



Turbidity probes. 4/20 mA and RS 485 output.

These unique probes have been designed to measure turbidity based on nephelometric method (ISO 7027 – EN 27027).

The probes are available for submersible and in-pipe installations.

The measuring system consists of:

- Infrared light source,
- 90 degree scattered light detector,
- Detector of the clean lens status,
- 2-wire 4/20 mA analog output,
- RS 485 digital output
- Nozzle for the autoclean by external pressured air (TU 321).

Through commands from the Personal Computer hyperterminal, the serial interface allows the measuring and check signals transmission, the scale selection, the analog or digital operating mode selection, the zero and sensitivity calibration.

Thanks to its 4/20 mA isolated output, the probe can be directly connected to a PLC or data logger, and configured in NTU, g/l, % or other.

The most common applications of this probe include: water quality monitoring, municipal and industrial water treatment and aquaculture.

Principle of operation

The turbidity follows the back nephelometric method (ISO 7027 – EN 27027).

A light beam is sent to the sample through an optical lens.

The 90 degree scattered light by suspended particle is collected by the probe through a second lens and it is converted in an electric signal proportional to the turbidity of the sample.

The probe uses an infrared light and the measuring is not affected by the color of the sample.



Technical specifications

Scale: 0/4,000 – 0/40,00 – 0/400,0

Sensitivity NTU: 70/130 %

Zero NTU: ± 0,400 NTU all scales

Power supply: 9/36Vdc

Analog output: 4/20 mA isolated current Loop

Load: 600 Ω max. at 24 Vdc

Digital output: RS 485

Room temperature: -5/50 °C

Max. pressure: 1 bar at 25 °C (TU 321); 6 bar at 25 °C (TU 311)

Autoclean: by pressure air 3 bar max (TU 321)

Dimensions TU 321: L=165 mm total, D= 60 mm

Dimensions TU 311: L=143 mm total, D= 40 mm

Body: PVC

Cable: 10 m (100 m max.)

Protection: IP 68