Current Switch, Adjustable Setpoint LED Status

Features

- Adjustable setpoint
- Switch output 250Vac @ 1A
- 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:		
	PM-H709HV	1 - 135A
	PM-H909HV	2.5 - 135A
Sensor power		Induced from monitored conductor
Max. current continuous		200A
Frequency range		50 - 60Hz
Switch output		250Vac @ 1A
Hysteresis		10% Typical
Switching		Normally open (zero through current)
Status indication		LED
Ambient:		
	Temp.	-15°C to +60°C
	RH	0-95% RH non-condensing
Sensing aperture:		
	Solid core	19mm dia.
	Split core	28 x 23 mm
Dimensions:		
	Solid core	106 x 74 x 27 mm
	Split core	81 x 74 x 26 mm
Insulation class		600Vac RMS
Compliant:		
	CE Marked	
	UL508 E150462	
Country of origin		U.S.A

Product Codes

PM-H709HV

Adjustable setpoint 1 to 135A current switch solid core with LED indication

PM-H909HV

Adjustable setpoint 2.5 to 135A current switch split core with LED indication

⚠ Suitable for switching 230Vac <u>ONLY</u>.

Technical Overview

The PM-Hx09HV range of current switches can be used to monitor motors, pumps or other electrical loads where a switched output is required. The output can be used for simple run/fail detection.
The current switch is fitted with smart LED status indication for status monitoring. A solid state switch operates when the current level sensed by the internal transformer exceeds the threshold value.

Installation

1. The PM-Hx09HV range of current switches 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-Hx09HV range. Never rely on status indicating devices only to determine if power is present in a conductor.

3. When installing the split-core version 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.

5. Maximum switched output cable size is $2.5mm^2$, care must be taken not to over tighten the screw terminals. The connections are polarity independent.

Note:
The contacts are solid state and work just like dry contacts. 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 135A 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)

(Ring type shown). Fig 1.

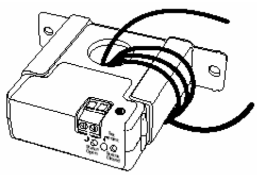
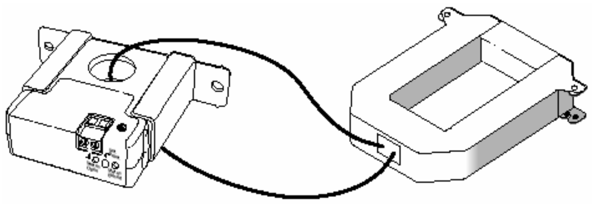
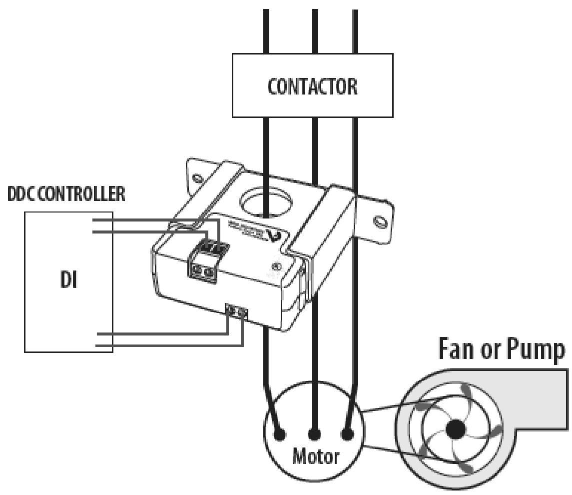


Fig 2.



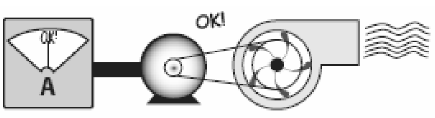
Wiring Example



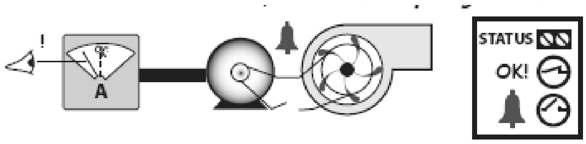
Two pairs of terminals are used for the switched output. Each pair is one connection, and both terminals in that pair are internally connected together. The connection are polarity insensitive.

