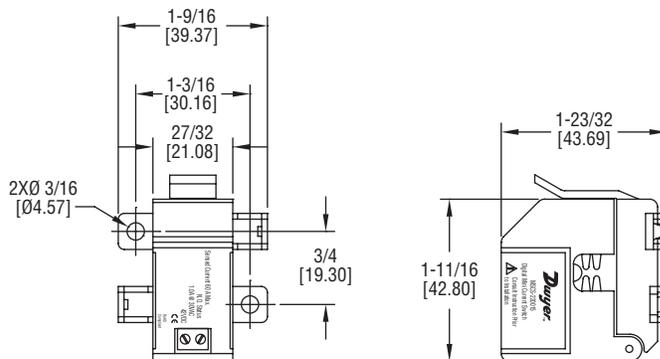




Model MSCS Miniature Current Switch

Specifications - Installation and Operating Instructions



The **Model MSCS Miniature Current Switch** is a low cost solution for monitoring on and off status of light to medium current loads in compact spaces. This unit has a split core design and has a fixed set point of 0.15 amps. It is designed to detect changes in operating current to prevent motor belt loss, slippage, or mechanical failure.

NOTICE The Model MSCS-220015 Miniature Current Switch is intended to provide an input to equipment under normal operating conditions. Where failure or malfunction of the current switch could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices such as supervisory or alarm systems or safety or limit controls intended to warn of, or protect against, failure or malfunction of the MSCS-220015.

CAUTION Risk of Shock. Disconnect power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electrical shock and may result in severe personal injury or death.

INSTALLATION

Mounting

1. Mount directly to a DIN rail in the electrical panel or enclosure.
- or
2. Using the two included screws, attach the switch to the rear of the electrical panel or enclosure.

Wiring (See Figure 1 for an example of wiring)

1. Disconnect the power to the conductor cable from the power source.
2. Open the core using the release tab. Snap the core closed around the power conductor cable. Make sure that the core release tab is locked in its original position.
3. Wire Model MSCS-220015 output terminals to the control box Digital Input (DI) terminal (30 VAC max. terminal voltage).
4. Reconnect the power conductor cable.

SPECIFICATIONS

Amperage Range: 0.15 to 60 A.
Output: NO.
Power Requirements: None, self-powered.
Temperature Limits: 5 to 140°F (-15 to 60°C).
Humidity Limits: 0 to 95%, non-condensing.
Isolation Voltage: 300 VAC RMS.
Frequency: 50/60 Hz.
Enclosure Rating: UL 94 V-0 flammability rated, ABS plastic housing.
Agency Approvals: CE, cULus.

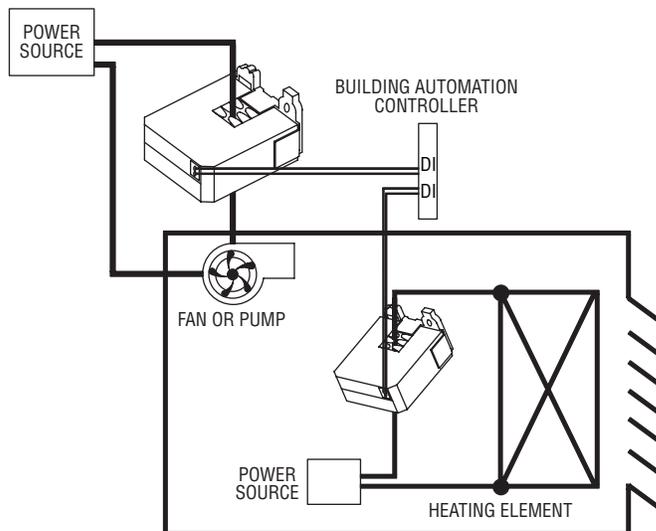


Figure 1

INCREASING/DECREASING MEASURED CURRENT

If the measured current is too low to be detected or is higher than the maximum current rating of the MSCS-220015, use the following methods to increase or decrease current.

If measured current is too low to be detected:

Wrap the conductor (wire) through the sensing hole and around the MSCS-220015 body to produce multiple turns to increase the measured current. (See Figure 2) Use the below equation to determine how many wraps are necessary.

Measured current = Actual current * Number of turns

NOTICE Failure to derate the current capacity could result in damage to the MSCS-220015 when using multiple turns to increase measured current. Use the following formula to determine the new maximum current:

New Maximum Current = MSCS-220015 Current Rating ÷ Number of turns
 (For example, Model MSCS-220015 with 4 turns = 60 A ÷ 4 = 15 A, new maximum current.)

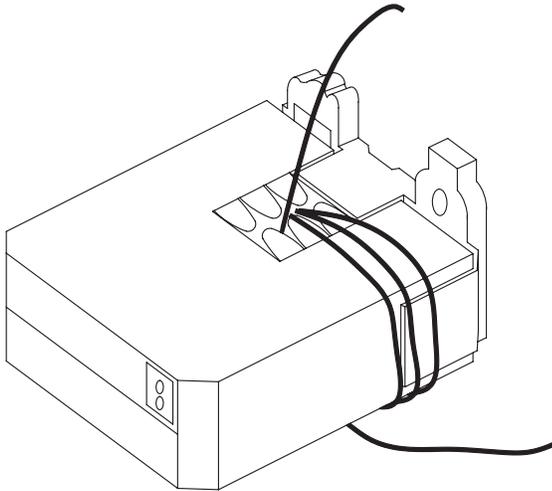


Figure 2

If measured current is above ratings of switch:

Use a 5 A current transformer (CT) to reduce the current passing through the MSCS-220015. (See Figure 3) Run the current transformer secondary wire through the sensing hole. Terminate the two secondary wires of the 5A current transformer to each other, and then install the 5A current transformer on the monitored conductor.

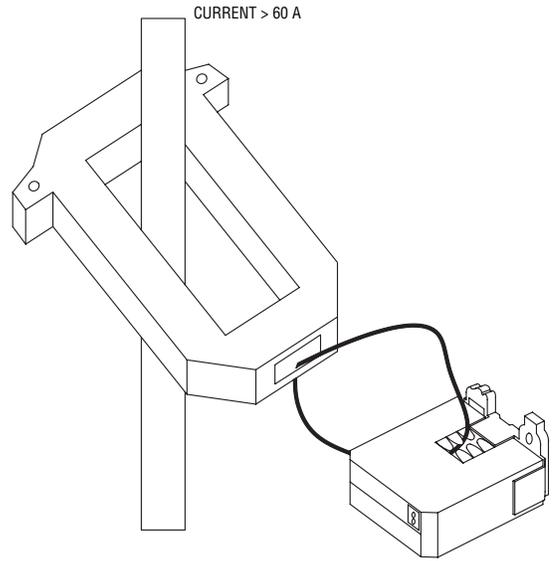


Figure 3

TROUBLESHOOTING

Symptom	Action
MSCS solid state output does not function.	Verify the maximum amperage range has not been exceeded. Voltages or currents above the rated levels may damage the MSCS-220015.
Motor is turned on and switch does not close.	Insufficient current to the load leads (for example, a motor or heater) to reach the set point threshold. To turn the switch on, wrap the cable multiple times through the sensing hold (See Figure 2).

MAINTENANCE/REPAIR

Upon final installation of the Model MSCS-220015 Miniature Current Switch, no routine maintenance is required. The Model MSCS is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

WARRANTY/RETURN

Refer to "Terms and Conditions of Sale" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.