AMI INSPECTOR Conductivity

Data sheet no. DenA7531000X

Portable monitoring system for the automatic, continuous measurement of specific conductivity in ultrapure water.

Application examples

- Quality assurance of conductivity monitors in power and industrial plants.

Measuring range

- From 0.055 µS/cm to 30 mS/cm.
- Temperature compensation: non-linear for high purity water, neutral salts, strong acids, strong bases, ammonia, ethanolamine, morpholine or linear with coefficient.
- Measured value is compensated to 25 °C.

Instrument features

- Transmitter with rechargeable battery in a rugged aluminum enclosure (IP66).
- USB stick for data logging.
- **Flow cell QV-Flow UP-CON SL**
  with patented slot-lock design for quick sensor release, integrated flowmeter for measurement validation and needle valve.
- **Swansensor UP-CON1000 SL**
  Two-electrode conductivity sensor with slot-lock design, integrated Pt1000 temperature probe and a cell constant of 0.04 cm^{-1}.

Scope of delivery

- AMI INSPECTOR Conductivity.
- High-quality carrying case.
- Power supply.
- Tubing for connection to sampling point.

Optional certification

- Verification of the measuring electronics with certified test resistors.
- Recalibration of the sensor and subsequent verification of the measured value using a certified reference instrument.
- Certification traceable to national standards.

Order numbers:	AMI INSPECTOR Conductivity	A–75.310.00_
Sensor cable	1 m length	0
	2 m length	2
Option	Instrument certificate	A-97.017.310

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Conductivity Measurement

Conductivity sensor type
2-electrode conductivity sensor.

Measuring range	Resolution
0.055 to 0.999 µS/cm	0.001 µS/cm
1.00 to 9.99 µS/cm	0.01 µS/cm
10.0 to 99.9 µS/cm	0.1 µS/cm
100 to 999 µS/cm	1 µS/cm
1.00 to 2.99 mS/cm	0.01 mS/cm
3.0 to 9.9 mS/cm	0.1 mS/cm
10 to 30 mS/cm	1 mS/cm

Automatic range switching.

Accuracy (at 25 °C) ±1% of measured value or ±1 digit (whichever is greater)
Precision (at 25 °C) <1% ±1 digit

Temperature compensations
Non-linear function (NLF) for high purity water, neutral salts, strong acids, strong bases, ammonia, ethanolamine, morpholine, linear coefficient 0.00 – 10.00 %/°C, absolute (none).

Auxiliary sensors
- Temperature measurement with Pt1000 type sensor (DIN class A).
  Measuring range: −30 to +250 °C
  Accuracy (0-50 °C) ±0.25 °C
  Resolution: 0.1 °C
- Sample flow measurement with digital SWAN sample flow sensor.

Transmitter Specifications and Functionality

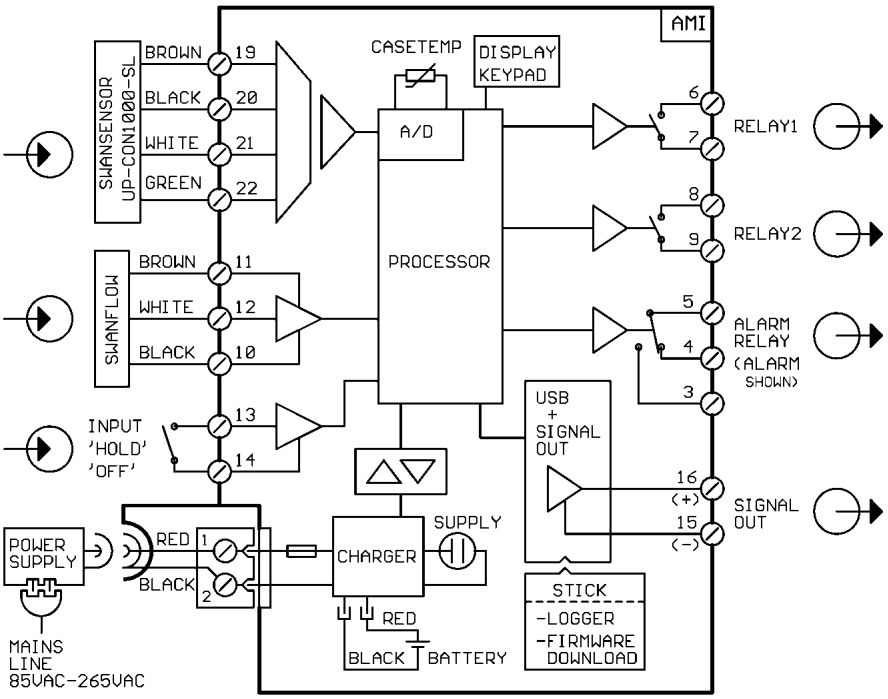
Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 75 x 45 mm
Electrical connectors: screw clamps
Ambient temperature: -10 to +50 °C
Humidity: 10 – 90% rel., non-condensing

Power supply
Voltage: 80 – 264 VAC 50/60 Hz
Power consumption: max. 18 VA
Charging time: ~6 h
Battery type Li-Ion
While charging protect from heat impact and keep splash-proof (not IP66). Use original power adapter only.

Operation
User menus in English, German, French, Spanish 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: 100 mA / 50 V

Signal output
One programmable signal output for measured value (freely scalable, linear or bilinear) or as controller output.
Current loop: 0/4 – 20 mA
Maximum burden: 510 Ω
Type: current source

Monitor Data

Sample conditions
Flow rate: 3 to 20 L/h
Temperature: 0 to 50 °C
Inlet pressure: max. 2 bar
Outlet pressure: pressure free
No sand, no oil

Sample connections
Sample inlet: Swagelok fitting with R ⅛" (ISO 7-1) thread for ¼" tube OD
Sample outlet: 8 mm Serto tube adapter (PA)

Panel
Dimensions 275 x 320 x 240 mm
Material anodized aluminum
Total weight 4.5 kg