Monitor AMI Turbiwell 7027

Data sheet no. DenA25641X600X

Nephelometer according to ISO 7027 for the automatic and continuous measurement of turbidity.

Application examples

- For applications in potable water, surface water treatment and effluent.

Measuring range

- 0.000 – 200 FNU/NTU.

Instrument features

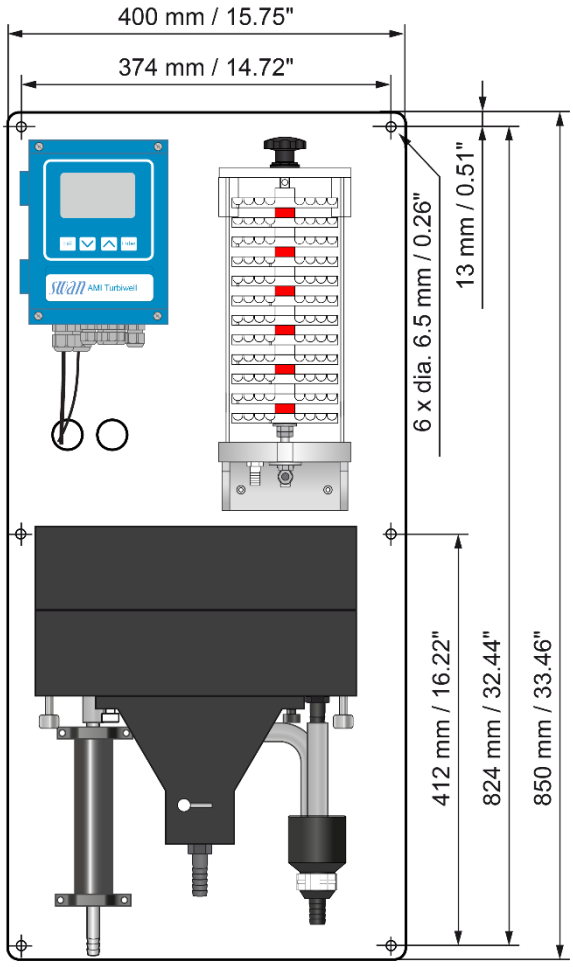
- Non-contact measurement: optical system is not in direct contact with the sample, no fouling on optical surfaces.
- Heated optics prevent condensation.
- Manual or automated draining of the sample chamber for removal of sediments.
- Easy cleaning of sample compartment.
- Factory calibrated with formazine.

Optional

- Sample degasser: prevents formation of interfering bubbles in the measuring chamber.
- Sample flow meter or flow controller

Accessories

- Verification kits: high-precision, stable secondary standards *Low* and *High* with nominal turbidity of approx. 1 and 20 FNU.



Monitor AMI Turbiwell with automatic drain valve, optional sample degasser and optional Swansensor Flow deltaT

Order numbers:	AMI Turbiwell 7027	A–25.41_.600._
Power supply	100 – 240 VAC, 50/60 Hz	1
	10 – 36 VDC	2
Drain valve	Manual drain valve	1
	Automatic drain valve: "Auto drain" with electrical motor	2
Option 1	Third signal output (0/4 – 20 mA)	A-81.420.050
	RS485 interface with Modbus RTU or Profibus protocol	A-81.420.020
	USB interface	A-81.420.042
	HART interface	A-81.420.060
Option 2	Sample degasser	A-82.321.000
Option 3	Swansensor Flow deltaT	A-87.933.010
	Flow controller	A-82.521.201

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Turbidity Measurement

Nephelometer type
Non-contact measurement according to ISO 7027

Measuring range	Resolution
0.000 – 0.999 FNU	0.001 FNU
1.00 – 9.99 FNU	0.01 FNU
10.0 – 99.9 FNU	0.1 FNU
100 – 200 FNU	1 FNU

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

Factory calibrated with formazine.

Auxiliary sensors
- Sample flow measurement with optional Swansensor Flow deltaT or flowcontroller.

Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 75 x 45 mm
Electrical connectors: screw clamps
Ambient temperature: -10 to +50 °C
Humidity: 10 – 90% rel., non-condensing

Power supply
AC version: 100 – 240 VAC (±10 %), 50/60 Hz (±5 %)
DC version: 10 – 36 VDC
Power consumption: max. 35 VA

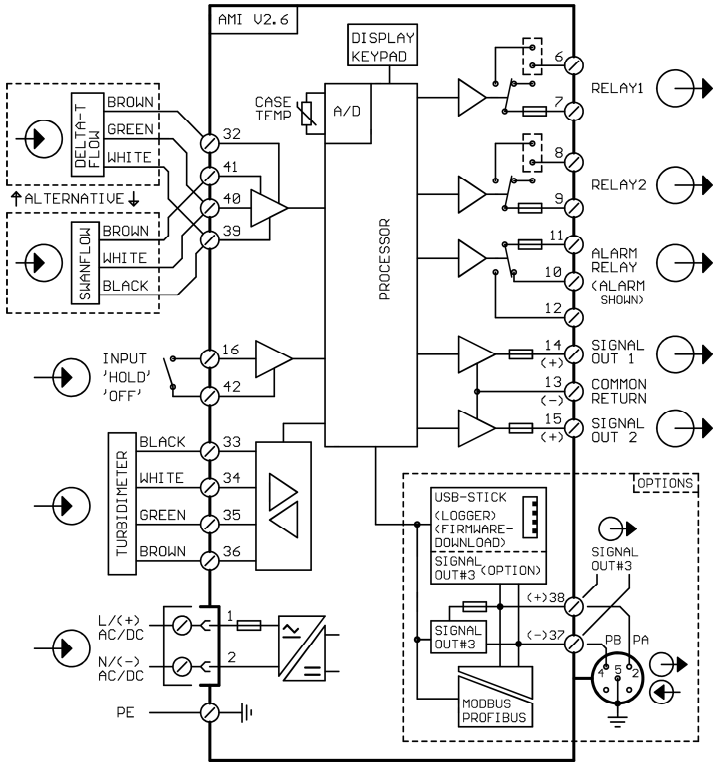
Operation
User menus in English, German, French, Spanish, Italian and Russian.
Separate, menu-specific password protection.

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

Transmitter temperature monitoring
With programmable high/low alarm limits.

Real-time clock with calendar
For action time stamp and preprogrammed actions

Electrical Connection Scheme



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

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

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

Signal outputs
Two programmable signal outputs for measured values (freely scalable, linear or bilinear) or as controller outputs.
Current loop: 0/4 – 20 mA
Maximum burden: 510 Ω
Type: current source
Third signal output available as an option. The third signal output can be used as a current source or as a current sink (selectable via switch).

Communication interface options
- RS485 interface with Modbus RTU or Profibus DP protocol, galvanically separated
- Third signal output
- USB interface for logger download
- HART interface

Monitor Data

Sample conditions
Flow rate: approx. 20 to 60 l/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 10 mm
Drain: Ø 16 mm, tubing 15 x 20 mm

Panel
Dimensions: 400 x 850 x 200 mm
Material: white PVC
Total weight: 11 kg