

# AquaMaster

Multi-Parameter Measuring System for Water Treatment Works



## Applications

Combined measurement of:

- Turbidity
- pH
- Conductivity
- Redox / ORP
- Dissolved oxygen
- Temperature
- 2 additional, external parameters

## Properties

- Compact, modular complete system
- Central, integrated control unit with colour touch screen
- Strong, reliable brands: SGRIST & HAMILTON
- One partner for all measurements
- Integration of external sensors possible
- Simple calibration and maintenance without tools

## Industries

- Treatment of drinking water
- Industrial water treatment

## Innovations with real benefits



### Compact complete system

A compact measuring system for a multitude of parameters. Turbidity in all available AquaScat variations, pH, conductivity, redox / ORP, dissolved oxygen, temperature:

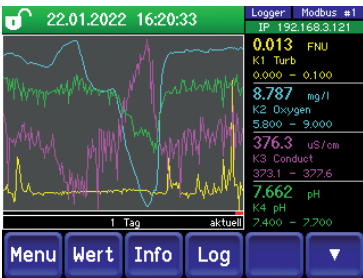
- Freely selected and combined parameters
- Compact footprint
- Simple installation; only one support has to be mounted
- Only one water supply and discharge is needed
- Connect – adjust water flow – measure



### Modular structure

2 additional parameters can be integrated via an analogue input (4–20 mA):

- Initial installation with only one parameter possible
- Additional sensors can be supplemented at any time
- SIGRIST ColorPlus for the measurement of DOC (UV absorption) colour (Hazen) and Nitrate can be combined



### Integrated control unit

A touch screen with colour display serves as user interface:

- Only one control unit is necessary; this is integrated in the system
- The display shows either values, graphs, status or alarm messages
- An internal data logger allows recalling and displaying measured data from the last 32 days
- Extensive communication options including an integrated web server



### User-friendly maintenance

Simple maintenance without tools. Storage shelf for calibration liquids, mounting brackets for sensors and the electronic part of the AquaScat:

- Both hands are free to calibrate and to work at the AquaScat.
- Little risk of damage.
- Automatic detection of the sensors' calibration standards
- Integrated display of the quality of the sensors
- Simple replacement of the sensors according to the principle «Plug & Measure»

### Main technical details

Measuring range:

pH, temperature:

ORP, temperature:

Conductivity, temperature:

Dissolved oxygen, temperature:

Sample conditions:

Turbidity according to ISO 7027/EN 27027

0 ... 100 FNU (P)

0 ... 4000 FNU (WTM, WTM A, HT)

0 ... 14, 0 ... 130°C

-1500 mV ... 1500 mV, 0 ... 130°C

1 ... 300'000 µS/cm, 0 ... 130°C

0.004 ... 25 ppm, 0 ... 130°C

see AquaScat data sheet

Full details and technical data:



# AquaMaster

## Technical data

### AquaMaster System

Dimensions:	approx. 55 × 115 × 40 cm (w × h × d)
Sample temperature:	0 ... +40 °C
Max. pressure:	0.6 MPa (6 bar)
Ambient temperature:	0 ... +50 °C
Ambient humidity:	0 ... 100 % rel. h.
Protection degree:	Min. IP54
Power supply:	100 ... 240 VAC, 47 ... 63 Hz or 18 ... 30 VDC
Power consumption:	max. 10 W

### Control Unit

Display:	¼ VGA, 3.5"
Operation:	Touchscreen
Outputs:	4 × 0/4 ... 20 mA, galvanically separated 2 × Relays 250 VAC, 4A 5 × digital outputs, freely configurable
Inputs:	2 × 0/4 ... 20 mA 4 × digital inputs, freely configurable 1 × for optional flow meter
Digital interface:	Ethernet, Modbus TCP, microSD-card
Optional:	Profibus DP, Profinet IO, Modbus RTU, additional current output module, 4 × 0/4 ... 20 mA

### Turbidimeter AquaScat

Measuring principle:	90° scattered light acc. to standard ISO7027/EN27027
Measured units:	FNU, NTU
Measuring range:	0 ... 4'000 FNU (WTM, WTM A, HT) 0 ... 100 FNU (P)
Further specifications:	See datasheet AquaScat

### pH Sensor

Measuring principle:	Potential measurement against a reference
Measured units:	pH, temperature
Measuring range:	pH 0 ... 14

### Conductivity Sensor

Measuring principle:	4-pole measurement
Measured units:	µS/cm, mS/cm, temperature
Measuring range:	1 ... 300'000 µS/cm

### Dissolved oxygen Sensor

Measuring principle:	Optical (luminescence)
Measured units:	µg/l, mg/l, ppb, ppm, %-sat., %-vol., temperature
Measuring range:	4 ppb ... 25 ppm

### Redox / ORP Sensor

Measuring principle:	Potential measurement against a reference
Measured units:	mV, temperature
Measuring range:	-1'500 ... 1'500 mV DOC (UV absorption) / colour (Hazen) / Nitrate ColorPlus: Absorption
Measuring principle:	Absorption
Measured values:	E, E/m, Hazen, GOST, mg/L
Further specifications:	See data sheet ColorPlus

