

# Current Switch: Auto Calibration, Automation Systems

## LCD Display



### DESCRIPTION

The Hawkeye TruStat H11D is a microprocessor based, self-learning, self-calibrating current switch. It is designed for user ease, providing calibration-free status for both under and overcurrent, an LCD display, and slide-switch selectable trip point limits. At initial power-up, the H11D 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 the selected range.

### APPLICATIONS

- HVAC fans, pumps, and blowers
- Monitoring status of industrial process equipment



### SPECIFICATIONS



|  |  |
|--|--|
| Sensor Power                             | Induced from monitored conductor   |
| Response Time                            | 1 sec.   |
| Accuracy                                 | ±2% of full scale  |
| Frequency Range                          | 50/60 Hz   |
| Temperature Range                        | -15° to 60°C (5° to 140°F)   |
| Humidity Range                           | 10-90% RH non-condensing   |
| LCD Backlight                            | Off at low currents; illuminates when monitored current exceeds 4.5A; flashes during an alarm state while current remains above 4.5A |
| On-State Resistance                      | ≤1.0 Ω   |
| Off-State Resistance                     | ≥1.0 MΩ  |
| Setpoint Target Range, Switch Setting A* | ±40% of learned nominal current; max. learned current of 142A to enable an upper trip limit at or below 200A                         |
| Setpoint Target Range, Switch Setting B* | ±60% of learned nominal current; max. learned current of 125A to enable an upper trip limit at or below 200A                         |
| Switch Setting C*                        | On/Off Status; contacts are closed while amperage is above 2.5A  |
| Alarm Reset Range                        | ±5% of learned nominal current **  |
| Setpoint Calibration Learn Period        | 30 sec.; self-learning, pushbutton reset   |
| Normal-to-Alarm Output Delay             | 1 sec. maximum   |
| Alarm-to-Normal Output Delay             | 30 sec. nominal  |
| Insulation Class                         | 600VAC RMS (UL); 300VAC RMS (CE)   |
| Terminal Block Wire Size                 | 24-14 AWG (0.2 to 2.1 mm <sup>2</sup> )  |
| Terminal Block Torque                    | 3.5 to 4.4 in-lbs (0.4 to 0.5 N-m)   |
| Agency Approvals                         | UL508 open device, CE: EN61010-1:2001-02, CAT III, pollution degree 2  |

\* Trip point switch positions A and B are not for use in applications where the current will fluctuate by more than 40% (A) or 60% (B) of the nominal current. If the current will fluctuate by more than 60%, use the H11D for on/off status (position C) only.

\*\* The upper trip limit alarm resets when the current drops by 5% of the learned nominal current limit. The lower trip limit alarm resets when the current rises by 5% of learned nominal current limit.

Specification Note: For CE compliance, conductor shall be insulated according to IEC 61010-1:2001.

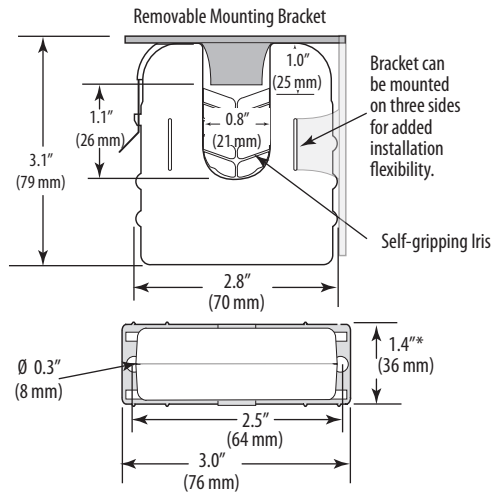
The product design provides for basic insulation only.

Do not use the LCD as evidence of applied voltage.

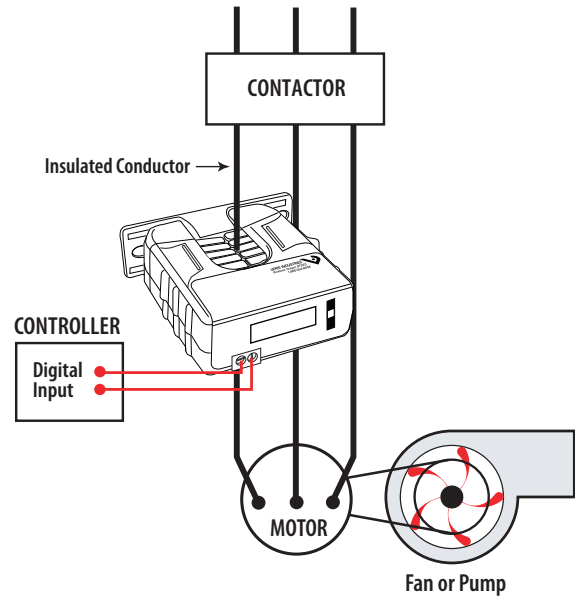
### FEATURES

- Backlit LCD display...view the monitored current (up to 200A)...eliminates the need for expensive handheld meters and offers easy visibility in dark enclosures
- Automatic calibration...reduced errors and installation costs
- Slide-switch selectable trip point limits...application versatility
- Microcontroller based learning technology...automatically learns load upon initial power-up...eliminates labor associated with calibration
- Records and displays the amperage level that trips the alarm...simplifies troubleshooting
- Reset function can be used when unpowered...reduces the possibility of an undesirable arc flash incident
- Monitors current for both under- and over-load in one package
- 100% solid state...no moving parts to fail
- Small size fits easily inside small starter enclosures...saves space
- Self-gripping iris for easy installation
- Bracket can be installed in three different configurations...added flexibility
- 5-year warranty

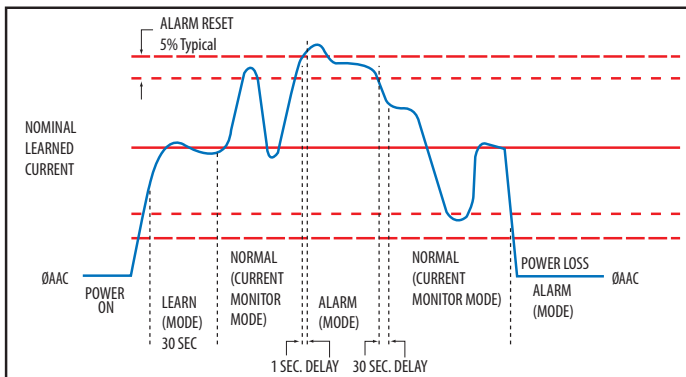
## DIMENSIONAL DRAWING



## APPLICATION/WIRING DIAGRAM



## FUNCTIONAL ILLUSTRATION



## ORDERING INFORMATION



| MODEL | AMPERAGE RANGE <sup>1</sup>              | STATUS OUTPUT      | NOMINAL TRIP POINT TARGET RANGE         | HOUSING    | STATUS LED | UL             | CE |
|-------|--|--------------------|---|------------|------------|----------------|----|
| H11D  | 2.5 - 200A @ 60 Hz<br>3.0 - 200A @ 50 Hz | N.O. 1.0A@30VAC/DC | ±40%, ±60%, or on/off (user selectable) | Split-core | ●          | ● <sup>2</sup> | ●  |

<sup>1</sup> To enable the upper trip limit alarm, the max. learned current for switch setting "A" is 142A, and the max. learned current for switch setting "B" is 125A. Switch setting "C" is for on/off status only, so the upper trip limit alarm does not apply.

<sup>2</sup> Listed for use on 75°C insulated conductors.

## ACCESSORIES

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

