

## Miniature Split Core Current Switch Adjustable Setpoint

### Features



- Small size and low min. setpoint
- Switches up to 1A @ 30Vac/dc
- Self powered, no supply required
- For use inside a separate fire or electrical enclosure
- For use in a Measurement category III environment, or less, as per IEC 61010-1:2001

### Specification

|                         |                                      |
|-------------------------|--------------------------------------|
| Current                 | 0.5 - 175A                           |
| Sensor power            | Induced from monitored conductor     |
| Max. current continuous | 50A                                  |
| Frequency range         | 50 - 60Hz                            |
| Switch output:          |                                      |
| Max. current            | 1A                                   |
| Max. voltage            | 30Vac/dc                             |
| Hysteresis              | 10% Typical                          |
| Switching               | Normally open (zero through current) |
| Ambient:                |                                      |
| Temp.                   | -15°C to +60°C                       |
| RH                      | 0-95% RH non-condensing              |
| Sensing aperture        | 16 x 13 mm                           |
| Dimensions              | 90 x 60 x 23 mm                      |
| Insulation class        | 600Vac RMS                           |
| Compliant:              |                                      |
|                         | CE Marked                            |
|                         | UL508 E150462                        |
| Country of origin       | U.S.A                                |

### Product Codes

#### PM-H608

Adjustable setpoint current switch split core 0.5A to 175A



Suitable for switching 30Vac/dc ONLY.

## Technical Overview

The PM-H608 current switch can be used to monitor motors, pumps or other electrical loads where a switched output is required. Its low min. setpoint (0.5A) and small size make it ideal for monitoring small to medium motor loads.

The output can be used for simple run/fail detection, a normally open solid state switch operates when the current level sensed by the internal transformer exceeds the threshold value.

## Installation

1. The PM-H608 current switch should only be installed by a competent, suitably trained technician, experienced in installation with hazardous voltages. (>50Vac & <1000Vac or >75Vdc & 1500Vdc)
2. Ensure that all power is disconnected before carrying out any work on the PM-H608. Never rely on status indicating devices only to determine if power is present in a conductor.
3. When installing the split-core current switch, you must ensure that there are no dirt particles that will prevent good contact between the core pieces when the device is closed.
4. Mount the sensor in a suitable location using the two mounting holes in the base of the unit or using the self-gripping iris which eliminates the need for drill mounting.
5. Maximum switched output cable size is 2.5mm<sup>2</sup>, care must be taken not to over tighten the screw terminals.

### Note:

The contacts are solid state open collector type.

When the switch is closed 1Ω is present. When the switch is open more than 1MΩ is present.

### Low conductor current:

If the load is less than the required switching point you can loop the conductor through the sensor to multiply the load. Example, load is 0.4A, pass the cable through the aperture 4 times and you will have a total load of 1.6A. This is now a sufficient load to operate the switch. See fig 1.

### High conductor current and large diameter cables:

If the load is greater than 175A or the cable diameter is greater than the aperture of the current switch, you must use a suitable current transformer. Pass a cable connected to the secondary winding of the current transformer through the aperture. See fig 2.

## Installation (continued)

Fig 1.

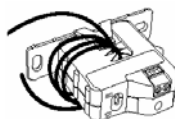
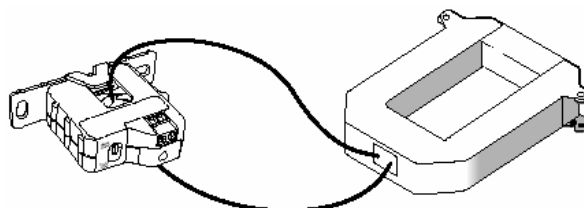
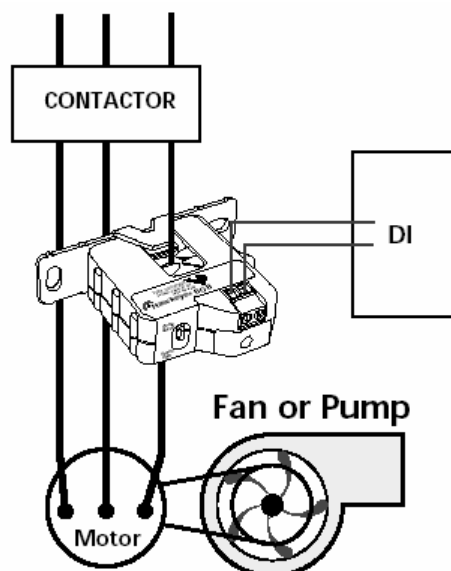


Fig 2.

