

# Transmitter AMI Turbiwell

Data sheet no. DenA15411X00

Electronic transmitter and controller for the measurement of turbidity with Swansensor Turbiwell.

## Application examples

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

## Sensors

- For use with Swansensor Turbiwell 7027 (ISO 7027) or Swansensor W/LED (US EPA 180.1).

## Measuring range

- Turbiwell 7027: 0.000 – 200 FNU.
- Turbiwell W/LED: 0.000 – 100 NTU.

## Instrument features

- Measuring and control transmitter in a rugged aluminum enclosure (IP66).
- Large, backlit LC display and simple, menu-driven operation.
- Various connection options: two or optionally three analog signal outputs, two limit relays, one alarm relay and one relay input.
- Modbus, Profibus, HART or USB as an option.



Order numbers:	AMI Turbiwell	A-15.411._00
Power supply	100 – 240 VAC, 50/60 Hz 10 – 36 VDC	1 2
Option	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



## Turbidity Measurement

### Nephelometer type

Non-contact measurement according to ISO 7027 or US EPA 180.1.

Measuring range	Resolution
with Swansensor Turbiwell 7027: 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
with Swansensor Turbiwell W/LED: 0.000 – 0.999 NTU	0.001 NTU
1.00 – 9.99 NTU	0.01 NTU
10.0 – 99.9 NTU	0.1 NTU

Precision:  
± (0.003 FNU/NTU +1% of reading)

Accuracy (based on formazine):  
Range 0 – 40 FNU/NTU:  
±(0.01 FNU/NTU +2% of reading)  
Range >40 FNU/NTU: ±5% of reading

Sensors factory calibrated with formazine.

For further information, refer to the data sheets of the respective Swansensors.

## Transmitter Specifications and Functionality

Electronics case:	Cast aluminum
Protection degree:	IP66 / 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

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

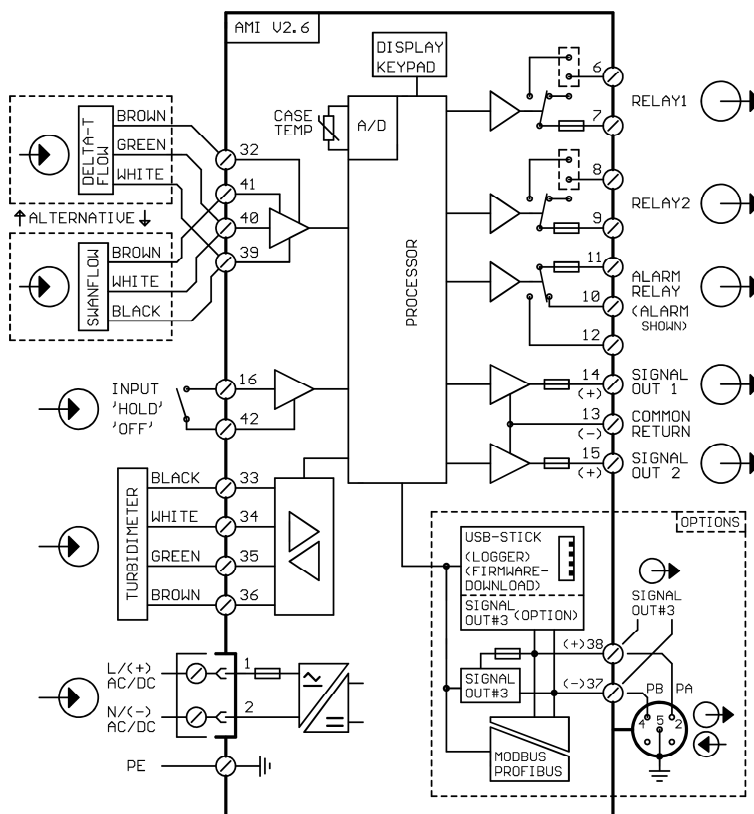
### Operation

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.

## Electrical Connection Scheme



### Transmitter temperature monitoring

With programmable high/low alarm limits.

### Real-time clock with calendar

For action time stamp and preprogrammed actions

### 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

