

OPTICAL TECHNOLOGY FOR OPTIMIZED MEASUREMENTS



WA-200

WAP

WRC-201

SUSPENDED SOLID PROBE

Optical Technology

- Optical sensor based on absorptiometry
- Range of measure : SS : 0-50 g/L
Sludge blanket 0-100 %
Turbidity 0-4000 FAU
- Digital communication MODBUS RS 485
- Strong Sensor
- Compact, strong and light



DIGISENS

SPECIFICATIONS

	CONTROLLER	HANDHELD CONTROLLER	CONTROLLER
Model No.	WA-200	WAP	WRC-201
Type	Wall mounting	Portable	Panel mounting
Parameters	Suspended Solid	Suspended Solid	Suspended Solid
Electronics / processor	Micro-controller	Micro-controller	Micro-controller
Technology	Optical	Optical	Optical
Power supply	230VAC, 50Hz	Rechargeable battery	230 V AC
Display	Graphic LCD	Graphic LCD	Graphic LCD
Alarm	Visual LED alarms, adjustable	Visual, audible	Visual LED alarms, adjustable
Response time	Instantaneous	<1s	Instantaneous
Operating temperature	0°C - 55°C	0°C - 50°C	0°C - 55°C
Input	RS 485, MODBUS	RS 485, Direct Plug-in	RS 485, MODBUS
Output	RS 485, 4-20 mA	USB, Datalogging	RS 485, 4-20 mA
Housing	ABS Hi-Impact Plastic	ABS Hi-Impact Plastic	ABS Hi-Impact Plastic
Indication LED	Power ON, Test, High alarm	LOW, HIGH	Power ON, Test, High alarm
Power consumption	< 5 Watt	< 5 Watt	< 5 Watt
Dimensions	270 x 240 x 150 (LBH)	200 x 94 x 37.5 mm	96 x 96 x 160 mm
Protection class	IP 65	IP 65	IP 65
Weight	1.7 Kg	330 gm	600 gm

SPECIAL FEATURES

- Simple System Integration
- Graphic LCD - Quick, Reliable System Status Checks
- No Mechanically Moving Parts
- Fast Response Time
- Accurate Monitoring
- Minimal maintenance
- Field Replacement Sensor
- Internal Datalogger

APPLICATIONS

- Urban Waste water treatment (Inlet/ sewage water (SS, Turbidity), Aeration basin (SS), Outlet (Turbidity)).
- Treatment of industrial effluents (Aeration basin (SS)), Clarifier (Sludge blanket), Outlet (Turbidity)
- Sludge treatment (Centrifugation)
- Dredging site (Turbidity)

OPTICAL TECHNOLOGY:

The principle of measure is based on the mitigation of the Infra-Red signal in 870 nm through an optical path of 5mm. The sensor delivers measures in Suspended Solid (g/l), Turbidity (FAU) and Sludge Blanket detection in % of transmission IR. For a better precision, the optics of the sensor are regulated in temperature.

For a measure of Suspended Solid, the sensor is directly calibrated on the material to be measured (sample of sludge).

In Turbidimeter version the sensor delivers measures on a range 0-4000 FAU (Formazine Attenuation Unit) and is calibrated with solutions of Formazine.

Temperature: measures and regulation of optics via CTN.

DIGITAL COMMUNICATION / INTEGRATED TRANSMITTER:

The sensor connects to every type of recorder, transmitter, system of remote processing or automaton endowed with an entrance MODBUS RS 485. Thanks to the indexation of the sensor, more than 200 sensors can be connected on a recorder.

Resisting the disturbances: pre-development integrated into the sensor and the digital treatment of the signals.

All the data concerning the calibration, the history and the users are directly recorded in the digital sensor MES5.

MECHANICS:

A handle in DELRIN material assures the mechanical dress of the sensor and the sealing seals of the cable.

Compact, strong and light, the sensor allows a use in portable version or fixed post.

SENSOR SPECIFICATIONS

Suspended Solid Measure

Principle of measure	: Optical IR (870 nm) based on IR absorption
Range of measure	: SS: 0-50 g/L Turbidity: 0-4000 FAU Sludge blanket: 0-100 %
Resolution	: SS: 0.01 g/L Turbidity: 0.01 à 1 FAU Sludge blanket: 0.01 à 0.1 %
Accuracy	: SS < 10% Turbidity: ± 5% (range 200-4000 FAU) Sludge blanket: ± 2%
Response time	: < 35 seconds

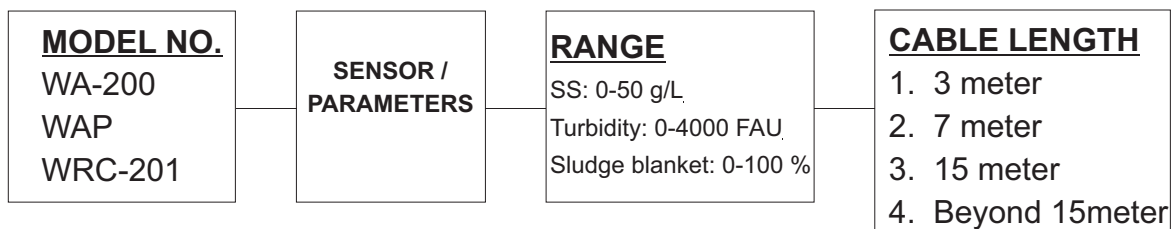
Temperature Measure

Principle of measure	: NTC
Working temperature	: -5°C to +60°C
Resolution	: 0.01 °C
Accuracy	: ± 0.5 °C
Storage temperature	: -10°C to +60°C
Degree of protection	: IP 68
Signal Interface	: MODBUS RS 485 or SDI-12
Refreshment of the measure	: Maximum <1 second
Power supply	: 5 to 28 volts
Consumption	: Standby : 25 µA (5 V) Average RS 485 (1 measure/second) : 4.5 mA (5V) Average SDI 12 (1 measure/second) : 4.5 mA (5V) Current Pulse : 100 mA during 30 mS Heating times : 100 mS

Sensor

Weight	: 750 g (sensor)
Material	: DELRIN, Nickel-plated brass, EPDM
Pressure max.	: 5 bars
Cable / connexions	: 9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector

ORDERING INFORMATION



Note : Images shown are indicative only. Specifications and Features will vary with application. There may be changes overtime due to continuous development process. @ 2018