

## NEPHELOMETRIC TURBIDITY

**OPTICAL TECHNOLOGY  
FOR OPTIMIZED  
MEASURES**

*RANGE DIGISENS / DATASHEET*



### APPLICATION

- Urban wastewater treatment (inlet/ outlet controls)
- Sanitation network
- Industrial effluent treatment
- Surface water monitoring
- Pumping drinking water

### OPTICAL TECHNOLOGY

- The measure principle is based on IR nephelometry / 850 nm. The sensor can be calibrated with a formazine standard solution.
- The NTU sensor integrates a low-cost optical technology, with a very few maintenance and no consumables.

### DIGITAL COMMUNICATION

The PONSEL sensor can be connected to any types of transmitters, display units, controllers or data loggers with Modbus RS-485 or SDI-12 inputs. The optical sensor saves its calibration data for better measures management.

### INTEGRATED TRANSMITTER

All data concerning calibration, history, users and measures are directly treated within the NTU sensor and transmitted via RS-485 or SDI-12.

### PHYSICAL CHARACTERISTICS

Compact, robust and light, the PVC sensor allows a handheld or fixed unit application.

ADVANTAGES



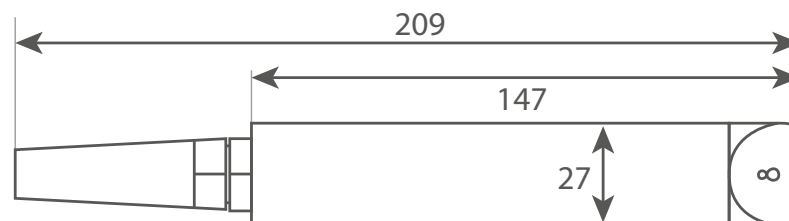
- IR optical sensor with optical fibre
- Range : 5 to 4000 NTU or 0-4500 mg/L
- Robust and waterproof (IP68)
- Ultra low-power consumption
- Digital output Modbus RS-485
- Nephelometry measurement



## TECHNICAL CHARACTERISTICS

Measures	
<b>Measure principle</b>	Diffusion IR at 90°
<b>Measure ranges</b>	5 to 4000 NTU in 5 ranges: <ul style="list-style-type: none"> <li>• 5 – 50 NTU</li> <li>• 5 – 200 NTU</li> <li>• 5 – 1000 NTU</li> <li>• 5 – 4000 NTU</li> <li>• AUTOMATIC</li> </ul> 0 to 4500 mg/L Calibration : Range 0-500 mg/L according to NF EN 872 Range >500 mg/L according to N F T 90 105 2
<b>Resolution</b>	0,01 to 1 NTU - mg/L
<b>Accuracy</b>	< 5% of the reading
<b>Working temperature</b>	0°C to + 50°C
<b>Measure of temperature</b>	Via CTN
<b>Stocking temperature</b>	-10°C to + 60°C
<b>Signal interface</b>	Modbus RS-485 (standard) and SDI-12 (option)
<b>Maximum refreshing time</b>	< 1 second
<b>Sensor power-supply</b>	5 to 12 volts
<b>Electric consumption</b>	Standby: 40 µA Average RS485 (1 measure/seconde): 820 µA Average SDI12 (1 measure/seconde): 4,2 mA Current pulse: 500 mA
Sensor	
<b>Dimensions</b>	Diameter : 27 mm; length : 170 mm
<b>Weight</b>	300 g (sensor + cable 3 meters)
<b>Material</b>	PVC, DELRIN, Quartz, PMMA, Polyamide
<b>Maximum pressure</b>	5 bars
<b>Connection</b>	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
<b>Degree of protection</b>	IP68

## OUTLINE DRAWING



## WIRING DIAGRAM

