ASM1
ANALOG SCALING MODULE

FEATURES

- 24V AC operation
- Output can sink input's pull-up voltage
- Optional Zero & Span potentiometers
- Small size 1.10" by 2.19"
- Two mounting options

APPLICATIONS

- Analog 0 to 5V DC & 0 to 10V DC scaling
- Rescale non - standard sensors
- Rescale non - standard voltages

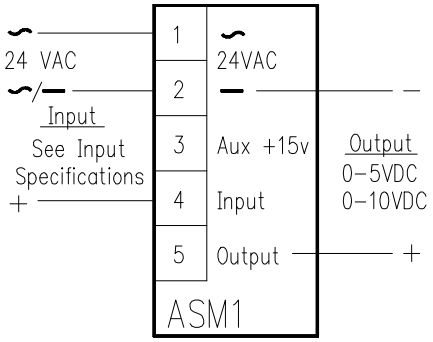
DESCRIPTION

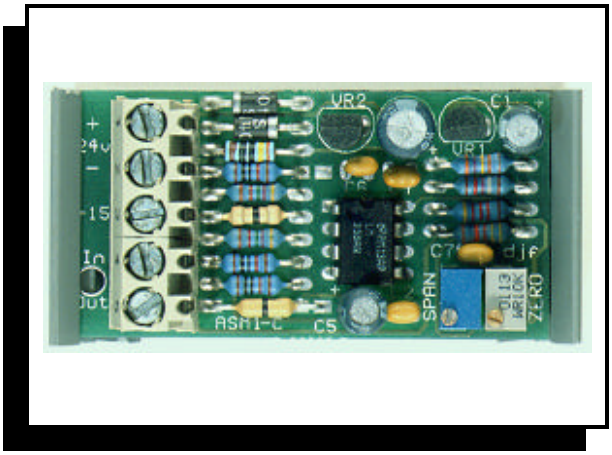
The ASM1 was designed as an analog signal scaling module to rescale control voltages or sensor signals to meet the input requirements of the various controllers. The ASM1 will also allow you to use existing sensors and scale the ASM1's output to match your controller's input requirement. The ASM1's output can sink the controllers input pull-up voltage on the application inputs. The ASM1 can be factory calibrated to your specific signal requirements. It can be snap - track mounted for panel use or be potted with detachable terminal block for field use.

OPERATION

The ASM1 uses a halfwave rectifier for 24V AC power input, with terminal 2 being common for the power supply, input common and output common. The input can be factory configured for voltage, current, or sensor signals either requiring a pull-up voltage or a load resistance. The signal then passes through two op-amp stages where it is scaled to the desired output signal.

WIRING CONFIGURATION





SPECIFICATIONS

SIZE:	1.10" L x 2.19" W x 0.75" H
MOUNTING:	2.187" RDI snap-track (supplied) or 2"L x 1"W Double sided foam tape
POWER:	24V AC, ±10%, 50/60Hz, 0.6VA
INPUT:	0 to 5V DC, 0 to 10V DC, 4 to 20 mA Temperature sensors: RTD'S, AD590 or 92, Staefa sensors. Actuator feedback potentiometers
INPUT IMPEDANCE:	Voltages ⩾ 100KΩ 4 to 20mA ⩾ 61.9Ω Sensors ⩾ 100KΩ
ACTION:	Dir. with 2 Hz filtering.
OUTPUT:	0 to 5V DC - Standard 0 to 10V DC - Standard Sensor voltages - Custom Voltage load 1kΩ minimum
ADJUSTMENTS:	ZERO & SPAN ± 20%
AMBIENT TEMP:	0 to 50° C.

ORDERING INFORMATION

ASM1/XXX/XXX/X/X (XX-XX)

- Temp or Resistance
- Mounting Option Code
- Sensor Reference Option Code
- Output Option Code
- Input Option Code

INPUT CODE OPTIONS

mA	-	4 to 20mA non-isolated with 62Ω load.
5V	-	0 to 5V DC Analog voltage.
10V	-	0 to 10V DC Analog voltage.
VDC	-	Analog DC voltage (specify).
OHMS	-	3 wire potentiometers (specify resistance)
AD590	-	Linear temperature sensor * (*specify temperature range)
RTD-100	-	RTD 100Ω temperature sensor **
RTD-1K	-	RTD 1KΩ temperature sensors **
RTD-2K	-	RTD 2KΩ temperature sensors ** (**specify RTD type, temperature coef. and temperature range)

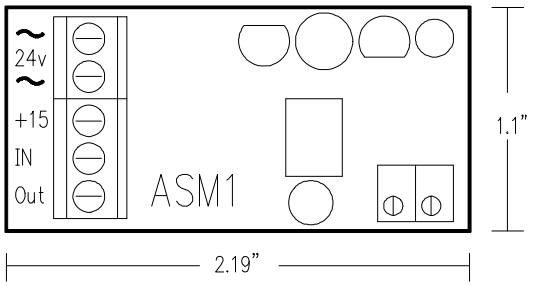
OUTPUT CODE OPTIONS

5V	-	0 to 5V DC
10V	-	0 to 10V DC
VDC	-	DC voltages - specify
BC-X	-	3V span starting @ X voltage (3,6,9,12)
BC-15	-	1 to 15V DC special (24VDC Regulator)
KLIMO	-	3.75V to 2.25V DC
SM2-T30X	-	T30 Exp (in#0) voltage

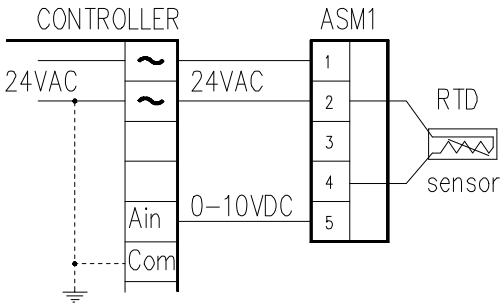
SENSOR REFERENCE OPTIONS

SA	-	Stand alone sensor (pull-up resistor and reference voltage or load resistor applied to ASM1's high impedance input)
PI	-	Parallel input to controller (no pull-up or load resistor or reference voltage applied to ASM1's high impedance input).

PHYSICAL CONFIGURATION



TYPICAL SENSOR APPLICATION



MOUNTING CODE OPTIONS

S	-	2.187" Snap Track
P	-	Potted enclosure double stick foam tape

CALIBRATION ADJUSTMENTS

Output adjustments are made with the ZERO and SPAN potentiometers on the ASM1. A clockwise ZERO adjustment increases the output level and should be made with a 0% input signal. A clockwise SPAN adjustment increases the signal differential and should be made with a 100% input signal.

ORDERING CODE EXAMPLES

ASM1/10V/BC6	-	0 to 10V DC input signal, to a 6 to 9V DC output signal) for Barber Colman-Seibe actuators)
ASM1/mA /10V	-	4 to 20mA input signal, to a 0 to 10V DC output signal (for improved 10V input resolution).
ASM1/270Ω/10V	-	0 to 270Ω feedback potentiometer signal, to a 0 to 10V DC output signal (for feedback status).
ASM1/AD590/10V/P 0-100	-	AD590 stand-alone sensor (0 to 100°F) signal, to a 0 to 10V DC output signal.
ASM1/RTD-1K/5V/S 0-100	-	RTD 1KΩ sensor - paralleled inputs (0-100°F) signal, to a 0 to 5V DC output signal.
ASM1/mA /KLIMO	-	4 to 20mA input signal, to a 3.75 to 2.25V DC output signal (for Staefa's Klimo Controllers).