



ADOM

SMART I/O™

DESCRIPTION

The Analog Dual Override Module (ADOM) allows users to override the analog signal provided to another device and provide a manually adjusted analog output value. Two separate analog input signals can be connected to the ADOM to control two separate analog devices on the output terminals.

Under normal operating conditions with the slide switch in the automatic ("AUTO") position, the ADOM passes the analog signal provided on its input terminals directly to its output terminals. By moving a slide switch to the manual ("MANUAL") position, the ADOM will provide a precise and stable analog voltage or current to the device connected to its output terminals and disconnect the analog sign provided on the input terminals.

Simple jumper adjustments can select analog output voltages of 0 to 5, 0 to 10 or 0 to 15 DC for use in the manual mode of operation. In addition, 0 to 20 milliamps (mA) can also be jumper selected for devices with current sensing input capability. An easily accessible potentiometer with an extended shaft allows continuous adjustment over the analog range. A 0 to 300 degree rotation of the potentiometer shaft from a fully counter-clockwise (CCW) position to a fully clockwise (CW) will allow adjustment over the analog voltage or current range.

When an input channel is in the manual mode, a red light emitting diode (LED) indicator will be illuminated providing the user with confirmation the particular analog channel has been placed in the manual mode of operation. Each analog channel has its own manual override indicator LED.

The ADOM can be powered with either AC or DC voltages. A green LED indicator is illuminated providing confirmation the ADOM has voltage applied at the power input terminals. The power supply inputs are protected from voltage transients or spikes that could damage the ADOM. No signal conditioning or protection is provided on the analog input or output terminals.

The module is placed in an open frame track that can be mounted to a metal panel or 35mm DIN-rail with appropriate mounting clips. The mounting clips are not provided with the ADOM.

APPLICATIONS

- Simulate Sensor or Controller Outputs
- Override Sensor or Controller Signals
- Diagnostic Testing for Proper Operation
- Calibration and tuning of PID and system performance
- Temporarily replace malfunctioning devices
- System Verification and Test

FEATURES

- Two Analog Channels
- Each Channel Independent Operation
- Manual Override Capability
- LED Indicator of Override Mode
- Analog Voltage or Current Signals
- Alarm Contact indicating an override condition is present
- AC or DC power source
- LED Power Indicator
- DIN-rail mounting
- Compact Size for Minimal Panel Space
- 2 Year Limited Warranty

SPECIFICATIONS

Power
 Nominal Input Voltage: 24 V AC or DC
 Input Voltage Range: 19.2-28.8 VAC
 or 21-32 VDC
 Maximum Consumption: 2.2 VA
 Transient Protection: Transzorb, ~ 43V

Environmental
 Operating Temperature: 0 °C to +50 °C,
 32 °F to 122 °F
 Storage Temperature: -40 °C to +70 °C,
 -40 °F to 158 °F
 Relative Humidity: 5% to 95% (non-condensing)

Alarm
 Output: Switch 1.0 A @ 24VAC
 N.O. in Auto Mode
 N.C. in Manual Mode
 Channels: Both switch contacts in
 parallel with output terminals

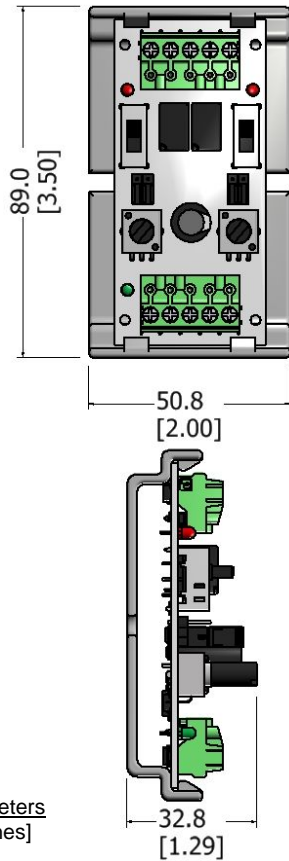
Auto Mode
 Analog Signal: Analog – Pass Through
 Voltage: ±42V peak
 Current: 1.0 A max.
 Protection Circuitry: None

Manual Mode
 Analog Signal: Analog – On Board
 Voltage or Current: 0-5 VDC, 250 ohm min.
 (Jumper Selectable) 0-10 VDC, 500 ohm min.
 0-15 VDC, 750 ohm min.
 0-20 mA, 750 ohm max.
 Signal Settings: Adjustable Potentiometer
 Protection Circuitry: None

Enclosure
 Dimensions: L 50.8 x W 89.0 x H 32.8 mm
 (2.00" x 3.50" x 1.29")
 Base: ABS, 94V-0 rated

Warranty
 Period: 2 Years (Limited)

