INTERFACE SERIES

Installation & Operation Instructions

MAO

Phone: 1-888-967-5224
Website: workaci.com

GENERAL INFORMATION

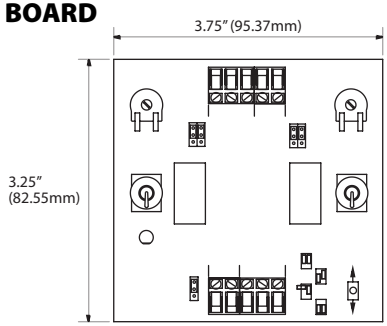
The MAO installs between a controller and an actuator to provide adjustable analog manual override when needed. In normal operation, two (2) analog signals route from the controller through the MAO to each actuator. Flip the override switch from automatic to manual on either MAO output and vary the analog signal independently. Each output can have a different span and can be analog current or voltage. When a switch is in manual position, an alarm output contact is made or broken (optional) to indicate override is in effect.

MOUNTING INSTRUCTIONS

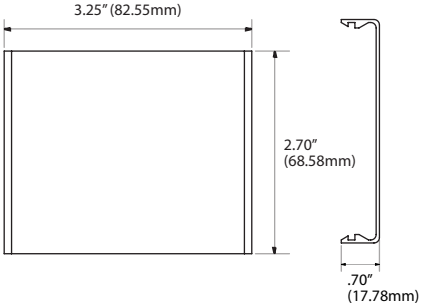
Ground yourself to discharge static electricity before touching any electronic equipment, as some components are static sensitive. The interface device can be mounted in any position. If circuit board slides out of snap track, a non-conductive "stop" may be required. Use only fingers to remove board from snap track. Slide out of snap track or push up against side of snap track and lift that side of the circuit board to remove. **Do not flex board. Use no tools.**

FIGURE 1: DIMENSIONS

BOARD



SNAP TRACK



WIRING INSTRUCTIONS

PRECAUTIONS

- **Remove power before wiring. Never connect or disconnect wiring with power applied.**
- **When using a shielded cable, ground the shield only at the controller end. Grounding both ends can cause a ground loop.**
- **It is recommended you use an isolated UL-listed class 2 transformer when powering the unit with 24 VAC. Failure to wire the devices with the correct polarity when sharing transformers may result in damage to any device powered by the shared transformer.**
- **If the 24 VDC or 24VAC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, DC/AC Transorb, Transient Voltage Suppressor (ACI Part: 142583), or diode placed across the coil or inductor. The cathode, or banded side of the DC Transorb or diode, connects to the positive side of the power supply. Without these snubbers, coils produce very large voltage spikes when de-energizing that can cause malfunction or destruction of electronic circuits.**
- **All wiring must comply with all local and National Electric Codes.**

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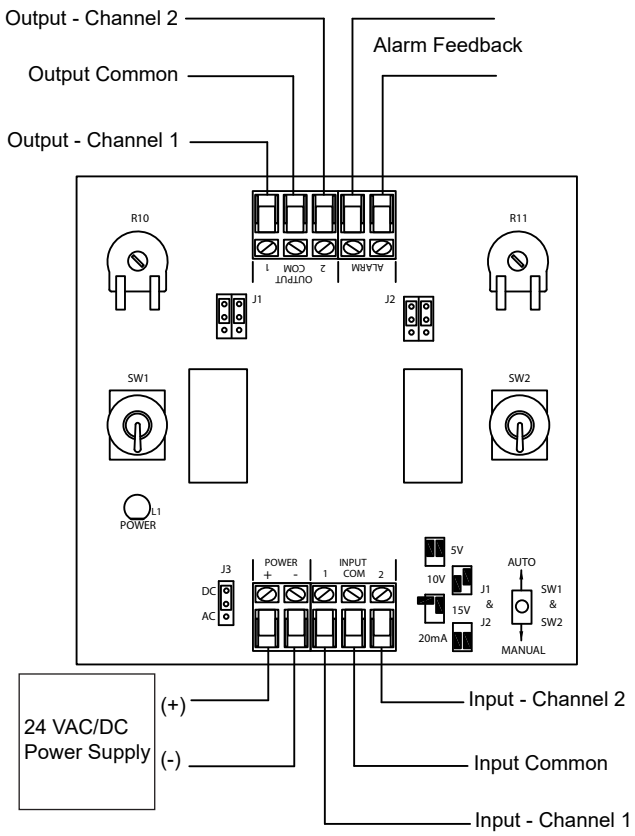
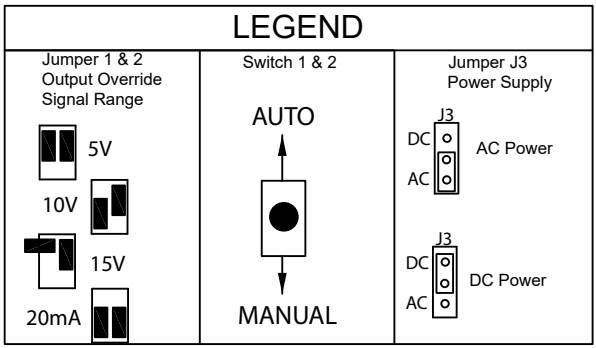
FIGURE 2: WIRING





