



Installation and Operation Instructions

Part #A/MCS, A/MSCS

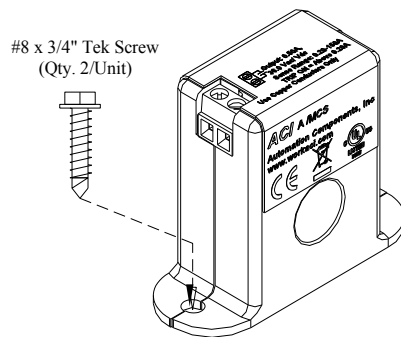


Figure 1: A/MCS

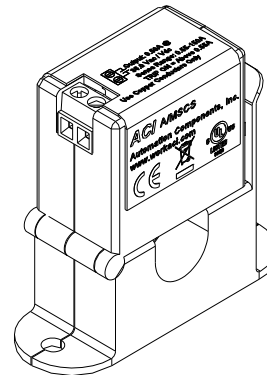


Figure 2: A/MSCS

For applications in which the normal operating current is below the 0.20 Amps (A/MCS) or 0.55 Amps (A/MSCS) trip point (See **Figure 3** below), the conductor being monitored may be looped through the sensor 4 times giving you a total operating current of 4X the original current. **Example:** A small fan operating at 0.2A should be wrapped through the sensor 4 times to give you a total operating current of 0.8Amps flowing through the A/MCS or A/MSCS.

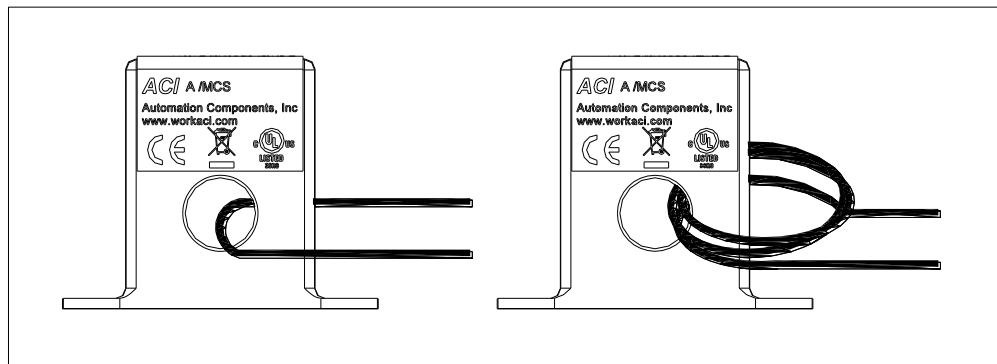


Figure 3: Wires Through Sensors

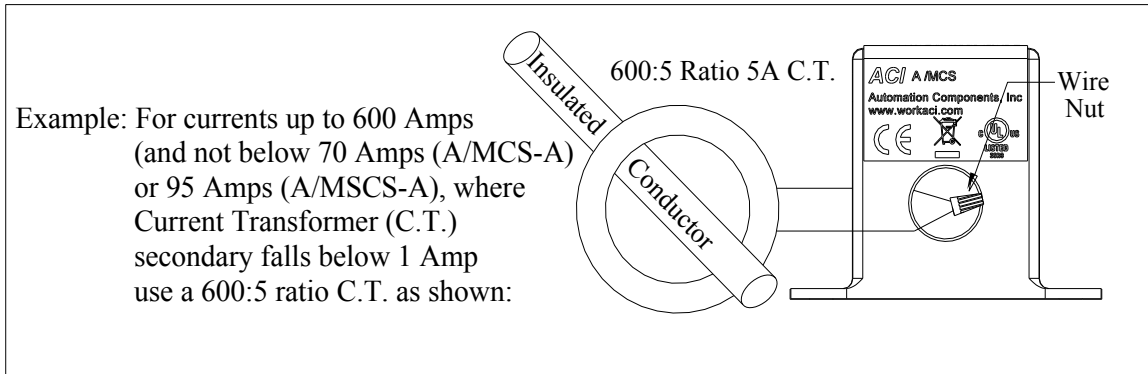
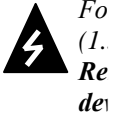


