

Optical Measurement Sensor for Low and Ultra-Low Suspended Solids

AshCon Product Description



Low & Ultra-low measurement range

- 0 to 25 mg/L (ppm) min. range
- Wide range (0 to 5,000 mg/L max.)
- Automated Brush & Flush cleaning
- Water Zero verification
- Optional Turbidity channel (0-1,000 NTU)
- Optional Polarisation for Fibre / Ash
- Optional Solids correction for Turbidity

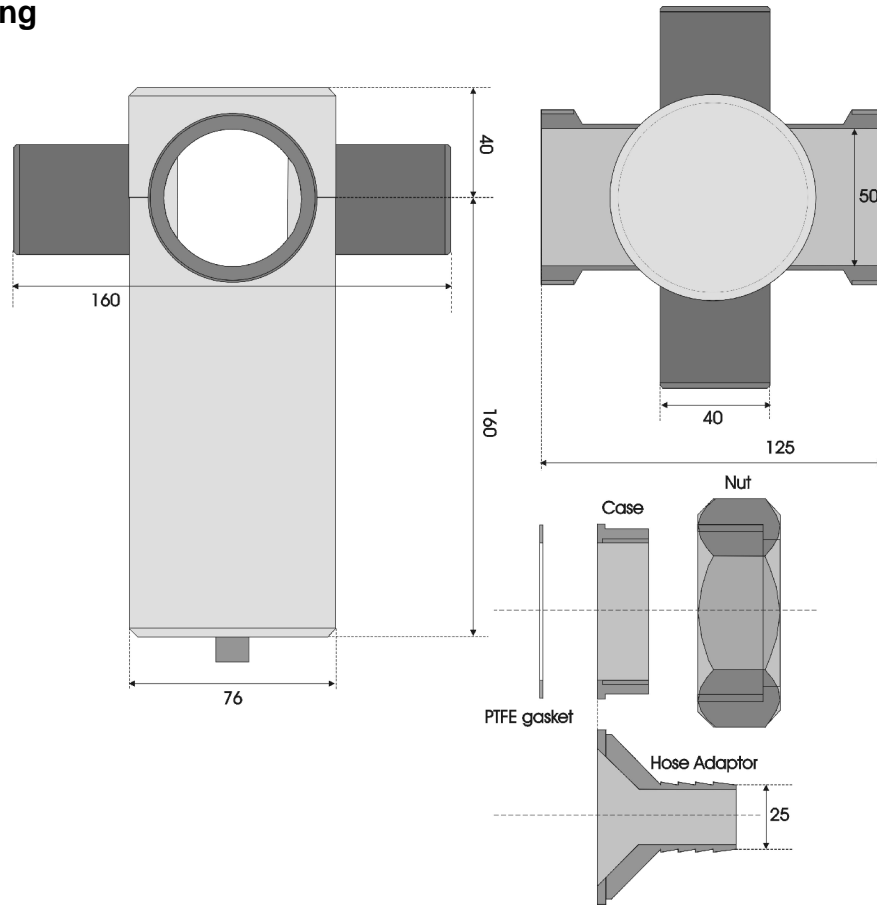
Applications & features

The Ashcon AC200 sensor measures the suspended solids within process streams. The sensor uses a high-energy pulsed *nIR* diode light source with dual-range measurement channels. A factory pre-calibration is made on a custom material mix to simplify on-site calibration. The sensor automatically compensates for process temperature changes as well as component drift with a reference correction of the light source. An automated brush cleaning mechanism can be fitted to the sensor as well as water back flush. A single sensor can measure two process measurement streams using an optional dual-sample manifold. Sample sequencing is controlled by the SIU and calibration / scaling values set for each sample. The SIU has up to four (4) auto/man. calibration tables available which can be selected remotely.

The AC200 sensor is normally used to measure environmental process streams. Common applications are around DAF units, clarifiers and fibre / water recovery systems. Environmental measurement applications normally include; process sampling (de-aeration), automated cleaning and signal processing. A 24hr (hourly) real-time composite sample reading is provided.

A Sensor Interface Unit (SIU) provides real-time signal processing for each sensor. The operator interface has; on screen trending (1hr to 24hr), history data-logging (MS Excel format) with microSD transflash card and optional remote data communications.(Modbus, Ethernet or 3G /GPRS modem). Telemetry interfaces can be provided/configured as required.

Product Drawing



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Technical Specification

Measurement:	Optical transmission of near infra-red light. (optional Turbidity 90° backscatter)	Material :	Wetted parts 316 St.Steel
Optical Gap:	40mm with Venturi from 50mm bore	Weight:	3 Kgs
nIR source:	GaAs Diode, typically 880nm wavelength	Connection:	5 core plug (IP65)
Range:	0 – 25 mg/L up to 0.5%Cs. / 5g/L (Total) 0 – 5g/L Solids (typical) = 4-20ma signal	Cable:	4 Metres (std.) upto 20 Mtrs
Accuracy:	Within 3% of range (lab. to sensor 2sigma)	Protection:	IP65 (NEMA 4X)
Flow rate:	10 L/min to 50 L/min (min. to max.)	Mount:	Clamp plate or piping
Pressure:	PN10 (146 psi.g. / 10 bar.g.)		
Temperature:	0 – 75 deg. C (max.)		

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