Setpoint Adjustment

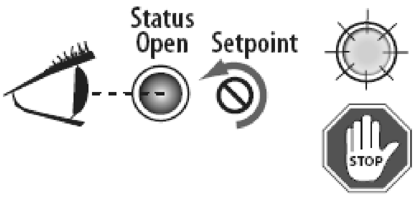
Establish normal load conditions.



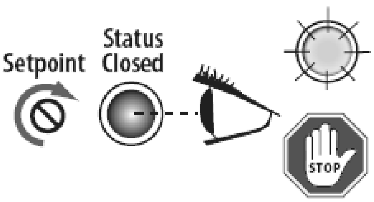
Monitoring under current (belt loss, coupling shear, status)



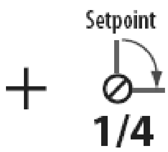
1. Turn setpoint screw counter-clockwise until Status OPEN LED turns ON.



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

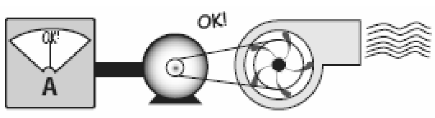


3. Turn the screw an additional 1/4 turn clockwise for operational margin.

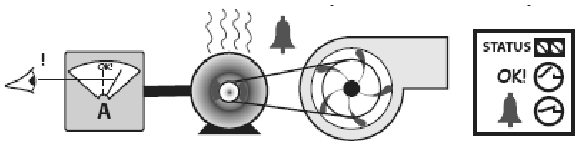


Setpoint Adjustment (continued)

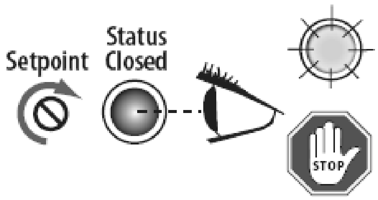
Establish normal load conditions.



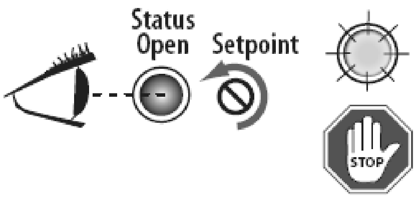
Monitoring over-current (mechnical problems, sized impeller)



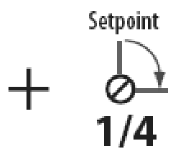
1. Turn setpoint screw clockwise until Status CLOSED LED turns ON.



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 300Vac or 1A 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 1 Amp. If the sensor is monitoring less than 1 Amp, employ installation note 'Low conductor current'.

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

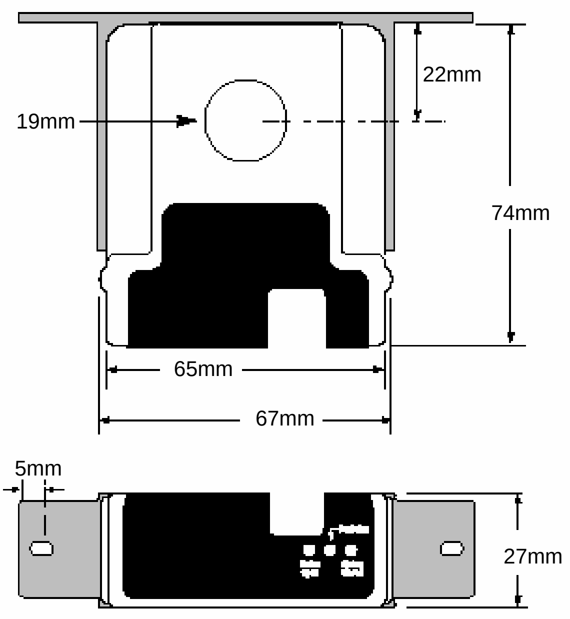
A. The 20 turn set-point screw has a slip clutch which prevents damage at either end. To start the calibration process over again turn the screw 20 full turns counter clockwise. This sets the device in its original and most sensitive position. Resume calibration from the beginning.

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

PM-H709HV:



Dimensions (continued)

PM-H909HV: