

## PRODUCT DESCRIPTION

The Model 851 Turbidity Sensor is a rugged DC-powered insertion-type probe that measures turbidity as a standalone unit. Since the sensor can be inserted into any size pipe, costly bypass systems are not required. The design eliminates the effects of fluid color. In-situ measurements provide instantaneous, accurate readings and the sensor has an isolated linear 4-20mA output for connection to control/monitoring systems. Calibrated range switches allow for the selection of four NTU ranges.

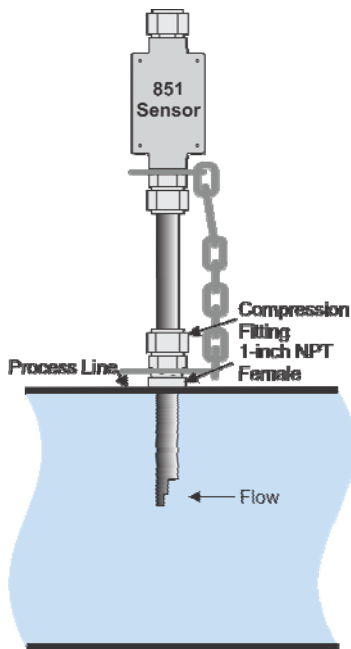
## FEATURES

- **Wide dynamic range**
- **Rugged and reliable**
- **Inline measurements assure maximum accuracy**
- **Low cost**
- **Hot-tap installation permits uninterrupted flow**
- **Linear-isolated output compatible with 4-20mA control/monitoring systems**
- **Use in any size pipe**
- **Insensitive to visible colors, flow, temperature & pressure**
- **One-year limited warranty**

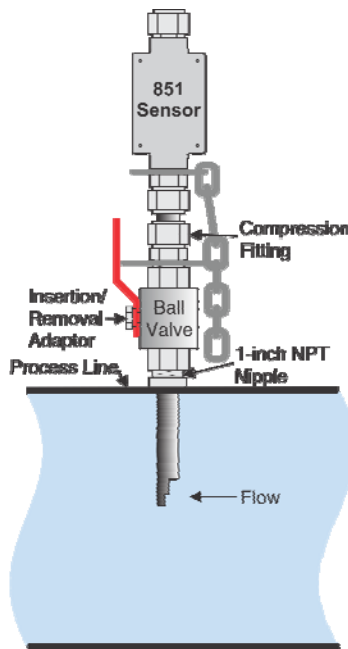
## PRINCIPLE OF OPERATION

This turbidity sensor uses a pre-focused 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 current signal is converted, amplified and scaled to provide a linear, isolated 4-20mA output signal.

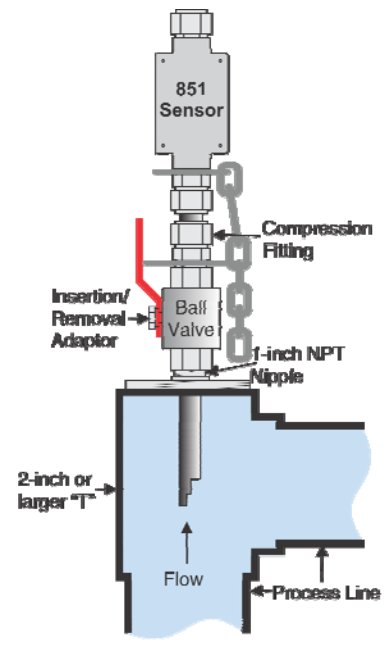
## MODEL 851 TYPICAL SENSOR MOUNTING



**Large Pipe or Tank Installation**



**Large Pipe or Tank Installation with Insertion/Removal Adaptor**



**Pipe "T" Installation with Insertion/Removal Adaptor**

### SPECIFICATIONS

Type	Insertion Sensor
Range	0 to 2, 0 to 20, 0 to 200, 0 to 2000 NTU switch selectable
Power	24 VDC @ 100mA standard, 12VDC @ 200mA optional
Output	4-20mA DC into 600 ohms max. isolated, other outputs available
Pipe Size	Greater than 2 inches
Wetted Parts	316 Stainless, glass
Process Temperature	15°F to 230°F (-10°C to 110°C)
Pressure	0 to 150 psig
Mounting	1" NPT male
Resolution	0.001 NTU
Repeatability	0.001 NTU
Accuracy	1% of scale
Ambient Temperature	32°F to 120°F (0°C to 50°C)
Enclosure	Dust Proof, Waterproof
Shipping Weight	6-10 lbs. depending on cable length
Dimensions	
Tube Diameter	7/8"
Tube Length	12"
Junction Box	2.5 X 3 X 6"
Overall Length	21"



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