Monitor AMI-II Deltacon Power

Data sheet no. DenA23561X0X

Complete monitoring system for the automatic, continuous measurement of specific conductivity and conductivity after cation exchange.
Calculation of sample pH and alkalizing reagent concentration based on differential conductivity measurement.

Application examples

- Monitoring of the water-steam cycle quality in power and industrial plants.

Measuring range

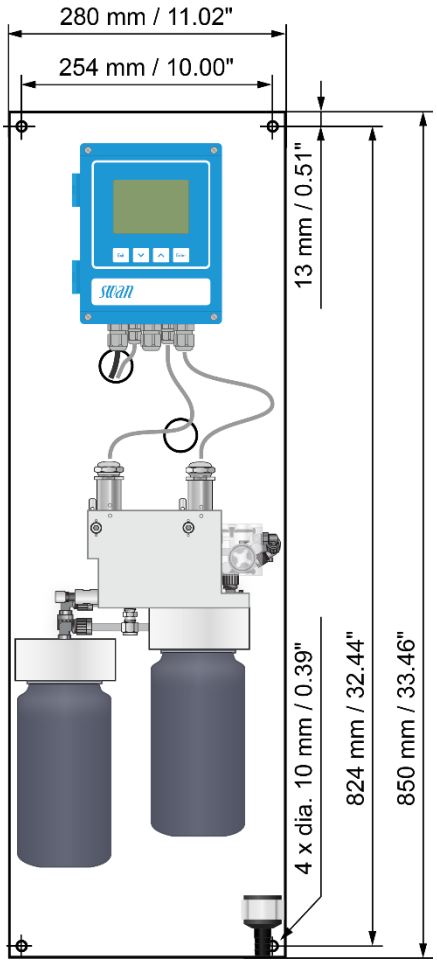
- Conductivity: 0.055 to 1000 µS/cm
  Temperature compensation to 25 °C with various models: non-linear for high purity water, neutral salts, strong acids, strong bases, ammonia, ethanolamine, morpholine, cyclohexylamine, 2-amino-2-methylpropanol, 2-diethylaminoethanol, hydrofluoric acid or linear with coefficient.
- pH: 7.5 to 10.5, calculated according to VGBE-010-00-2023-08.
- Concentration: e. g. 30 ppm ammonia at pH 10.2 (calculated).

Instrument features

- **Transmitter AMI-II Deltacon Power**
  in a rugged aluminum enclosure (IP66).
- **Flow cell CATCON+ SL**
  with patented slot-lock design for quick sensor release, integrated, easily exchangeable cation exchanger vessel with automatic deaeration, 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}.
- Factory tested, ready for installation and operation.

Pre-rinse option

- Setup for rinsing the resin before use, enabling an instant resin change without additional rinsing time.



Monitor AMI-II Deltacon Power with pre-rinse option.

Order numbers:	Monitor AMI-II Deltacon Power	A–23.561._0_
Power supply	100 – 240 VAC, 50/60 Hz	1
	10 – 36 VDC	2
Option 1	Without pre-rinse option	1
	With pre-rinse option	2
Option 2	RS485 interface with Modbus RTU or Profibus protocol	A–81.470.0X0
	HART interface	A–81.470.030
	Two additional 0/4 – 20 mA signal outputs	A–81.470.040
Consumable	Bottle with 1 liter of cation exchange resin	A–82.841.030

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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

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 compensation
Non-linear function (NLF) for high purity water, neutral salts, strong acids, strong bases, ammonia, ethanolamine, morpholine, cyclohexylamine, 2-amino-2-methylpropanol, 2-diethylaminoethanol, hydrofluoric acid, linear coefficient 0.00 – 10.00 %/°C, absolute (none).

pH and alkalizing reagent calculation
pH (at 25 °C): 7.5 to 10.5
Concentration: see Operator's Manual
Conditions for pH calculation: Only 1 alkalizing reagent, contamination is mostly NaCl, phosphates < 0.5 mg/L, if pH value < 8 the concentration of contaminant must be small compared to alkalizing reagent.

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

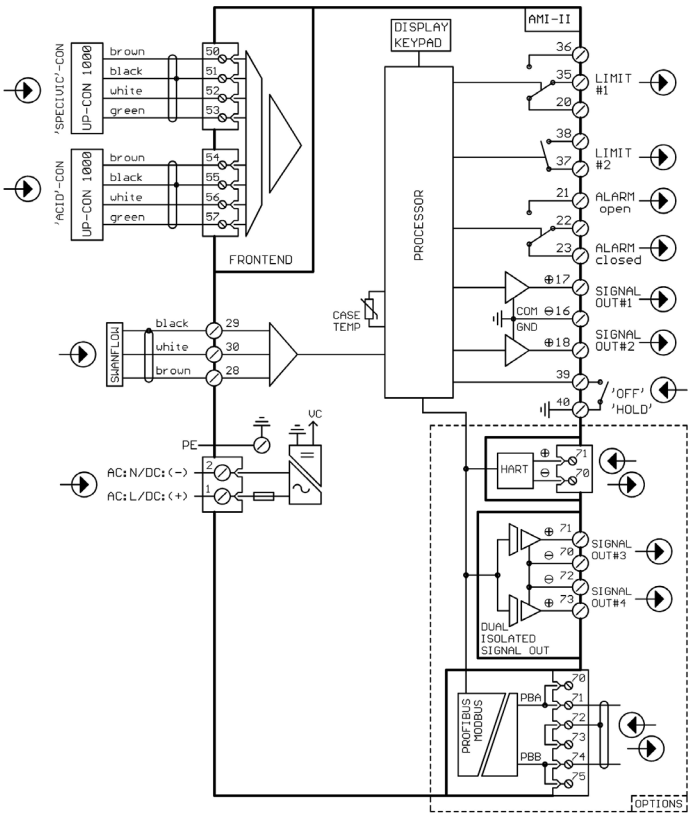
Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 74 × 53 mm
Electrical connectors: screw clamps
Ambient temperature: −10 to +50 °C
Humidity: 10 - 90% rel., non-condensing

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 and Spanish.
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



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 timers with automatic hold function.
Rated load: 1 A / 250 VAC

Signal outputs
Two or four (with optional communication interface) 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

SD card interface
Possibility to record measured values and diagnostic data to an SD card.
SD card included.

Communication interface options
- Two additional signal outputs, galvanically separated
- RS485 interface with Modbus RTU or Profibus DP protocol, galvanically separated
- HART interface

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: for flexible tube, 15 mm inner Ø

Panel
Dimensions 280 × 850 × 200 mm
Material stainless steel
Total weight 10 kg