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TU 8355 – TU 8555

Turbidity & Suspended Solids Sensors

TU 8325 – TU 8525

Turbidity Sensors

Features

- Infrared light source.
- Detector of scattered light by suspended particles.
- Detector of the clean lens status.
- 2-wire 4-20 mA analogue output.
- RS 485 digital output.
- Nozzle for the auto clean by external pressured air (TU 8355 & TU 8325).
- Detector of scattered light by suspended particles.

These unique probes have been designed to measure to measure high turbidity and suspended solids based on back scattering technology. The probes are available for submersible and in-pipe installations.

Through commands from the Personal Computer HyperTerminal, the serial interface allows the measuring and check signals transmission, the scale selection, the analogue 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 MXD70 Series controller, which provide the power, the measuring readout, 1x 4-20mA (can be increased via output expansion cards) & 2x relay outputs.

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

Principle of operation TU 8355 – TU 8555

The turbidity and suspended solid measurement follow's 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 colour of the sample.

Principle of operation TU 8325 – TU 8525

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.

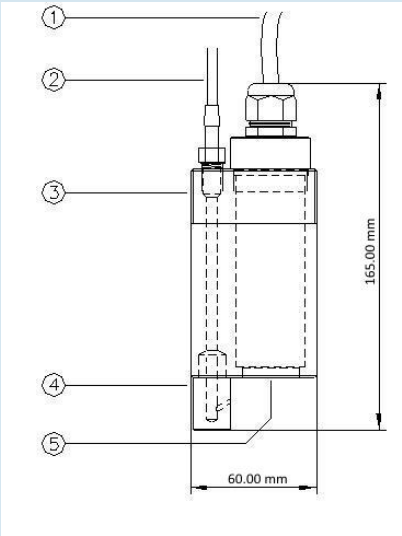
Technical Specifications TU 8355 – TU 8555

Scale: 0/100 – 0/1000 – 0/10000 FTU
Sensitivity FTU: 70/130 %
Zero FTU: ± 10 FTU all scales
Power supply: 9/36 Vdc
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 8355)
6 bar at 25 °C (TU 8555)
Auto clean: 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

Technical Specifications TU 8325 – TU 8525

Scale: 0/4,000 – 0/40,00 – 0/400,0 NTU
Sensitivity NTU: 70/130 %
Zero NTU: ± 0,400 NTU all scales
Power supply: 9/36 Vdc
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 8325)
6 bar at 25 °C (TU 8525)
Auto clean: by pressure air 3 bar max (TU 8325)
Dimensions TU 8325: L=165 mm total D= 60mm
Dimensions TU 8525: L=143 mm total D= 40mm
Body: PVC
Cable: 10 m (100 m max.)
Protection: IP 68

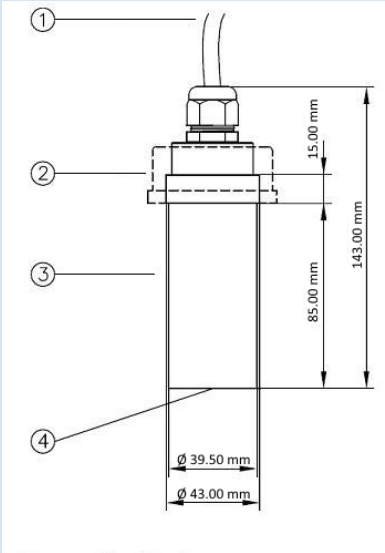
TU 8355 – DIMENSIONS



Description Connections

1. Cable - Shield not connected
2. Air input - Yellow RS485 A (+)
3. Thread - Grey RS485 B (-)
4. Air nozzle - Brown not connected
5. Optical lens - Green + current loop
White - current loop / COM RS485

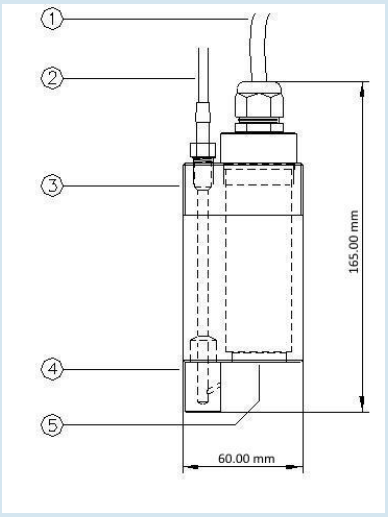
TU 8555 - DIMENSIONS



Description Connections

1. Cable - Shield not connected
2. Thread - Yellow RS485 A (+)
3. Air nozzle - Grey RS485 B (-)
4. Optical lens - Brown not connected
Green + current loop
White - current loop / COM RS485

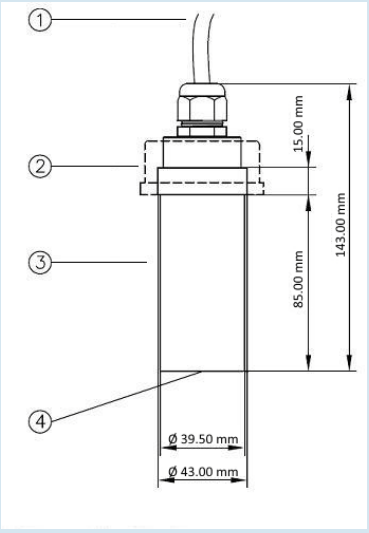
TU 8325 – DIMENSIONS



Description Connections

1. Cable - Shield not connected
2. Air input - Yellow RS485 A (+)
3. Thread - Grey RS485 B (-)
4. Air nozzle - Brown not connected
5. Optical lens - Green + current loop
White - current loop / COM RS485

TU 8525 - DIMENSIONS



Description Connections

1. Cable - Shield not connected
2. Thread - Yellow RS485 A (+)
3. Air nozzle - Grey RS485 B (-)
4. Optical lens - Brown not connected
Green + current loop
White - current loop / COM RS485

Accessories for TU 8355 / 8325

0012.450043 - Extension pipe adapter

Accessories for TU 8555 / 8525

TU 910 - Overflow cell

Order Codes

Part No	Description
1924	TU8355 SUBMERSIBLE TURBIDITY & SUSPENDED SOLIDS SENSOR 4-20mA RS485 10M CABLE (0-10000FTU).
1926	TU8555 IN-LINE TURBIDITY & SUSPENDED SOLIDS SENSOR 4-20mA 10M CABLE (0-10000 FTU).
1923	TU8325 SUBMERSIBLE TURBIDITY SENSOR 4-20mA 10M CABLE (0-400 NTU).
1925	TU8525 IN-LINE TURBIDITY SENSOR 4-20mA 10M CABLE (0-400 NTU).
7001	12.450043 SUBMERSIBLE HEAD ADAPTER TU8325 & TU8355 1"NPT PIPE REQUIRED.
7003	TU910 OVERFLOW CHAMBER FOR IN-LINE SENSOR TU8555.
7004	YAT75M0021 1.5" FLOW TEE ASSEMBLY FOR IN-LINE SENSOR TU8555.

Note: Temperature, pressure and solution composition will influence the life expectancy of the measurement sensor.

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Issue: LTH09.19