Figure 4: Current Transformer

■ Wiring

ACI recommends the use of a two conductor 16 to 22 AWG shielded cable or twisted pair **copper wire only** for all current switch applications. A maximum wire length of less than 30 meters (98.4 feet) should be used between the A/MCS and A/MSCS current switches and the Building Management System or controller. **Note: When using a shielded cable, be sure to connect only (1) end of the shield to ground at the controller. Connecting both ends of the shield to ground may cause a ground loop.** When removing the shield from the sensor end, make sure to properly trim the shield so as to prevent any chance of shorting. The current switch output terminals represent a solid-state switch for controlling both AC and DC loads and is not polarity sensitive. The recommended torque to be used on the terminal block connections is 0.67 Nm or 5.93 in-lbs.. The aperture (hole) size of the current switch is 0.53” (1.35 cm) and will accept a 1 AWG maximum wire diameter.

■ Operating Specifications

ACI Model #	Fixed Trip Point	Output Switch Rating	Max. Sensing Current Voltage	Max. Continuous Current	Max. Current for 6 seconds	Max. Current for 1 second
A/MCS	0.20 Amps	0.50 Amp @ 36 VAC/VDC	600 VAC	158 Amps	240 Amps	600 Amps
A/MSCS	0.55 Amps	0.50 Amp @ 36 VAC/VDC	600 VAC	158 Amps	240 Amps	600 Amps

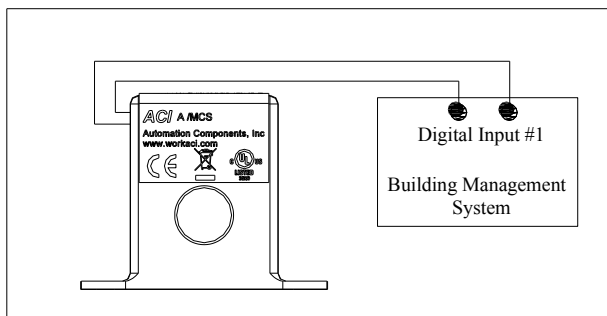


Figure 5: Digital Circuit

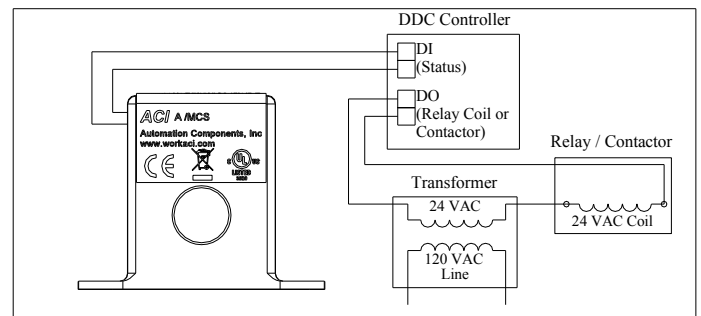


Figure 6: Analog Circuit

■ Troubleshooting

Problem	Solution
Current switch didn't activate (Test # 1)	Disconnect the wires from the current switch output. Measure the resistance across the contacts with an Ohmmeter. See Figure 7 below for resistance readings for a good unit.
Current switch didn't activate (Test # 2)	Verify that the current flowing in the conductor being monitored is above the fixed trip point as listed in the operating specifications. If the sensor is monitoring less than the fixed trip point See Figure 3 on Page 1.

ACI Model #	Resistance if switch open	Resistance if switch closed
A/MCS	Greater than 1 Meg ohms	Approximately 0.2 ohms
A/MSCS	Greater than 1 Meg ohms	Approximately 0.2 ohms

Figure 7

■ WEEE Directive

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with household waste. Do not burn.

