

Monitor AMI Turbiwell Power

Data sheet no. DenA2541X605X

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

Application examples

- Corrosion product monitoring in water steam cycles.

Measuring range

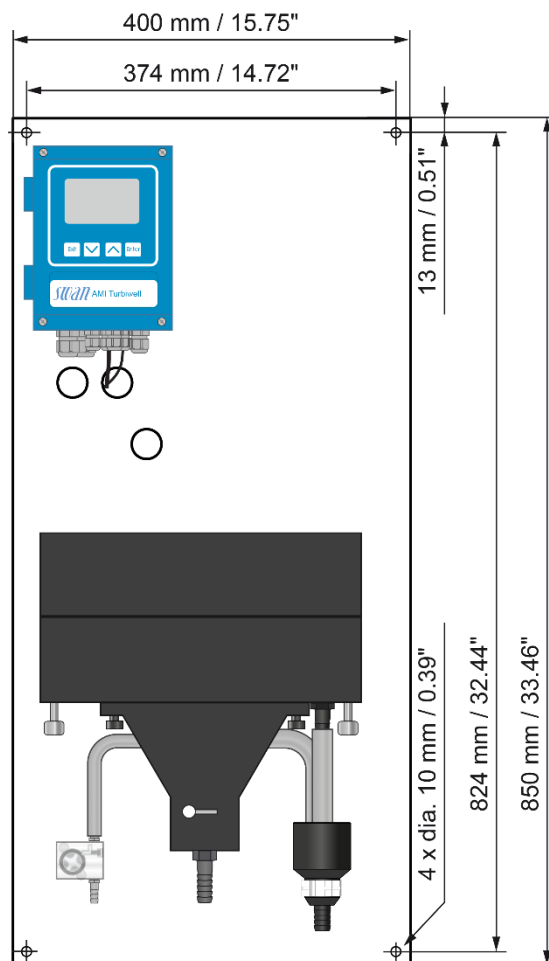
- 0.000 – 200 FNU/NTU.

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.
- Sample flow meter included as standard.
- Easy cleaning of sample compartment.
- Factory calibrated with formazine.

Accessories

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



Order numbers:	AMI Turbiwell Power	A-25.41_.605._
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	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



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

Accuracy (based on formazine):

Range 0 – 40 FNU:

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

Range >40 FNU:

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

Factory calibrated with formazine.

Auxiliary sensors

- Sample flow measurement with digital SWAN sample flow sensor.

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 ($\pm 10 \%$), 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.

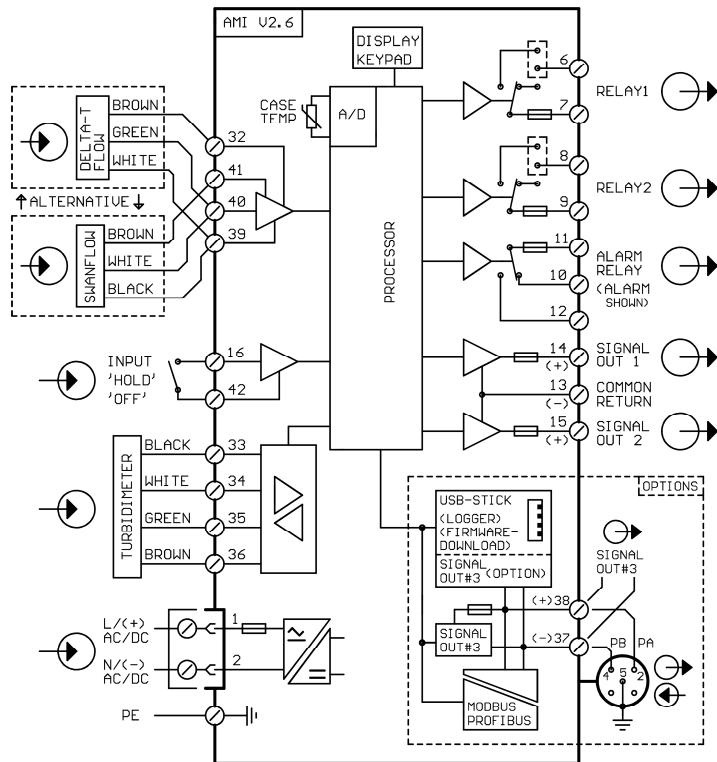
Transmitter temperature monitoring

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. 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:	Serto, 6 mm
Drain:	\varnothing 16 mm, tubing 15 x 20 mm

Panel

Dimensions:	400 x 850 x 200 mm
Material:	stainless steel
Total weight:	14 kg

