

Monitor for continuous measurement of dissolved oxygen in high purity water with integrated auto verification.

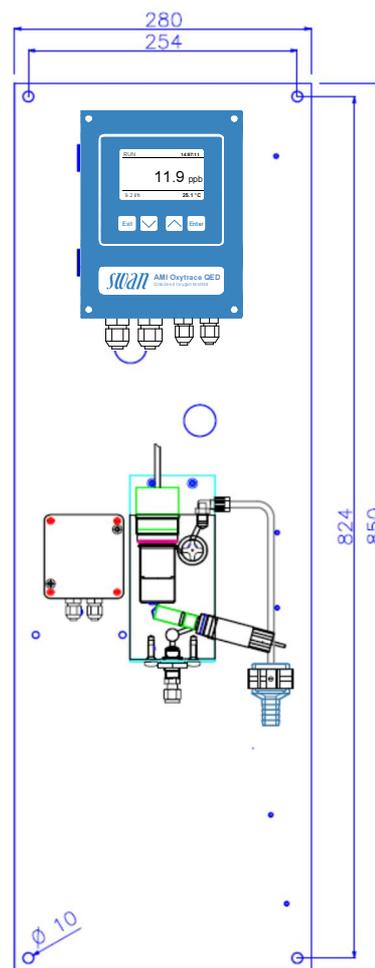
Monitor AMI Oxytrace QED

Complete system mounted on stainless steel panel:

- **Transmitter AMI Oxytrace QED** in a rugged aluminum enclosure (IP 66).
- **Flow cell QV-Flow PMMA OTG QED** made of acrylic glass with needle valve and digital sample flow meter on mounting angle made of stainless steel.
- **Swansensor Oxytrace G** with three electrode set-up (cathode, anode and guard) and integrated NT5k temperature sensor.
- **Faraday electrode** for the automatic or manual verification by electrochemically generated oxygen concentration in the ppb range.
- Factory tested, ready for installation and operation.

Specifications:

- Measuring range (at 25°C): 0.01 ppb to 20 ppm O₂ or 0 to 200% saturation
- Automatic air pressure compensation
- Automatic temperature compensation
- Automatic surveillance of electrolyte
- Faster initial response time after maintenance due to silver guard
- Simultaneous measurement of dissolved oxygen, sample temperature and sample flow.
- Big backlit LC display for the reading of measuring value, sample temperature, sample flow and operating status.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Two current outputs (0/4 - 20 mA) for measured signals (3rd output optional).
- Electronic record of major process events and calibration data.



Order Nr.	Monitor AMI Oxytrace QED AC	A-22.451.000
	Monitor AMI Oxytrace QED DC	A-22.452.000
Option:	<input type="checkbox"/> 3 rd current signal output (0/4 – 20mA)	A-81.420.050
	<input type="checkbox"/> Profibus DP & Modbus RTU interface (RS-485)	A-81.420.020
	<input type="checkbox"/> USB interface	A-81.420.042
	<input type="checkbox"/> HART interface	A-81.420.060

Dissolved Oxygen Measurement

Swansensor Oxytrace G with three electrode set-up (cathode [gold], anode [silver] and guard [silver]) with integrated NT5k temperature sensor.

Measuring range	Resolution
0.01 to 9.99 ppb	0.01 ppb
10 to 199.9 ppb	0.1 ppb
200 to 1999 ppb	1 ppb
2 to 20 ppm	0.01 ppm
0-200% saturation	0.1% saturation

Automatic range switching

Automatic temperature and air pressure compensation.

Response time
 $t_{90} < 30$ sec. (rising concentration)

Accuracy / Repeatability
Accuracy: $\pm 1.5\%$ of reading or ± 0.2 ppb
Repeatability: $\pm 1\%$ of read. or ± 0.15 ppb

Faraday verification
In-line, electrochemical generation of oxygen in ppb range (value dep. on flow rate) by faraday electrode made of platinum.

