

# FREQUENCY TRANSDUCER

MODEL AFT-

0.05% ACCURACY

## DESCRIPTION

The AFT Frequency Transducer combines wide frequency range capability with high-accuracy measurement. The AFT can accurately measure frequencies up to 1000Hz with some models measuring from dc to full-scale. For applications requiring better resolution, the AFT has standard models with narrower frequency ranges. All standard models accept voltages from 3V to 575V. The AFT comes with standard outputs of 0-1mAdc, 4-20mAdc, 0-20mAdc as well as 0-5Vdc and 0-10Vdc.

## FEATURES

- High accuracy over wide frequency ranges.
- Each model covers all input voltages from 3V to 575V.

## APPLICATION

- Isolated instantaneous indication of frequency required.



INPUT FREQUENCY (Hz)	STANDARD OUTPUTS MODEL AFT-					
	0-1mAdc	0-10Vdc	0-5Vdc	4-20mAdc	4-20mAdc*	0-20mAdc
45-55	050-10B	050-10D	050-10X5	050-10E	050-10E2	050-10EA
55-65	060-10B	060-10D	060-10X5	060-10E	060-10E2	060-10EA
375-425	400-50B	400-50D	400-50X5	400-50E	400-50E2	400-50EA
0-10	010B	010D	010X5	010E	010E2	010EA
0-55	055B	055D	055X5	055E	055E2	055EA
0-65	065B	065D	065X5	065E	065E2	065EA
0-100	100B	100D	100X5	100E	100E2	100EA
0-425	425B	425D	425X5	425E	425E2	425EA
0-1000	1000B	1000D	1000X5	1000E	1000E2	1000EA



115Vac, 50/60Hz instrument power required on all standard units.

Optional 230Vac Instrument Power - Add suffix "-22"

\* Output is loop-powered from 15-24Vdc (also requires instrument power)

\*\* Optional 24Vdc Instrument Power - Add suffix "-24"

Consult factory for special frequency ranges.

## ORDERING INFORMATION

Example: 55-65Hz Input with 0-5Vdc Output and 230Vac Instr. Power.

AFT-060-10X5-22

## SPECIFICATIONS

### INPUT

Frequency Range ..... See Table  
 Voltage Range ..... 3-575V  
 Burden ..... 1.25VA  
 Overload ..... 575V

### DIELECTRIC TEST

Input to Output/Instrument Power ..... 3250Vac  
 Instrument Power to Output ..... 2200Vac  
 Case to Input/Output/Instrument Power ..... 2200Vac

### INSTRUMENT POWER

Standard ..... 115Vac, 50/60Hz,  $\pm 15\%$ , 15VA max.  
 "-22" Option ..... 230Vac, 50/60Hz,  $\pm 15\%$ , 15VA max.  
 "-24" Option ..... 24Vdc,  $\pm 10\%$ , 5W max. \*\*

### OUTPUT

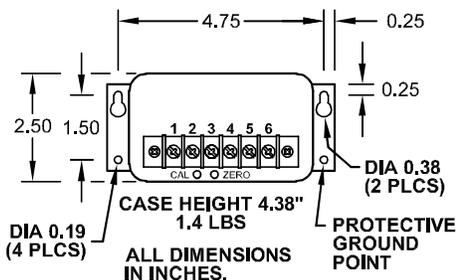
Loading  
 "B" models ..... (0-1mAdc) ..... 0-10k $\Omega$   
 "D" & "X5" models ..... (0-10, 0-5Vdc) ..... 2k $\Omega$  min.  
 "E", "E2" & "EA" models .. (4-20 & 0-20mAdc) ..... 0-500 $\Omega$   
 Response Time ..... <200ms

ACCURACY .....  $\pm 0.05\%$  Rdg.  $\pm 0.05\%$  Span  
 Output Ripple .....  $\pm 1.0\%$  F.S.

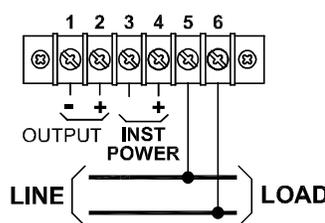
### TEMPERATURE

Operating Range ..... -20°C to 60°C  
 Effect .....  $\pm 0.005\%/^{\circ}\text{C}$

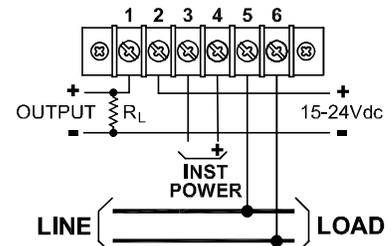
## CONNECTION DIAGRAMS AAND CASE DIMENSIONS



### "B", "D", "X5", "E", "EA" MODELS



### "E2" MODELS



Dwg # 0902-00884-B Rev-A



**Ohio Semitronics, Inc.**  
 What Can We Measure for You?

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## INSTALLATION INSTRUCTIONS

1. Installation should be performed by qualified electricians only!
2. Verify that electrical service is disconnected before making any electrical connections.
3. Branch circuit protection is required to be provided in accordance with the National and Local codes of the inspection authority.
4. Route wires as required and secure to terminals per connection diagram on this sheet and on the unit.
5. Attach the Protective Ground Point (  ) to earth ground by mounting to a grounded enclosure or by attaching a ground wire. Paint barrier on can must be broken by using an internal-tooth lock-washer or similar device.

## OPERATING INSTRUCTIONS

1. This unit is intended for indoor use at altitudes up to 2000 meters.
2. Transient overvoltages according to Installation Category (overvoltage category) II, pollution Degree 2.
3. The output signal is intended to be "Not accessible to the user." To prevent contact with live circuits, the transducer is required to be mounted in an enclosure that requires the use of a tool for access.
4. If cleaning of the exterior surface is necessary, de-energize all services of supply (both measuring and instrument power circuits) and brush with a soft brush or blow off with low-pressure air. Use appropriate eye protection. Not suitable for hose-down cleaning.
5. Maximum relative humidity 80 percent for temperatures up to 31°C decreasing linearly to 50 percent relative humidity at 40°C.
6. Maximum operating temperature range is -20°C to 60°C.

## WARRANTY STATEMENT

Ohio Semitronics Inc. warrants this unit to be free of defects in material and workmanship for a period of five years from date of shipment. This unit must not be used in any manner other than as specified in this document.