

# AquaScat

## In-line turbidity measurement for the water treatment



### Applications

- Turbidity measurement in raw water
- Monitoring of flocculation and dosage of flocculants
- Filtration monitoring of filter performance and back-wash control
- Turbidity measurement in treated and final waters
- Turbidity monitoring of water in storage and distribution networks
- Turbidity measurement in process and waste waters

### Industries

- Potable Water Treatment Works
- Waste water treatment
- Industrial water production

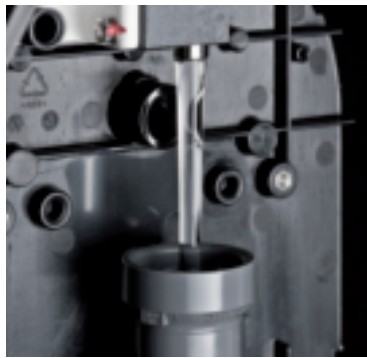
### Advantages

- True non-contact measurement in free-fall stream (models WTM, WTM A, HT)
- Dual beam measurement in optimized cell (model P)
- Re-calibration with secondary standard (fully automatic at model WTM A)
- Lowest stray light levels
- Virtually maintenance free
- Convenient operation via touch screen
- Graphical display of trends and/or values
- Visualization of measured values over the past month

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## Innovations with true customer benefits



### Non-contact free-fall concept

Water passes through the AquaScat models WTM, WTM A and HT without touching the optics.

- No window fouling and hence, the measured values are not falsified.
- Very low and high turbidity values can be measured precisely.
- The entire sample beam is measured which leads to true representative results.
- Extremely low maintenance is the result.



### Dual beam concept

At the AquaScat P, transmitted light and scattered light are measured and taken into consideration. The cell is large and the machining is of high quality.

- The influence of the cell contamination is reduced substantially.
- Possible interference by colour is completely eliminated.
- Cell cleaning is minimised.



### Very low quantity of stray light

The design of the AquaScat in combination with high quality optical components minimizes the quantity of stray light inside.

- A stable measurement of a few mFNU turbidity is therefore possible.
- Very low zero drift provides excellent long term stability.



### Re-calibration with secondary standard

Formazine is used in the factory to calibrate the AquaScat after assembly. For re-calibration, a secondary standard (Zerodur® glass body) is available.

- Precise re-calibration is possible without the use of Formazine.
- In the AquaScat WTM A, this re-calibration is done automatically without stopping the waterflow.



### Integrated control unit

The control unit of all the AquaScat family is an integrated colour touch screen.

- Values, graphs, alarm- and status messages can be presented.
- An internal data logger allows recalling and displaying measured data of the last 32 days.

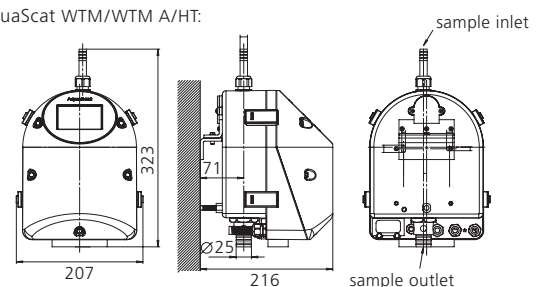


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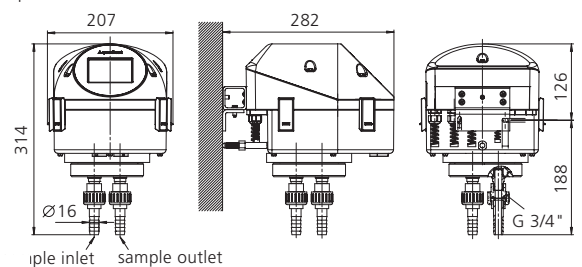
## Technical Data

|                                    |   |
|------------------------------------|---|
| <b>Instrument data:</b>            |   |
| Measuring principle:               | 90° Scattered light according to ISO 7027/EN27027   |
| Light source:                      | LED 880 nm  |
| Measuring span:                    | 0 .. 4'000 FNU (WTM, WTM A, HT)<br>0 .. 100 FNU (P)                                       |
| Measuring ranges:                  | 8, freely programmable  |
| Resolution:                        | 0.001 FNU (WTM, WTM A, P);<br>0.1 FNU (HT)  |
| Sample temperature:                | 0 .. +40 °C   |
| Ambient temperature:               | -10 .. +50 °C   |
| Humidity:                          | 0 .. 100% rel.  |
| Protection:                        | IP 54 (WTM, WTM A, HT);<br>IP 65 (P)  |
| Power supply:                      | 18 .. 30 VDC, optional:<br>100 .. 240 VAC, 47 .. 63Hz                                     |
| Power consumption max.:            | 8 W   |
| <b>Installation models WTM/HT:</b> |   |
| Sample inlet/outlet:               | Hoses of inner $\varnothing$ 12/25mm  |
| Sample flow:                       | min. 1.3 l/min,<br>atmospheric pressure   |
| Material inlet/outlet:             | SS 316L/PVC   |
| <b>Installation model P:</b>       |   |
| Sample inlet/outlet:               | Hoses of inner $\varnothing$ 16/16mm or<br>GF-System G $\frac{3}{4}$ "                    |
| Sample flow:                       | 0.2 .. 2 l/min  |
| Pressure:                          | max. 10 bar @ 20 °C   |
| Material: Cell/inlet&outlet:       | POM/PVC   |
| <b>Control Unit:</b>               |   |
| Display:                           | 1/4 VGA, 3.5"   |
| Operation:                         | Touchscreen   |
| Outputs:                           | 2 x 0/4 .. 20 mA, galv. isolated<br>2 x Relays 250 VAC, 4A<br>1 x for optional flow meter |
| Inputs:                            | 2 x 0/4 .. 20 mA  |
| Digital interfaces:                | Ethernet, Modbus TCP, SD-card   |
| Optional:                          | Profibus DP, Modbus RTU   |

AquaScat WTM/WTM A/HT:



AquaScat P:



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