

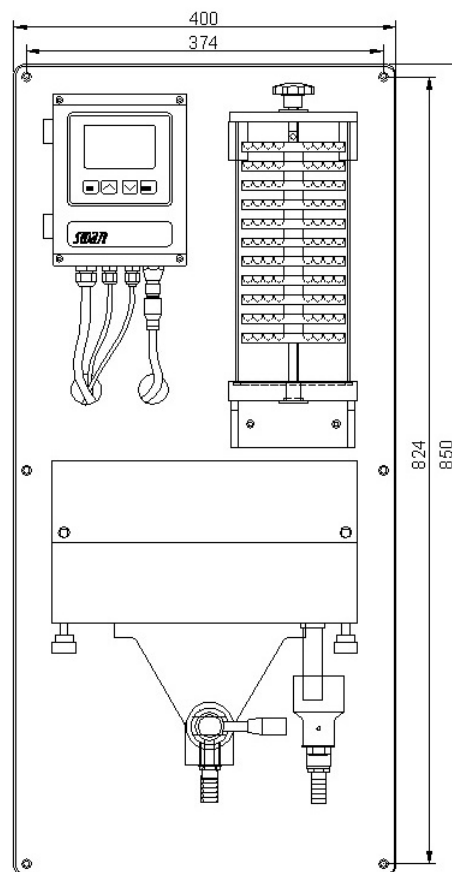
Nephelometric system based on ISO 7027 for the automatic and continuous measurement of turbidity in potable water, surface water and effluent.

Monitor AMI Turbiwell 7027

- Non-contact turbidimeter: System optics is not in direct contact with sample, no fouling on optical surfaces.
- Measuring range: 0.000 - 200.0 FNU/NTU
Automatic range switching.
- Precision: $\pm (0.003 \text{ FNU} + 1 \% \text{ of reading})$
- Complete system including measurement control electronics, sample chamber and turbidimeter
- Manual or automated draining of the sample chamber.
- Easy user menus in English, German, French, Spanish, Italian and Russian. Simple programming of all parameters by keypad.
- Electronic record of major process events and calibration data.
- Real-time clock for time stamp in data logs and for automated functions.
- Data logger for 1'500 data records stored at selectable intervals.
- Big back-lit LCD display for the reading of all measured values and status information simultaneously.
- Measurement values are available as analog output signals.
- Potential-free alarm contact as summary alarm indication for programmable alarm values and for instrument faults.
- Input for potential-free contact to freeze the measuring value or to interrupt control in automated installations (hold function or remote-off).
- Factory tested, ready for installation and operation.

Accessories:

- Turbidity verification kits (dry verification)



Monitor AMI Turbiwell with manual drain valve and optional sample degasser

Optional:

- Communication *interfaces*
- *Sample degasser* to avoid the formation of interfering bubbles in the samples
- *SS deltaT* flow meter

Order no.	Monitor AMI Turbiwell 7027 AC	A-25.411.600.1
	Monitor AMI Turbiwell 7027 DC	A-25.412.600.1
	Monitor AMI Turbiwell 7027 Auto-drain AC	A-25.411.600.2
	Monitor AMI Turbiwell 7027 Auto-drain DC	A-25.412.600.2
Option:	[] 3 rd current signal output (0/4 – 20mA)	A-81.420.050
	[] Profibus DP & Modbus RTU interface (RS-485)	A-81.420.020
	[] USB interface	A-81.420.042
	[] HART interface	A-81.420.060
Option:	[] Sample degasser	A-82.321.000
Option:	[] SS Flow deltaT	A-87.933.010
	[] Flowcontroller	A-82.521.201

Turbidimeter System

Nephelometer according to ISO 7027

Measuring range:

0.000-200.0 FNU/NTU

Precision:

± (0.003 FNU + 1 % of reading)

Accuracy (based on Formazine):

Range 0-40 FNU:

± (0.01 FNU + 2 % of reading)

Range > 40 FNU: ± 5 % of reading

Two-part turbidimeter body made of PETP with drain valve.

Heated optics to avoid condensation.

Easy cleaning of sample compartment.

Factory calibrated with Formazine.

Optional sample flow measurement with SWAN deltaT flow sensor.

Transmitter Specifications and Functionality

Electronics case: Aluminum
Protection degree: IP 66 / NEMA 4X
Display: backlit LCD, 75 x 45 mm
Electrical connectors: screw clamps
Ambient temperature: -10 to +50 °C
Limit range of operation: -25 to +65 °C
Storage and transport: -30 to +85 °C
Humidity: 10 to 90 % relative, non condensing

Power supply

Voltage:

AC version: 100 - 240 VAC (± 10 %),
50/60 Hz (± 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".

Separate, menu specific password protection.

Display of process value, 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.

Real-time clock with calendar

For action time stamp and preprogrammed actions.

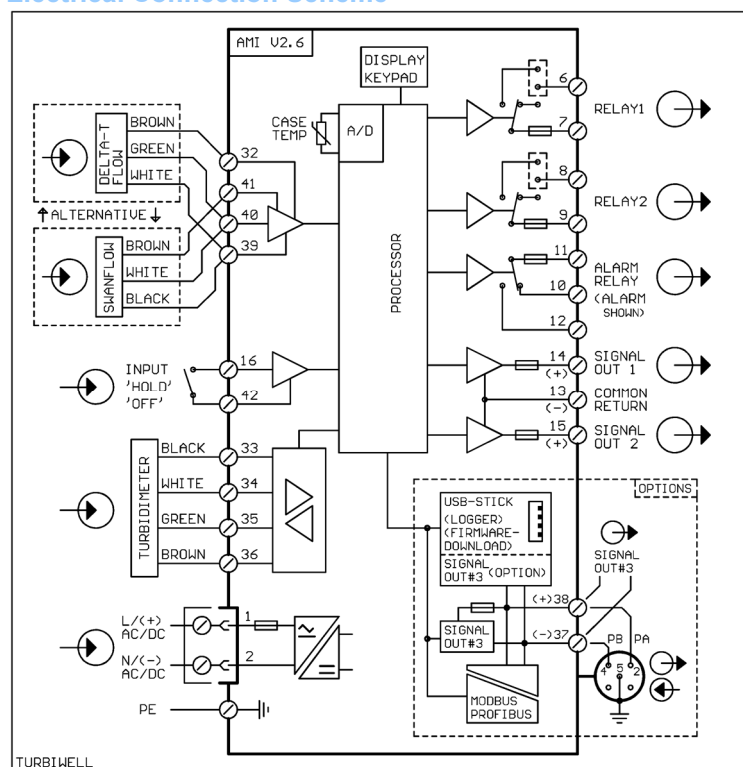
Safety features

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.

Electrical Connection Scheme



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 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

Sample and Monitor Data

Sample conditions

Flow rate: approx. 20-60l/h
Temperature: up to 45 °C
Sample temperature max. 20 °C over ambient temperature
Outlet pressure: pressure free, atmospheric drain

Sample connections

Inlet: nozzle, Ø 10mm
Drain: Ø 16 mm, tubing 15 x 20 mm

Panel

Dimensions: 400 x 850 x 200 mm
Material: white PVC
Weight: 11.0 kg