# 164CL

## Low turbidity sensor

**Sensor for the measurement of turbidity in pure and process water up to 100 NTU.**

**Measurement accuracy ± 1% to ± 5%**

**90 ° light scattering measurement method**

**Measurement range from 10NTU to 100NTU**

**Max operating temperature 50 ° C**

**Max pressure 4 bar**

**Measurement transmission via RS485**

**MODBUS RTU digital communication**

**Combine with MCA800 control unit**

The 164CL sensor, connected to the MCA800, is used for the measurement of turbidity in pure and drinking water, in primary water, industrial and recirculating water.
The measurement is performed using 90 ° light scattering, as per ISO 7027 / EN 27027.

### Technical Feature

**Materials**
Probe body in PVC
Special glass optic with oleo-phobic treatment
OR in Viton and Silicone
**Threads**
1” GAS
**Measuring ranges**
0÷10NTU
0÷100NTU
**Method of measurement**
90 ° scattering of light
**Calibration method**
1 point and / or 2 points per scale
**Accuracy**
±1% at the measuring point range_0-10 NTU
±2% at the measuring point range_0-50 NTU
±5% at the measuring point range_0-100 NTU

**Resolution**
0,01 NTU range_0-10NTU(0.001NTU up to9,999NTU)
0,1 NTU range_0-100NTU
**Repeatability**
±0.05 NTU f.s 10NTU
±0.5 NTU f.s 100NTU
**Response time**
T90<60s
**Operating temperature**
0÷50 °C
**Maximum operating pressure**
4 bar

**Electric absorption**
3W
**Mechanical protection**
IP68 Sensor + cable
**Cable length**
10m integral with the sensor
**Power supply**
12÷24Vdc
**Protocol**
MODBUS RTU
**Dimensions (LxHxP)**
42x231x42mm

**164CL** Low concentration Turbidity digital sensor

For the connection to MCA800 via MODBUS RTU
Measuring principle: 90°scattering light, infrared pulsed method
Measuring range: 0÷10 NTU / 0÷100 NTU
Resolution: 0,01 NTU / 0,1 NTU
Accuracy: ±1% f 0÷10 NTU; ±5% 0÷100 NTU
Operating temperature: 0÷50°C (122°F)
Thread: 1"G
Mechanical protection: IP68 sensor+cable

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|---|---|---|
| | **Sensor material** | |
| | **1** | PVC |
| | **2** | SS316 (for insertion mounting) |
| | **Installation method** | |
| | **A** | Immersion |
| | **B** | Insertion (with probe holder H) |
| | **C** | By-pass |
| | **Cable length** | |
| | **1** | Standard 10m |
| | **9** | Special |
| | **Probe holder** | |
| | **A** | None |
| | **B** | Immersion style - PP material. Dim.: (Ø x l) 42 x 570 mm |
| | **C** | Immersion style - PP material. Dim.: (Ø x l) 42 x 1070 mm |
| | **D** | Immersion style - PP material. Dim.: (Ø x l) 42 x 1570 mm |
| | **E** | Immersion style - PP material. Dim.: (Ø x l) 42 x 2070 mm |
| | **F** | Immersion style - PP material. Dim.: (Ø x l) 42 x 2570 mm |
| | **G** | For by-pass installation - 2 bar max. , 40 °C, black beaker in PP - Inlet-Outlet dimensions: 8x12mm |
| | **H** | Insertion style - Ball valve assembly DN40 with safety lock, stainless steel material, Viton O-ring |
| | **Z** | Special |
| | **Accessories** | |
| | **0** | None |
| | **1** | Kit for automatic electrode rinsing - SS body (only for immersion probe holders) |