

### AIFO-200 Analog to Frequency Conversion Module

- 0-10 Vdc and 4-20 mA Inputs
- 0.05% Linearity
- Offset and Gain Adjustments
- 1 - 20 KHz Output Switch Selectable
- Inverse proportional Outputs Available
- Multiple Position Mounting Bracket
- NPN Open Collector or Driven Output

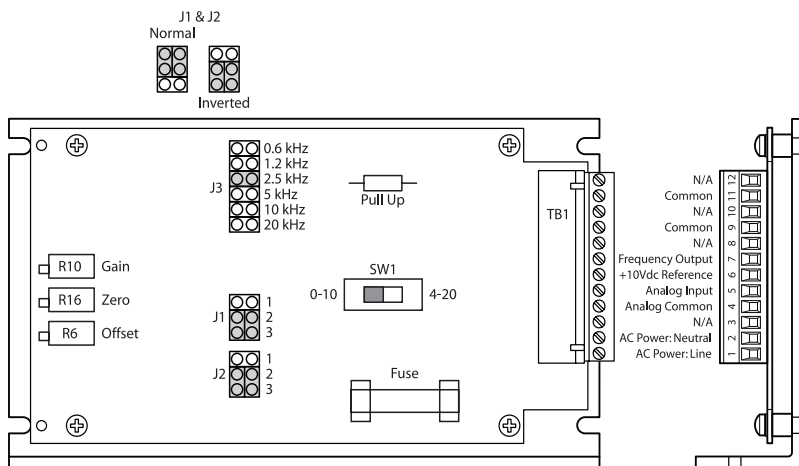


## Product Information

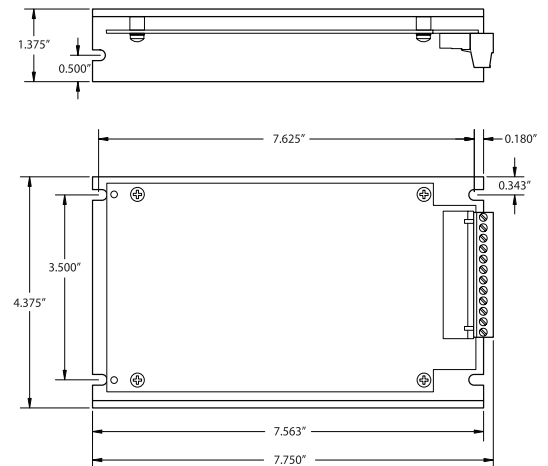
### Description

The model AIFO-200 is an interface between analog output devices and frequency input devices. In typical applications a process is monitored by a transducer, PLC, PC or some other device that provides a 0-10 Vdc or 4-20 mA signal. This signal is converted to a frequency and can be used to provide the lead signal to a closed loop controller such as our MicroSpeed 196 or as the input to an electronic counter, tachometer, etc. A regulated 10 Vdc signal is provided on the terminal strip for an input to the module if required. Zero and span potentiometers are provided to calibrate the output frequency to your requirements.

### Electrical Connections • AIFO-200



### Dimensional Drawings • AIFO-200



**Calibration Procedure**

**Note A:** The AIFO is factory calibrated for 0-10 Vdc Input and 0-2500 Hz Output.

**Note B:** 0 Vdc Input can be obtained by connecting TB1-4 Common to TB1-5 High.

A frequency measuring device must be used to calibrate the AIFO-200. Connect the measuring device to Terminal TB1-9 (Common) and TB1-7 (Frequency Output).

Determine if your application requires a pull-up resistor for the frequency output. If not required, remove resistor R20 labeled "PULL-UP" on the circuit board.

Turn all potentiometers fully counterclockwise.

Now turn R16 zero potentiometer 11 turns clockwise.

**0 -10 Vdc or 20 mA Input with Inverse Proportional Output:**

1. Switch SW1 to the proper position.
2. Place jumpers J1 and J2 in the inverse position.
3. Place jumper J3 in the frequency range that you desire.
4. Apply 10 Vdc or 20 mA to the analog input terminals.
5. Turn the R6 offset potentiometer until the output frequency LED starts blinking 2-times per second or less.
6. Turn the R16 zero potentiometer for a 0 Hz reading on your meter. The output frequency LED will be steady, either ON or OFF. A final half-turn counterclockwise of R16 will complete this procedure. (A final 2-turns counterclockwise with 4-20 mA).
7. Apply 0 Vdc or 4 mA to the analog input terminals.  
TB1-5 High  
TB1-4 Common
8. Adjust the R10 gain potentiometer clockwise until your desired frequency is reached.

**0 -10 Vdc Input with Proportional Output:**

1. Switch SW1 to the 0-10 Vdc position.
2. Place jumpers J1 and J2 in the normal position.
3. Place jumper J3 in the frequency range that you desire.
4. Apply 0 Vdc to the analog input terminals.  
TB1-5 High  
TB1-4 Common
5. Turn the R16 zero potentiometer until the output frequency LED starts blinking. You may have to turn clockwise or counterclockwise.
6. Turn the R16 zero potentiometer for a 0 Hz reading on your meter. The output frequency LED will be steady, either ON or OFF. A final half-turn counterclockwise of R16 will complete the zero procedure.
7. Apply 10 Vdc to the analog input terminals.  
TB1-5 High  
TB1-4 Common
8. Adjust the R10 gain potentiometer clockwise until your desired frequency is reached.

**4-20 mA Input with Proportional Output:**

1. Switch SW1 to the 4-20 mA position.
2. Place jumpers J1 and J2 in the normal position.
3. Place jumper J3 in the frequency range that you desire.
4. Apply 4 mA to the analog input terminals.  
TB1-5 High  
TB1-4 Common
5. Turn the R6 offset potentiometer clockwise until the output frequency LED starts blinking two-times per second or less.
6. Turn the R16 zero potentiometer for a 0 Hz reading on your meter. The output frequency LED will be steady, either ON or OFF. A final two turns counterclockwise of R16 will complete the zero procedure.
7. Apply 20 mA to the analog input terminals.  
TB1-5 High  
TB1-4 Common
8. Adjust the R10 gain potentiometer clockwise until your desired frequency is reached.

**Specifications • AIFO-200**

**Input Power**

Voltage.....	115 Vac ± 10% Standard 230 Vac ± 10% Optional
Frequency .....	50 - 60 Hz
Fuse.....	1/16 Amp at 115 Vac 1/32 Amp at 220 Vac
Wattage .....	4 VA

**Analog Input**

Voltage.....	0 - 10 Vdc
Voltage Input Impedance .....	500K Ohms
Current .....	4 - 20 mA
Current Input Impedance .....	500 Ohms

Reference Voltage ..... 10 Vdc at 10 mA Maximum

**Output Signal**

Frequency .....	Jumper Selectable: 0 - 600 Hz      0 - 1.2 kHz 0 - 2.5 kHz    0 - 5 kHz 0 - 10 kHz     0 - 20 kHz
Digital Signal Type.....	NPN Open Collector with Internal Pull-up Resistor. <i>Note: Resistor Can Be Removed.</i>
Level .....	0 - 15 Vdc Squarewave with Internal Pull-Up Resistor
Output Transistor .....	NPN

**Physical / Environmental**

Operating Temperature .....	0° C to +70° C
Storage Temperature.....	-65° C to +105° C
Mounting .....	Chassis
Electrical .....	Removable Terminal Strip

Specifications subject to change without notice.

ES-992- Rev E

