

# NFS-100 Non-Ferrous Sensor

Patent Pending

999357

- Senses all non-ferrous media
- Glass, Ceramic, AlOx, etc.



**Signal Conditioner**



**Sensor**

- Power 24 VDC
- Signal output 0-10VDC
- 10-element bar graph display
- DIN-rail or panel mount
- 1.25 inch NPT body
- All steel construction
- Replaceable sensor blade
- Maximum pressure 80 PSI

The NFS100 system provides the capability of accurately monitoring the flow rate of any non-ferrous media. Using a simple thin blade, which bends with media flow, an output signal is produced that is directly proportional to actual flow rates.

Simply specify the media type and size, the expected flow rate range, and the proper model and blade size will be selected and a factory calibration sheet provided. The signal conditioner provides a 0-10VDC output signal for its 10-element bar graph that can also be used for remote display. Two replacement blades are included in the base price.

The NFS-100 provides the ability to comply with the requirements of AMS2432.

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# NFS-100 Non-Ferrous Sensor

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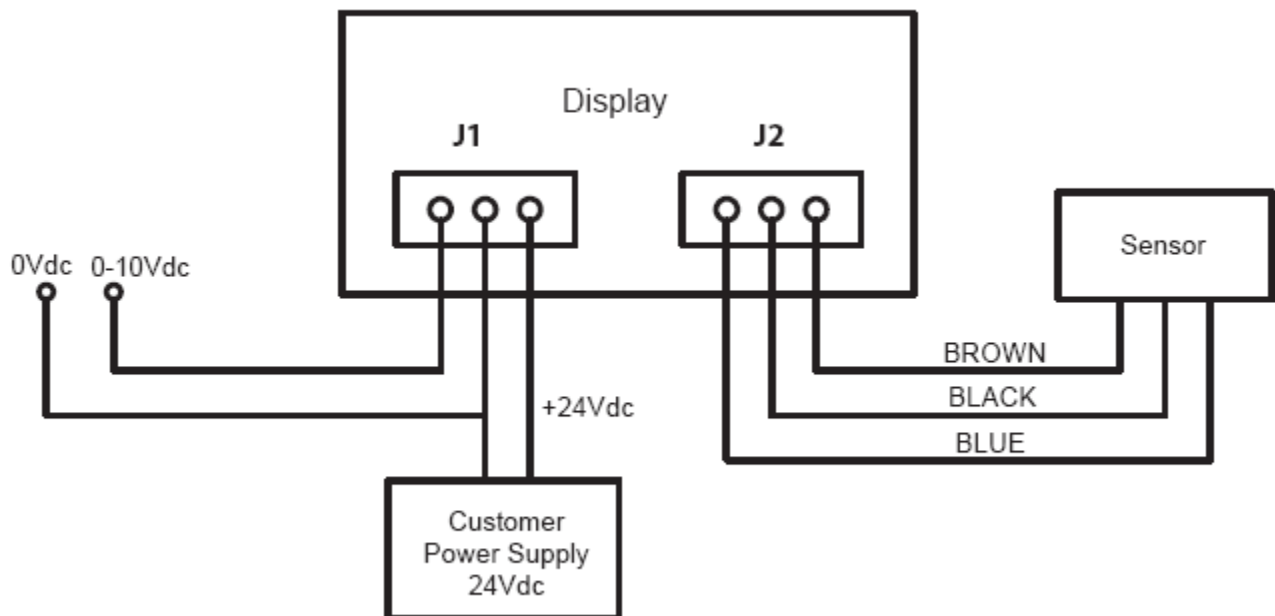
Theory: Falling media bends a thin blade. The bending displacement is monitored and the signal is converted into a 0-10 VDC format. The type and size of the media influence the bending of the blade, so the unit must be factory calibrated. The NFS-100 can easily be recalibrated with the adjustments on the signal conditioner panel.

1. Adjust "zero" until both LEDs are off.
2. Operate the machine at the maximum expected flow rate.
3. Adjust the "Gain" until all 10 elements of the bar graph are illuminated.
4. Cycle the machine and adjust the "Time Delay" to stabilize the output signal.

The Field sensor output signal ranges from 9.0 VDC at no-flow to 1.0 VDC at maximum flow. The field sensor is factory adjusted to approximately 9.0 VDC output. Further adjustment is made with the "zero" control.

