

Monitor AMI Turbiwell W/LED

Data sheet no. DenA2541X700X

Nephelometer according to US EPA 180.1 for the automatic and continuous measurement of turbidity.

Application examples

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

Measuring range

- 0.000 – 100 NTU.

Instrument features

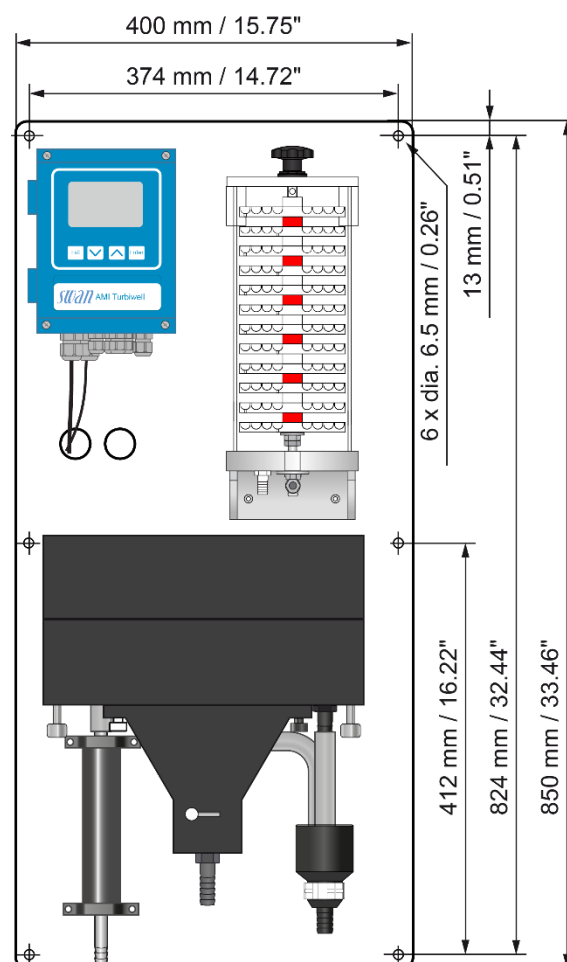
- Non-contact measurement:
optical system is not in direct contact with the sample, no fouling on optical surfaces.
- Heated optics prevent condensation.
- Manual or automated draining of the sample chamber for removal of sediments.
- Easy cleaning of sample compartment.
- Factory calibrated with formazine.

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 NTU.



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

Order numbers:	AMI Turbiwell W/LED	A-25.41_.700._
Power supply	100 – 240 VAC, 50/60 Hz..... 10 – 36 VDC.....	1 2
Drain valve	Manual drain valve Automatic drain valve: "Auto drain" with electrical motor	1 2
Option 1	Third signal output (0/4 – 20 mA) RS485 interface with Modbus RTU or Profibus protocol USB interface HART interface	A-81.420.050 A-81.420.020 A-81.420.042 A-81.420.060
Option 2	Sample degasser	A-82.321.000
Option 3	Swansensor Flow deltaT Flow controller.....	A-87.933.010 A-82.521.201



Turbidity Measurement

Nephelometer type

Non-contact measurement according to US EPA 180.1 (registered alternate test procedure in accordance with 40 CFR 136.4).

Measuring range

0.000 – 0.999 NTU
1.00 – 9.99 NTU
10.0 – 99.9 NTU

Resolution

0.001 NTU
0.01 NTU
0.1 NTU

Precision: $\pm (0.003 \text{ NTU} + 1 \% \text{ of reading})$

Accuracy (based on formazine):

Range 0 – 40 NTU:

$\pm (0.01 \text{ NTU} + 2 \% \text{ of reading})$

Range >40 NTU:

$\pm 5 \% \text{ of reading}$

Factory calibrated with formazine.

Auxiliary sensors

- Sample flow measurement with optional Swansensor Flow delta T or flowcontroller.

Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 2.95" x 1.77" mm
Electrical connectors: screw clamps
Ambient temperature: 14 to 122 °F
Humidity: 10 – 90% rel., non-condensing

Power supply

AC version: 100 – 240 VAC ($\pm 10 \%$),
50/60 Hz ($\pm 5 \%$)
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.

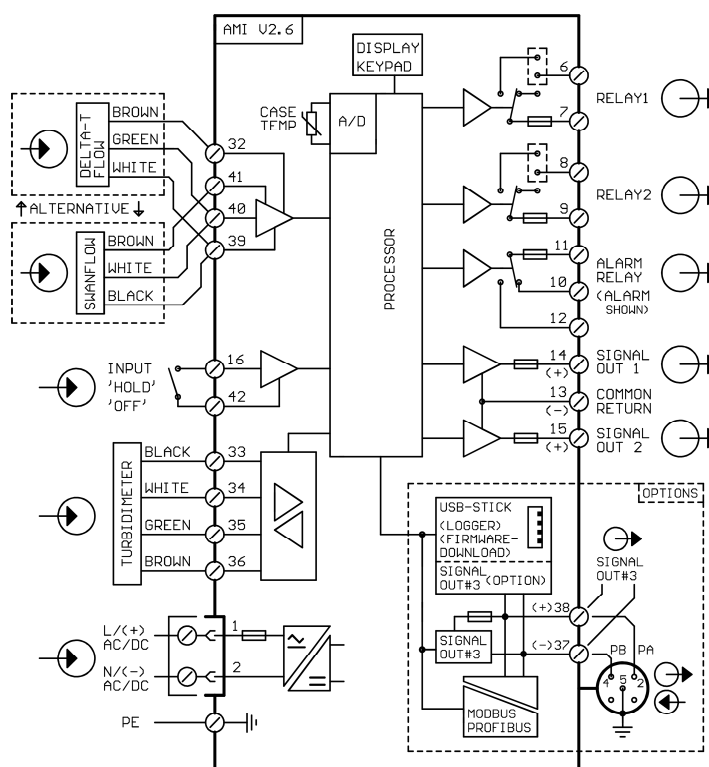
Transmitter temperature monitoring

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. 5 – 16 gal/h
Temperature: up to 113 °F
Sample temperature max. 36 °F over ambient temperature
Outlet pressure: pressure free, atmospheric drain

Sample connections

Inlet: 1/4" thread / $\varnothing$ 0.39" (10 mm) nozzle
Drain: 1/2" thread / $\varnothing$ 0.62" (16 mm) nozzle, tubing 0.59" x 0.78" (15 x 20 mm)

Panel

Dimensions: 15.75" x 33.46" x 7.87" (400 x 850 x 200 mm)
Material: white PVC
Total weight: 30.0 lbs

