

# BlueEC Inductive Conductivity Sensor

The **BlueEC Conductivity Sensor** works on basis of the **inductive measurement principle** and features an **integrated temperature measurement**. In addition, the digital sensor is capable of **simultaneously calculating the salinity and TDS content**. The sensor can directly be connected to all controller units of the BlueBox System via the digital Modbus interface.



## Application Areas



### Drinking Water

- Quality control
- Alarm systems



### Wastewater

- Effluent monitoring
- Trend analysis
- Early detection of discharge



### Process Measurement & Control Technology

- Process monitoring in industrial facilities
- Control of process water treatment
- Process optimization



### Environmental Monitoring

- River water
- Surface water



### Aquacultures

- Hatcheries
- Onshore & offshore fish farms

## Parameters

- Conductivity
- Temperature
- Conductivity [Temperature compensated]
- Salinity\*
- Total Dissolved Solids (TDS)\*

\* Calculated Parameters

## Main Functions & Features



Selectable Measuring Range



Modbus Interface



Maintenance Free



No Consumables



Temperature Compensation



Contactless Measurement



Resistant Against Contamination



Immersion & In-line Installation

## Technical data

Power supply	10 - 32 V DC
Power consumption (typical)	<1 W
Material	PVDF black
Operation temperature range	0 °C to +60 °C
Weight	150 g
Dimensions	Length 160 mm; Ø 40 mm
Maximum pressure	6 bar
Interface	Modbus [RTU]
Art. no.	461 2092

## Conductivity

Measuring principle	inductive conductivity
Measuring range	30 – 3000 µS/cm 0.5 – 120 mS
Measuring accuracy	3 % FS
Measuring interval	≥ 1 s

## Temperature

Measuring principle	NTC
Measuring range	0 – 60 °C
Measuring accuracy	± 0.5 °C
Resolution	0.1 °C
Measuring interval	≥ 1 s

## Salinity

Measuring principle	Calculation [UNESCO Formula]
Measuring range	0.02 – 1.6 PSU; ‰ 0.2 – 94 PSU; ‰
Measuring accuracy	3 % FS
Measuring interval	≥ 1 s

## Total Dissolved Solids (TDS)

Measuring principle	Calculation
Measuring range	20 – 2010 mg/l 0.33 – 80.4 g/l
Measuring accuracy	3 % FS
Measuring interval	≥ 1 s

## Product implementation

The design of the BlueEC sensor allows for both immersion and in-line implementations. The sensor can be connected to all controller units of the **BlueBox System** or directly to a PLC via the digital Modbus interface. The corresponding Modbus protocol is made freely available for the integration into other systems.