

## Sensor Data Sheet

### BlueTrace Turbidity Sensor

DOC 461 6780-E-2.4-DS

Submersible turbidity sensor (Modbus) with integrated temperature sensor

Article-No. 461 6780



#### Properties

- Selectable measuring range
- Robust and Non-corrosive
- Connection via Modbus interface
- Integrated TSS determination
- Easy calibration
- Temperature compensation
- Measurement according to DIN EN 27027 / ISO 7027

#### Applications

- Drinking water
- Wastewater
- Process measurement
- Control technology
- Environmental monitoring

Measurement	Turbidity	Temperature	TSS
Measuring principle	Scattered light measurement; Light source 860 nm	Semiconductor; Bandgap Voltage Reference	Model
Measuring ranges [FNU]	0 – 50   0 – 100   0 – 1000   0 – 4000	0 – 60 °C	0 – 5 g/l*
Measuring accuracy	typical 3 % FS	3 % FS	3 % FS*
Measuring interval	≥ 1 s	≥ 1 s	

Technical data	
Voltage supply	10 – 32 VDC
Power consumption	typical 0.5 W
Body material	High-grade steel 1.4404; optional Titanium
Body length	146.1 mm
Body diameter	36 mm
Weight	0.6 kg
Ambient pressure	max. 6 bar
Ambient temperature	-5 to +55 °C
Interface	Modbus [RTU]

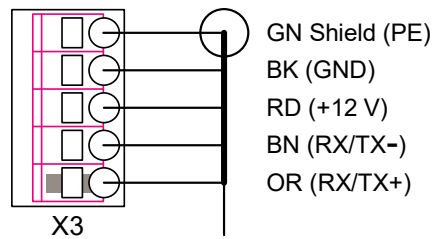
\* Accuracy and calibration depend on the composition of the substance.

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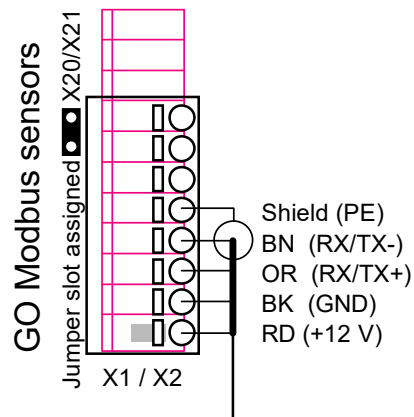
## Pin assignment

BlueTrace Turbidity – Article-No. 461 6780

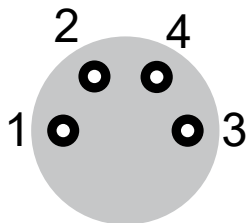
### Pin assignment at the board of the BlueConnect Module, slot X3



### Pin assignment at BlueSense Transducer, slot X1/X2



### Pin assignment at the serial interface of the BlueBox T4



**RS-485**  
panel plug (M8, male)

1	GND
2	12 VDC
3	RX/TX-
4	RX/TX+



Cable socket, shielded body  
Article No. 338 1017  
Cable colours see below

**i** Here there is the BlueBox version with a 4-pin M8 panel plug and a 12 VDC power supply. For versions with 3-pin M8 panel plug without 12 VDC power supply, an adapter or similar must be used.

### Pin assignment at the mainboard of the BlueBox R1 and BlueBox Panel – Slot X08

Colour coding standard cable BlueTrace		
Pin No.	Wire colour	Function
1	orange (OR)	TX/RX+
2	brown (BN)	TX/RX-
3	red (RD)	+12 V
4	black (BK)	GND
5	green (GN)	Shield (PE)