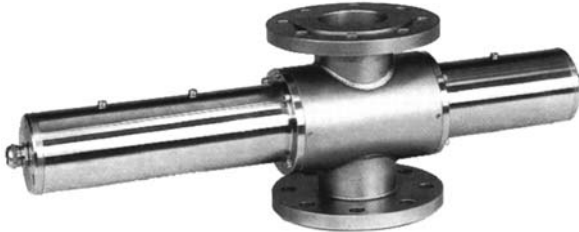


## Model TSW (210-F)



- **Low maintenance**
- **Extended calibration interval: Typical 24 month**
- **Sight glass material: Sapphire**
- **Sight glass cleaning: Via cleaning jet probe**
- **Cleaning in place (CIP)**
- **Process connection: DIN, ANSI, SMS, NPT, APV, TH, ...**
- **Optional air purge connection: 4mm**

### Description:

The turbidity sensor Model TSW uses the principle of 12° forward scattered light to detect suspended particles in liquids. The transmitter model Messenger is required to use this sensor. The system has been designed for continuous operation with long life time. A ratio measurement of direct- / scatter light assure highly reliable and repeatable measurement results. The special design of lamp- and detector optic allow measurements of extreme low particle concentrations in ranges down to ppb level. Inaccuracies caused by product colour, lamp ageing or window coating will be compensated. The forward scatter measuring results are nearly independent of particle size and will correlate to product concentration. Calibration can be done in multiple ranges and measurement units like EBC, ppm, mg/l, etc.. The sensors can be installed into almost any type of pipe. Process connection, pressure, temperature, gasket material, etc will be application specific. Optional cleaning jets will allow a cleaning of the sapphire windows in determined intervals.

### Applications:

- Filtration / Ultra filtration of liquids
- Product quality
- Water in fuel
- Oil in water / Water in oil

### Operational areas:

- Chemical industry
- Petrochemical industry
- Power plants
- Brew & Beverage

### Technical Data:

Line size:	DN 25 – DN 125 / ½" - 5"	Protection class:	IP65 / NEMA 4X
Process pressure:	PN16 / ANSI class 150	Measurement range:	typical 0–0,5ppm, 0–500ppm
Process temperature:	maximum 140°C	Reproducibility:	± 1 %
Sensor material:	1.4404 / 316L	Detector system:	Silica diodes
Sight glass material:	Sapphire	Sterilization:	CIP (cleaning in place)
Gasket material:	application specific		