



Multi Sensor Head - MSH

The **Multi Sensor Head (MSH)** is a modular sonde that allows the integration of up to four sensors or electrodes in one submersible probe head. As one possible configuration, conductivity, temperature, ORP, pH and oxygen can be determined with one MSH.

The integrated electronics allow the direct digitalization of analogue sensors. The MSH can alternatively be integrated into the **BlueBox System** via CAN bus or into a PLC via Modbus. The necessary protocol and PC configuration program are freely available.



Application Areas



Drinking Water

- Quality control
- Alarm systems



Wastewater

- Effluent monitoring
- Trend analysis



Process Measurement & Control Technology

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



Environmental Monitoring

- River water
- Surface water
- Well & bore hole

Available Parameters

- Ammonium
 - Nitrate
 - pH
 - Redox / ORP
 - Conductivity
 - Temperature
 - Salinity
 - TDS
 - Dissolved Oxygen
- * Further parameters on request

Functions & Features



CAN bus / Modbus Interface



Expandable with UV/Vis or MSH



Plug & Play [Smart Sensor]



Integration of Standard Electrodes



Robust Design



PLC Integration



Open Protocol



Freely Available PC-Program

Technical data

Power supply	10 - 36 V DC
Power consumption (typical)	4 W
Material	Stainless steel 1.4404 / Titanium [optional]
Dimensions	Length 465 mm; Ø 86 mm
Weight	approx. 4 kg
IP protection class	IP 68
Pressure range	0 - 6 bar
Operating temperature range	-5 to +45 °C
Interfaces	CAN bus / Modbus [RTU]



Expandable with UV/Vis or MSH

The expandable design of the MSH allows the extension of the sonde with a **BlueScan Plus UV/Vis Spectrometer** or an additional MSH. With this feature it is possible to increase the number of measurable parameters even further.



Available Configurations

Art. no.	Parameter	Measuring Principle	Measurement Range
461 MSH0-LORp	Conductivity	Inductive conductivity	30 – 3000 µS/cm 50 – 120000 µS/cm
	Temperature	NTC / PT1000	0 – 60 °C
	Salinity	Calculation [UNESCO Formula]	0.02 – 1.6 PSU; ‰ 0.2 – 94 PSU; ‰
	TDS	Calculation	20 – 2010 mg/l 335 – 80400 mg/l
	pH	pH electrode	0 – 14
	Redox / ORP	Redox / ORP electrode	-2000 – +2000 mV
	Dissolved Oxygen	Galvanic	0 – 20 mg/l
	461 MSH0-NOp	Ammonium	Ion-selective electrode
pH		pH electrode	0 – 14
Dissolved Oxygen		Galvanic	0 – 20 mg/l
Temperature		NTC / PT1000	0 – 60 °C
461 MSH0-pNH0	Ammonium	Ion-selective electrode	0.2 – 18.000 mg/l
	Nitrate	Ion-selective electrode	0.4 – 60.000 mg/l
	pH	pH electrode	0 – 14
	Temperature	NTC / PT1000	0 – 60 °C

* Further parameter configurations request