Temperature measurement NT5k
Measuring range: -30 to +130 °C
Resolution: 0.1 °C

Sample flow measurement
With digital SWAN sample flow sensor

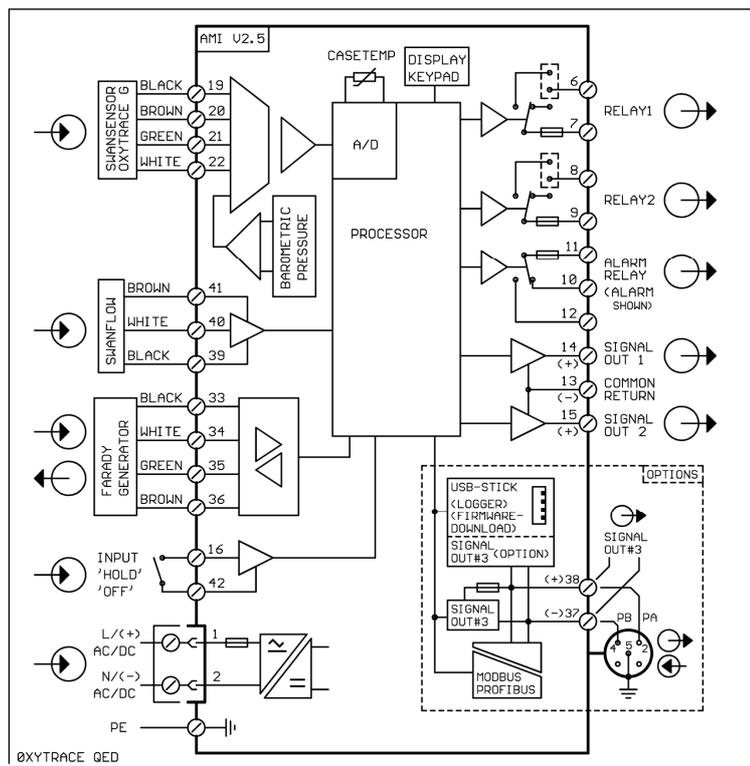
Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP 66 / NEMA 4X
Display: backlit LCD, 75 x 45 mm
Electrical connectors: screw clamps
Dimensions: 180 x 140 x 70 mm
Weight: 1.5 kg
Ambient temperature: -10 to +50 °C
Humidity: 10 - 90% rel., non condensing

Power supply
Voltage:
AC version: 100 - 240 VAC ($\pm 10\%$),
50/60 Hz ($\pm 5\%$)
DC version: 10-36 VDC
Power consumption: max. 35 VA

Operation
Easy operation based on separate menus for "Messages", "Diagnostics", "Maintenance", "Operation" and "Installation".
User menus in English, German, French and Spanish.
Separate menu specific password protection.
Display of process value, sample flow, alarm status and time during operation.
Storage of event log, alarm log and calibration history.
Storage of the last 1'500 data records in logger with selectable time interval.

Electrical Connection Scheme



Safety features
No data loss after power failure, all data is saved in non-volatile memory.
Over-voltage protection of in- and outputs.
Galvanic separation of measuring inputs and signal outputs.

Transmitter temperature monitoring
with programmable high/low alarm limits.

1 Alarm relay
One potential free contact for summary alarm indication for programmable alarm values and instrument errors.
Maximum load: 1A / 250 VAC

1 Input
One input for potential-free contact.
Programmable hold or remote off function.

2 Relay outputs
Two potential-free contacts programmable as limit switches for measuring values, controllers or timer for system cleaning with automatic hold function.
Rated load: 1A / 250 VAC

2 Signal outputs (3rd as option)
Two programmable signal outputs for measured values (freely scalable, linear or bilinear) or as continuous control output (control parameters programmable) as current source. 3rd signal output selectable as current source or current sink.
Current loop: 0/4 - 20 mA
Maximum burden: 510 Ω

Control functions
Relays or current outputs programmable for 1 or 2 pulse dosing pumps, solenoid valves or for one motor valve. Programmable P, PI, PID or PD control parameters.

1 Communication interface (option)
- RS485 interface (galvanically separated) with Fieldbus protocol Modbus RTU or Profibus DP
- 3rd Signal output
- USB interface
- HART interface

Monitor Data

Sample conditions
Flow rate: 8 to 25 l/h
Temperature: up to 45 °C
Inlet pressure: 0.2 to 1 bar
Outlet pressure: pressure free
pH: not lower than pH 4
Suspended solids: less than 10 ppm

Flow cell and connections
Flow cell made of acrylic glass with built-in flow adjustment valve, digital sample flow meter and faraday electrode.
Sample inlet: Swagelok 1/4" tube adapter
Sample outlet: for flexible tube \varnothing 20 x 15 mm

Panel
Dimensions: 280 x 850 x 150 mm
Material: stainless steel
Total weight: 8.0 kg