A or more current. At currents less than 5A, these ranges are approximate. 2. Listed for use on 75°C insulated conductors.

