

Monitor AMI-II Powercon Acid

Data sheet no. DenA23545X0X

Complete monitoring system for the automatic, continuous measurement of acid conductivity in ultrapure water.

Application examples

- Monitoring water quality in water cycles of power and industrial plants.

Measuring range

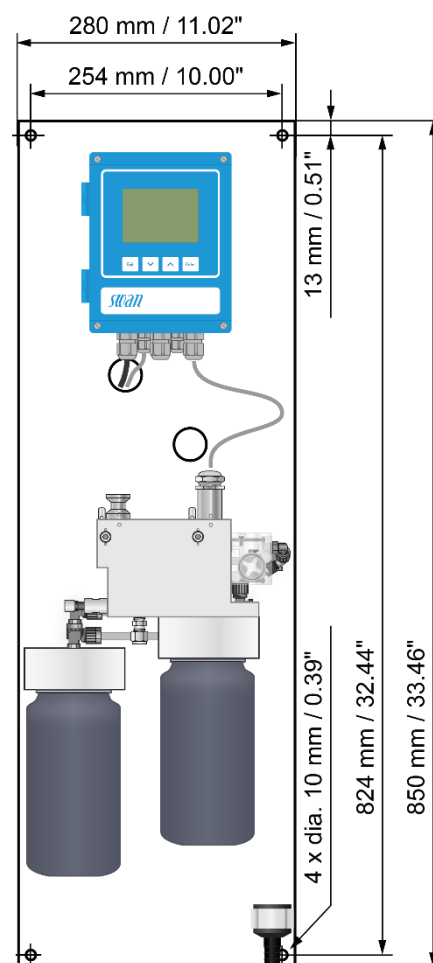
- From 0.055 $\mu\text{S}/\text{cm}$ to 1000 $\mu\text{S}/\text{cm}$.
- Temperature compensations: non-linear for high purity water, neutral salts, strong acids, strong bases, ammonia, ethanolamine, morpholine, cyclohexylamine, 2-amino-2-methylpropanol, 2-diethylaminoethanol, hydrofluoric acid or linear with coefficient.
- Measured value is compensated to 25 °C.

Instrument features

- Transmitter AMI-II Powercon**
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 Powercon Acid with pre-rinse option.

Order numbers:	Monitor AMI-II Powercon Acid	A-23.545._0_
Power supply	100 – 240 VAC, 50/60 Hz..... 10 – 36 VDC.....	1 2
Option 1	Without pre-rinse option With pre-rinse option	1 2
Option 2	RS485 interface with Modbus RTU or Profibus protocol HART interface Two additional 0/4 – 20 mA signal outputs	A-81.470.0X0 A-81.470.030 A-81.470.040
Consumable	Bottle with 1 liter of cation exchange resin	A-82.841.030



Monitor AMI-II Powercon Acid

Data sheet no. DenA23545X0X

Conductivity Measurement

Conductivity sensor type

2-electrode conductivity sensor.

Measuring range

0.055 to 0.999 $\mu\text{S}/\text{cm}$

1.00 to 9.99 $\mu\text{S}/\text{cm}$

10.0 to 99.9 $\mu\text{S}/\text{cm}$

100 to 999 $\mu\text{S}/\text{cm}$

Automatic range switching.

Resolution

0.001 $\mu\text{S}/\text{cm}$

0.01 $\mu\text{S}/\text{cm}$

0.1 $\mu\text{S}/\text{cm}$

1 $\mu\text{S}/\text{cm}$

Accuracy (at 25 °C) $\pm 1\%$ of measured value
or ± 1 digit (whichever is greater)

Precision (at 25 °C) $< 1\% \pm 1$ digit

Temperature compensations

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 $\%/^{\circ}\text{C}$, 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, 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 ($\pm 10\%$),
50/60 Hz ($\pm 5\%$)
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.

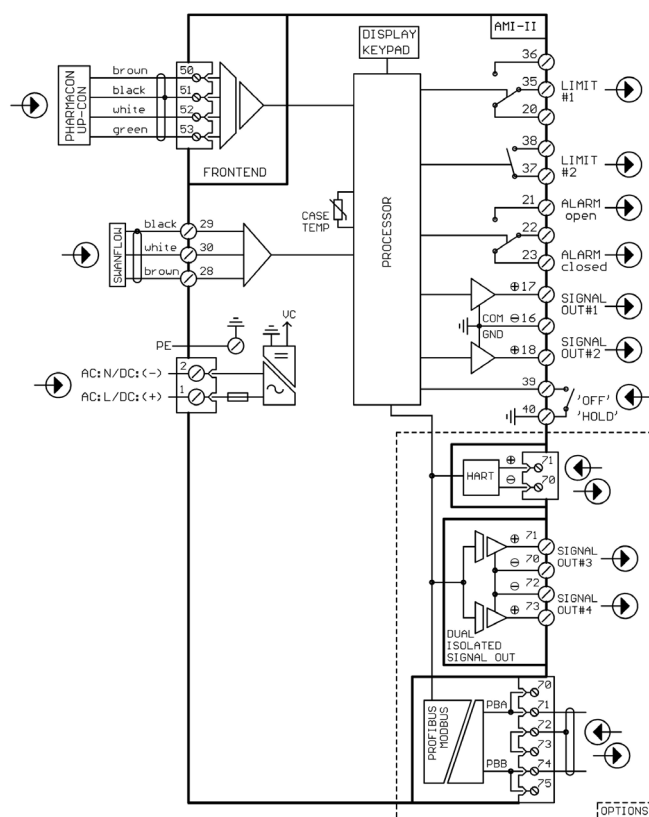
Transmitter temperature monitoring

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 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 $R \frac{1}{8}$ " (ISO 7-1) thread for $\frac{1}{4}$ " tube OD for flexible tube, 15 mm inner $\varnothing$

Sample outlet:

Panel

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

