NEMA 4X Enclosure   **NEMA 1 Enclosure**

**Insertion
Sensor**

**Submersible Sensor
with Light Shield**   **Submersible Sensor**

PRODUCT DESCRIPTION

The Model 850 is an innovative turbidimeter that utilizes an insertion-type sensor. A submersible sensor is available for open channel applications. Since the sensor can be inserted in any size pipe, costly by-pass systems are not required. The design eliminates the effects of fluid color. In-situ measurements provide instantaneous accurate readings and a choice of isolated linear outputs is supplied as standard. A 4-position calibrated range dial allows for the selection of four NTU ranges.
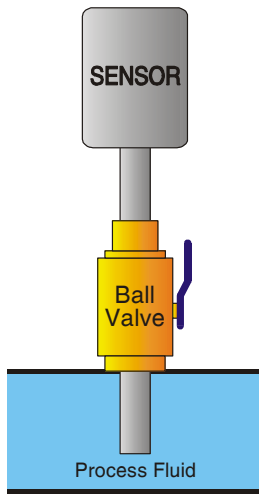
FEATURES

- **Wide dynamic range**
- **In-line measurements assure maximum accuracy**
- **Hot-tap installation permits uninterrupted flow**
- **Linear-isolated output**

- **Optional alarms, battery power**
- **Use in any size pipe**
- **High accuracy and reliability**
- **Insensitive to visible colors, flow, temperature & pressure**
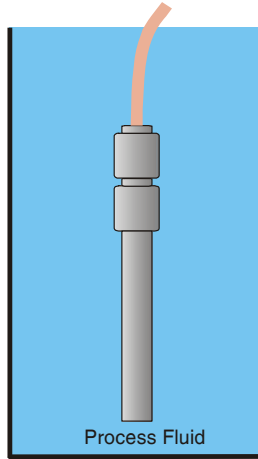- **One-year limited warranty**

PRINCIPLE OF OPERATION

This turbidimeter uses a prefocused incandescent lamp to direct a beam of light through the process fluid. Particulate matter in the fluid scatters light in proportion to particulate concentration. The scattered light is received by a silicon detector that generates a current signal proportional to the particulate concentration. The electronic signal converter amplifies and scales the current signal to provide a linear readout on a digital meter with an isolated output signal.
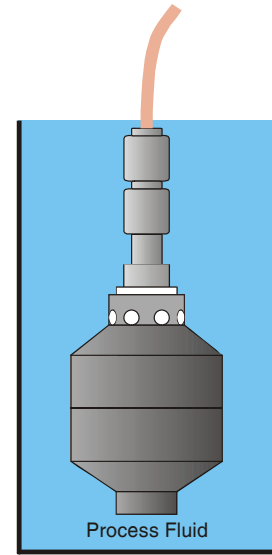
MODEL 850 TYPICAL SENSOR MOUNTING

INSERTION SENSOR

SUBMERSIBLE SENSOR

SUBMERSIBLE WITH LIGHT SHIELD

SPECIFICATIONS

SENSORS

	Insertion Probe	Submersible Probe
Type		
Size	Pipes greater than 2 inches	Open channel/tanks
Wetted Parts	316 Stainless, glass	316 Stainless, glass, PVC cable
Process Temp.	$15^{O}F$ to $230^{O}F$ ($-10^{O}C$ to $110^{O}C$)	$15^{O}F$ to $140^{O}F$ ($-10^{O}C$ to $60^{O}C$)
Pressure	0 to 150 psig	0 to 50 psig(110 feet of water)
Mounting	1" NPT male	Cable or rigid mount
Dimensions		
Diameter	7/8"	7/8"
Length	12"	8"
Junction Box	2 X 4 X 2"	None

TRANSMITTER

Display	3-1/2 digit LCD indicator
Range	0 to 2, 0 to 20, 0 to 200, 0 to 2000 NTU switch selectable
Input	Model 850 Sensor
Output	4 to 20 mA into 600 ohms max. isolated, other outputs available
Resolution	0.05%
Repeatability	Range dependent 0.01 NTU
Accuracy	2% of full scale
Ambient Temperature	$32^{O}F$ to $120^{O}F$ ($0^{O}C$ to $50^{O}C$)
Alarms	Optional dual alarms
Enclosure	NEMA 1 or NEMA 4X
Dimensions	
NEMA 1	11" **W** x 6" **H** x 4" **D**
NEMA 4X	11-7/8" x 7-1/4" x 6-3/4"
Mounting	
NEMA 1	Panel or wall mount
NEMA 4X	Wall or pipe mount
Power	115 or 230 VAC @ 50/60 Hz, 20 Watts. Optional 12 & 24 VDC etc.
Shipping Weight	16-24 lbs. depending on options

CONFAB
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