DIMENSIONS



CONTACT



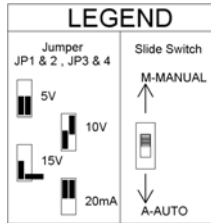
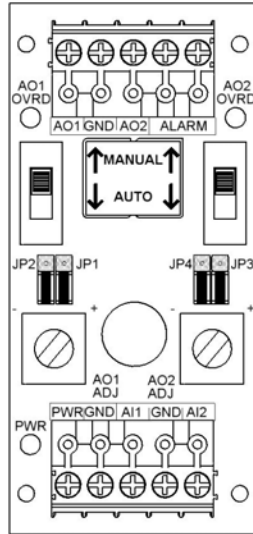
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CONTROLS AND INDICATORS

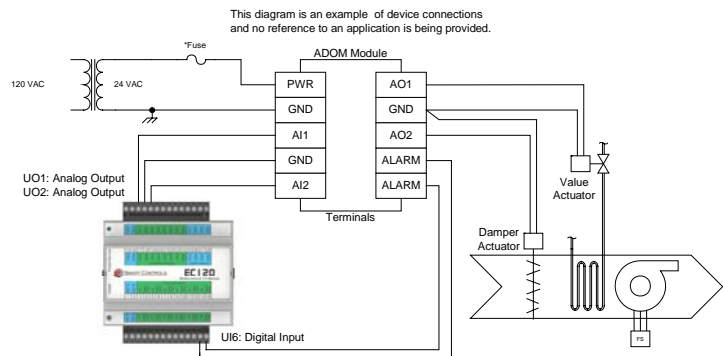


JUMPER SELECTION	
JP1 & JP2	Jumpers that control the selection of 0-5V, 0-10V, 0-15V and 0-20mA outputs in the manual mode for analog output AO1. See Legend for jumper positions.
JP3 & JP4	Jumpers that control the selection of 0-5V, 0-10V, 0-15V and 0-20mA outputs in the manual mode for analog output AO2. See legend for jumper positions.
MODE SELECTION	
AO1 Slide Switch	Selects automatic and manual mode of operation. Automatic mode passes input signals directly from analog input AI1 to the analog output AO1. Manual mode passes signals produced in the module to the analog output AO1. See legend for slide switch positions.
AO2 Slide Switch	Selects automatic and manual mode of operation. Automatic mode passes input signals directly from analog input AI2 to the analog output AO2. Manual mode passes signals produced in the module to the analog output AO2. See legend for slide switch positions.
MANUAL ADJUSTMENT	
AO1 ADJ	Adjusts the magnitude of the analog output AO1 value in the manual mode of operation. Adjusts the output value from 0-5V, 0-10V, 0-15V or 0-20mA depending on the jumper selection. Clockwise increases the value and counter clockwise decrease the value.
AO2 ADJ	Adjusts the magnitude of the analog output AO2 value in the manual mode of operation. Adjusts the output value from 0-5V, 0-10V, 0-15V or 0-20mA depending on the jumper selection. Clockwise increases the value and counter clockwise decrease the value.
LED INDICATORS	
PWR	LED is illuminated GREEN indicating AC or DC power is applied to the ADOM module.
AO1 OVRD	LED is illuminated RED indicating analog output AO1 is in OVERRIDE and in the manual mode of operation.
AO2 OVRD	LED is illuminated RED indicating analog output AO2 is in OVERRIDE and in the manual mode of operation.

EXAMPLE WIRING DIAGRAM

IMPORTANT WIRING INFORMATION

- 1) Secondary of Class 2 transformer should always be earth grounded to provide reliable communication and input readings from sensor and communicating devices.
- 2) *External fuse not supplied. Size fuse according to application load and not to exceed 5 Amps.



PWR	AC or DC Voltage input to power ADOM. Positive input for DC voltage.
GND	Ground for AC voltage power input, Analog Inputs and Analog Outputs. Negative input for DC voltage. Ground is connected and common on all GND terminals for both input and output terminals.
AI1	Channel 1 Analog Input voltage or current.
AI2	Channel 2 Analog Input voltage or current.
AO1	Channel 1 Analog Output voltage or current. In the automatic mode analog voltage or current is provided directly from Analog Input AI1. In manual mode the analog voltage or current is selected from the associated jumper setting and can be varied with the appropriate adjustment potentiometer.
AO2	Channel 2 Analog Output voltage or current. In the automatic mode analog voltage or current is provided directly from Analog Input AI2. In manual mode the analog voltage or current is selected from the associated jumper setting and can be varied with the appropriate adjustment potentiometer.
ALARM	Alarm Output contact. Terminals have an open connection when in the auto mode and a closed connection when in the manual mode. Only one channel needs to be in the manual mode for the output contact to be closed.
ALARM	