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CALIBRATION

STEP 1) POWER JUMPERS Set jumper J3 for the correct power supply type (AC or DC).

STEP 2) SET SWITCHES To obtain the input signal on the output signal connection, set switches SW1 and SW2 in the "AUTO" position.

STEP 3) SET JUMPERS Set Jumpers J1 (Output 1) and J2 (Output 2) to the desired output signal range.

STEP 4) SET SWITCHES To obtain the output range set by jumpers J1 and J2 on the output signal connection, set switches SW1 and SW2 in the "MANUAL" position.

STEP 5) VARY POTS Vary the voltage on the output channels, while in "MANUAL" operation, by turning potentiometers R10 and R11

STEP 6) FEEDBACK The Alarm Feedback will indicate the mode of operation to the user by creating a shorted(standard version) or resistive (optional version) feedback.

Note: A/MAO-PMNT will be supplied with the Switches(SW1 & SW2) and Potentiometers(R10 & R11) installed on the backside(solderside) of the PCB.

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PRODUCT SPECIFICATIONS

NON-SPECIFIC INFORMATION	
Supply Voltage:	24 VAC or 24 VDC, +/- 10%
Supply Current:	100 mA maximum
Alarm Output (Feedback):	N.O. in auto, N.C. in manual (optional: N.C. in auto, N.O. in manual)
Optional Resistive Alarm Output:	3 Watts or 2A maximum (state resistance value when ordering)
Alarm Output Current Rating:	2A maximum
Override Analog Input Voltage Range:	0-24 VDC (Manual Mode)
Override Analog Input Current:	2A maximum (Manual Mode)
Override Analog Input (Selectable) Range (@ Impedance):	0-5 VDC @ 250Ω minimum 0-10 VDC @ 500Ω minimum 0-15 VDC @ 750Ω minimum 0-20 mA @ 750Ω maximum
Accuracy:	+/- 4% of maximum output
Override Analog Output Voltage Range:	0-24 VDC
Override Analog Output Current:	2A maximum or same as override input (Auto Mode)
Operating Temperature Range:	35 to 120°F (1.7 to 48.9°C)
Operating Humidity Range:	10 to 95% non condensing
Connections:	45° Captive Screw Terminal Blocks
Wire Size:	16 (1.31 mm²) to 26 AWG (0.129 mm²)
Terminal Block Torque Rating:	0.5 Nm (Minimum); 0.6 Nm (Maximum)
Storage Temperature:	0 to 150°F (-17.8 to 65.5°C)
Snaptrack Material:	Polyvinyl Chloride (PVC)
Snaptrack Flammability Rating:	UL94 V-0
Product Dimensions:	(L) 3.75" (W) 3.25" (H) 1.25" (95.25 x 82.55 x 31.75 mm)
Product Weight:	0.29 lbs. (0.131 Kg)
Agency Approvals:	RoHS2, WEEE

WARRANTY

The MAO Series is covered by ACI's Two (2) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's website: www.workaci.com.

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