The "Gain" setting is adjusted to provide a 0-10 VDC signal for remote display. The customer must decide what value or full scale range is implied when the output signal is 10 VDC.

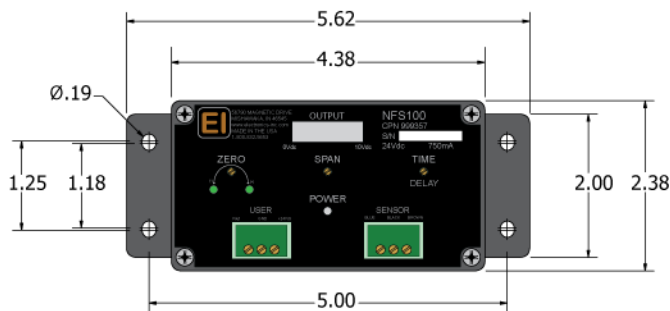
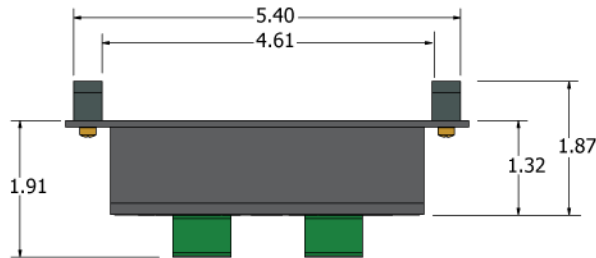
Natural fluctuations in flow rate and vibrations from adjacent machines may cause the output signal to oscillate. These oscillations can be damped by adjusting the "Time Delay" from 0.1 Second to 10 Second delay.



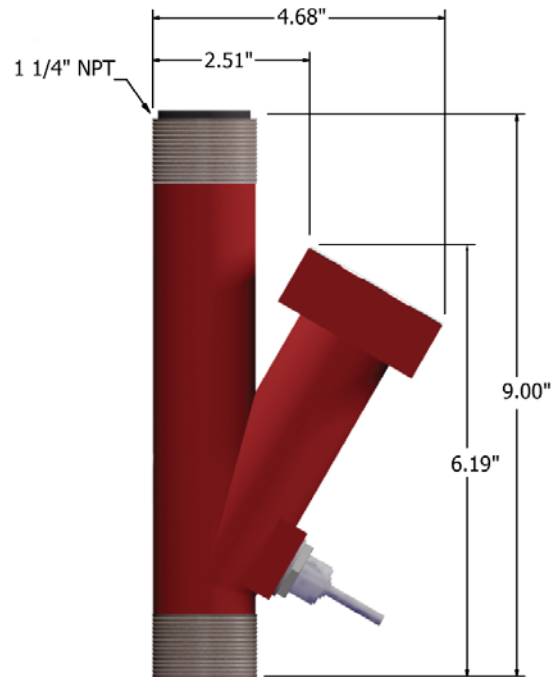
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# NFS-100 Non-Ferrous Sensor

Top view of conditioner



Front view of conditioner



Side view of Sensor

## Signal Conditioner:

Power:	24 VDC @ .75 Amp
Input signal range:	0-10 VDC
Output signal range:	0-10 VDC
Zero offset range	±1.0 VDC (centered at 9.0 VDC)
Gain range:	0.5 to 20.0 V/V
Bar graph range:	0-10 VDC

## Sensor:

1.25 inch NPT steel pipe construction											
Max pressure:	80 PSI										
Height:	9.0 inches										
Weight:	5.25lbs										
Blade:	<table border="1"> <thead> <tr> <th>CPN</th> <th>Thickness</th> </tr> </thead> <tbody> <tr> <td>920329</td> <td>0.010"</td> </tr> <tr> <td>920330</td> <td>0.012"</td> </tr> <tr> <td>920325</td> <td>0.015"</td> </tr> <tr> <td>920335</td> <td>0.018"</td> </tr> </tbody> </table>	CPN	Thickness	920329	0.010"	920330	0.012"	920325	0.015"	920335	0.018"
	CPN	Thickness									
	920329	0.010"									
	920330	0.012"									
920325	0.015"										
920335	0.018"										
Accuracy:	6% of FS										
Temp range (operating):	0°C-51°C										
Temperature coefficient:	9 mV/ °C										