AWQ-NTU: Water Quality Sensing Nephelometric Turbidity

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

Applications

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

Digital Communication

The AWQ-NTU sensor can be connected to any type of transmitters, display units, controllers or data loggers with Modbus RS-485 or SDI-12 inputs. The NTU sensor stores its calibration data and history directly in the sensor electronics. This means that it can be used quickly anywhere without the need for constant recalibration.

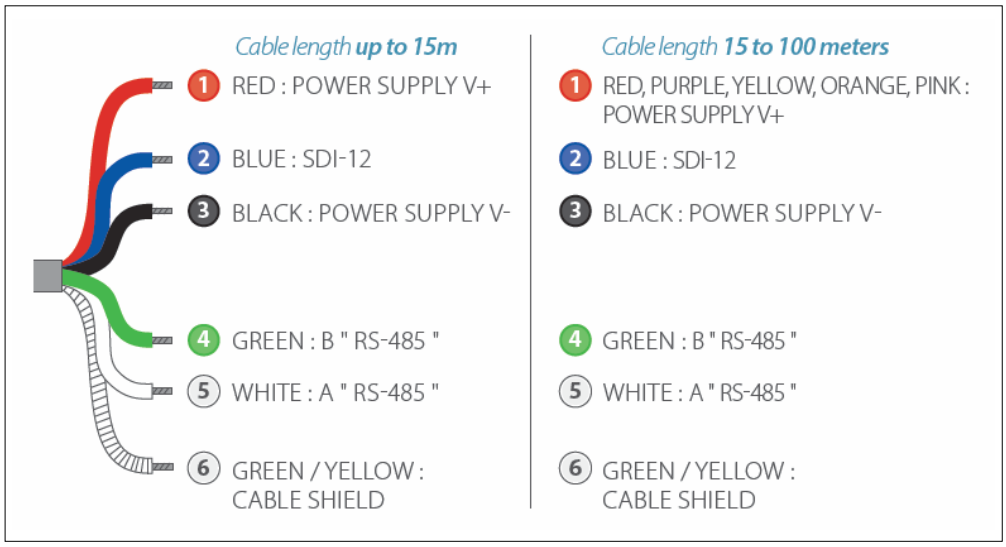
Integrated Transmitter

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

Advantages

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

Wiring Diagram



AWQ-NTU: Specifications

Measurement Principle	Turbidity: Diffusion IR at 90°; Temperature : NTC	
Measurement Range (Conductivity)	**0 to 4000 NTU in 5 ranges:** 0 – 50 NTU 0 – 200 NTU 0 – 1000 NTU 0 – 4000 NTU AUTOMATIC	0 to 4500 mg/L **Calibration:** Range 0-500 mg/L according to NF EN 872 Range >500 mg/L according to NF T 90 105 2
Resolution	0.01 to 1 NTU - mg/L	
Accuracy	< 5% of the reading	
Sensor Operating Range	**Operating Temperature:** 0°C to +50°C **Storage Temperature:** 0°C to +60°C **Maximum Pressure:** 5 bar	
Sensor Power Requirements	5 to 12 volts DC (for Cable 0-15m), 7-12 volts (for Cable >15m), Max. 13.2 V	
Current Draw (Consumption)	Standby : 40 µA Average RS485 (1 measure/seconde) : 820 µA Average SDI12 (1 measure/seconde) : 4,2 mA Current pulse : 500 mA	
Sensor Interface	Modbus RS-485 (standard); SDI-12 (optional)	
Sensor Dimensions	**Sensor Size:** Diameter: 27 mm; Length: 170 mm **Sensor Weight (Including 3 Meter Cable):** Approx. 300gms **Sensor Material:** PVC, DELRIN, Quartz, PMMA, Polymide **Sensor Protection:** IP68	
Sensor Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector	

Sensor Detail & Outline