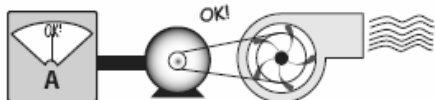


## Wiring Example

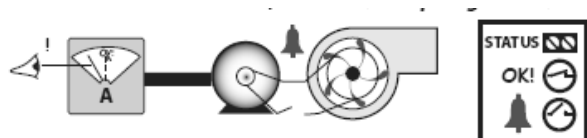


## Setpoint Adjustment

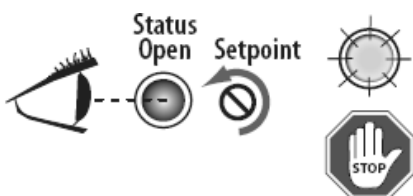
Establish normal load conditions.



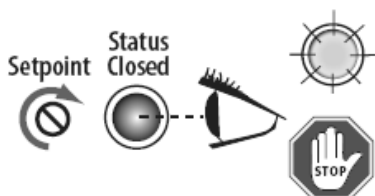
**Monitoring under current (belt loss, coupling shear, status)**



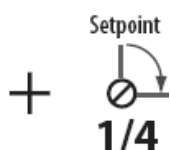
1. Turn setpoint screw counter-clockwise until Status OPEN LED turns ON.



2. Slowly turn the screw clockwise until the Status CLOSED LED just turns ON.

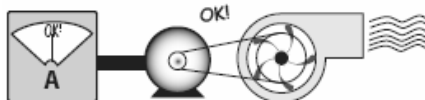


3. Turn the screw an additional 1/4 turn clockwise for operational margin.

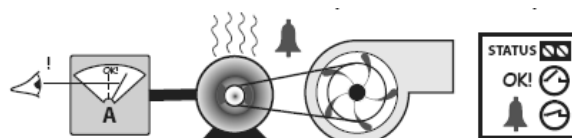


## Setpoint Adjustment (continued)

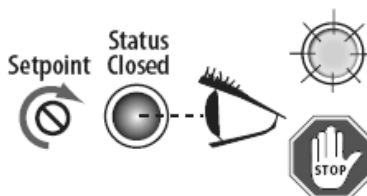
Establish normal load conditions.



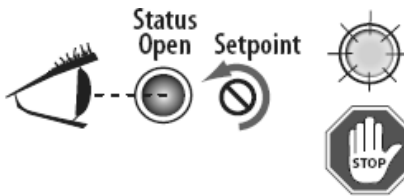
**Monitoring over-current (mechanical problems, sized impeller)**



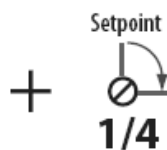
1. Turn setpoint screw clockwise until Status CLOSED LED turns ON.



2. Slowly turn the setpoint screw counter-clockwise until the Status OPEN LED just turns ON.



3. Turn the setpoint screw an additional 1/4 turn counter-clockwise for operational margin.



## Trouble Shooting

### 1/ The unit will not come on at all.

A. Check to be sure that no more than 30Vac/dc or 1.0A has passed through the contact. Voltages or currents above these levels will damage the unit.

B. Verify that the conductor you are monitoring is carrying at least 0.5 Amps. **If the sensor is monitoring less than 0.5 Amps, employ installation note fig. 1.**

C. Verify that the setpoint is not above operating amps by turning screw counter-clockwise (up to 20 full turns) until the contacts close (status closed LED turns on).

### 2/ Set-point screw has no stops. Keeps turning.

A. The 20 turn set-point screw has a slip clutch which prevents damage at either end. To start the calibration process over again turn the screw 20 full turns counter clockwise.

This sets the device in its original and most sensitive position. Resume calibration from the beginning.

### 3/ Both LED's are lit.

A. If the setpoint screw has been turned too far to the right the user will be notified that the current switch is out of calibration by seeing both LED's lit.

To correct this, turn the set-point screw 20 full turns counter-clockwise and resume calibration from the beginning.

## Dimensions

