

High turbidity and suspended solids probes. 4/20 mA and RS 485 output.

These unique probes have been designed to measure high turbidity and suspended solids based on back scattering technology.

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

The measuring system consists of:

- Infrared light source,
- Detector of scattered light by suspended particles,
- 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 8355).

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 FTU, g/l, % or other.

The probe can be connected to B&C Electronics controller BC7335, BC 7635, BC 7635.010, BC 7687 or BC 6587, which provide the power, the measuring readout, 2 set-points, the alarm relay and the holding function for an external cleaning cycle.

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

Principle of operation

The turbidity and suspended solid measurement follows the back scattering method.

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

The back scattered light by suspended particle is collected by the probe through a second lens, detected and 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.



TU 8355

TU 8555

Technical Specifications

Scale: 0/100 – 0/1000 – 0/10000 FTU

Sensitivity FTU: 70/130 %

Zero FTU: ± 10 FTU all scales

Power supply: 9/36Vdc

Analog output: 4/20 mA isolated current Loop

Load: 600 Ω max. at 24Vdc

Digital output: RS 485

Room temperature: -5/50 °C

Max. pressure: 1 bar at 25 °C (TU 8355); 6 bar at 25 °C (TU 8555)

Autoclean: by pressure air 3 bar max (TU 8355)

Dimensions TU 8355: L=165 mm total, D= 60 mm

Dimensions TU 8555: L=143 mm total, D= 40 mm

Body: PVC

Cable: 10 m (100 m max.)

Protection: IP 68

The technical specifications may be changed without notice

Accessories

BC 8701 RS485/USB converter for power supply through PC connection

Accessories for TU 8355

0012.450043 Extension pipe adapter
0012.000624 Swivel mounting + 0012.450043
0012.440040 33 m PVC tubing for pressured air

Accessories for TU 8555

TU 910 Overflow cell
YAT75M0021 Flow Tee assembly for in-pipe installation