

Monitor AMI Powercon Specific

Data sheet no. DenA23441X00

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

Application examples

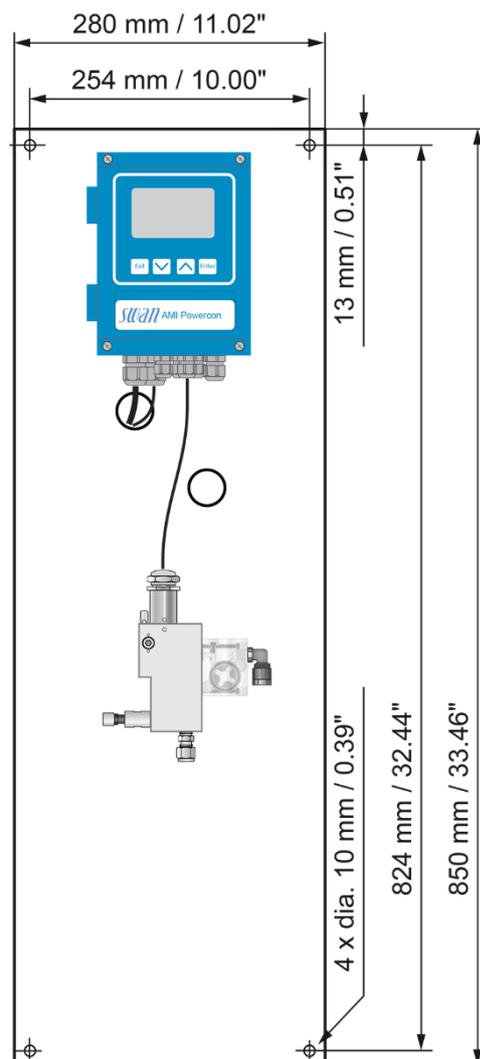
- Monitoring water quality in water cycles of power and industrial plants, as well as in demineralization plants.

Measuring range

- From 0.055 $\mu\text{S}/\text{cm}$ to 30 mS/cm .
- Temperature compensations: 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 AMI Powercon**
in a rugged aluminum enclosure (IP66).
- 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} .
- Factory tested, ready for installation and operation.



Order numbers:	AMI Powercon Specific	A-23.441._00
Power supply	100 – 240 VAC, 50/60 Hz.....	1
	10 – 36 VDC.....	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



Conductivity Measurement

Conductivity sensor type

2-electrode conductivity sensor.

Measuring range

0.055 to 0.999 $\mu\text{S/cm}$
 1.00 to 9.99 $\mu\text{S/cm}$
 10.0 to 99.9 $\mu\text{S/cm}$
 100 to 999 $\mu\text{S/cm}$
 1.00 to 2.99 mS/cm
 3.0 to 9.9 mS/cm
 10 to 30 mS/cm

Resolution

0.001 $\mu\text{S/cm}$
 0.01 $\mu\text{S/cm}$
 0.1 $\mu\text{S/cm}$
 1 $\mu\text{S/cm}$
 0.01 mS/cm
 0.1 mS/cm
 1 mS/cm

Automatic range switching.

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, 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, 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 and Russian.
 Separate, menu-specific password protection.

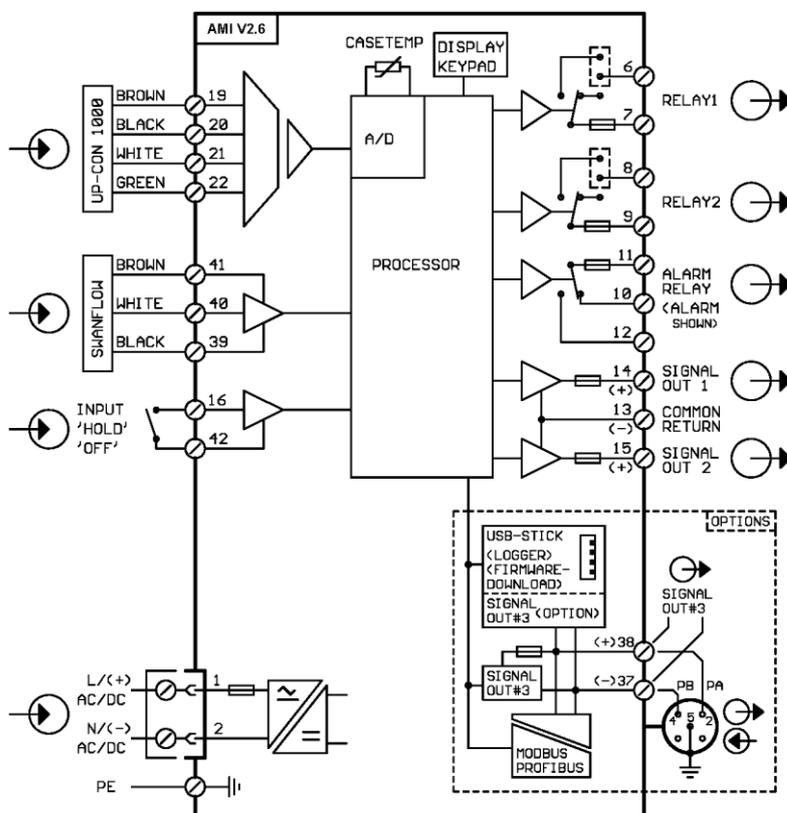
Safety features

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.

Electrical Connection Scheme



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

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 1/8" (ISO 7-1) thread for 1/4" tube OD
 Sample outlet: 8 mm Serto tube adapter (PA)

Panel

Dimensions: 280 x 850 x 200 mm
 Material: stainless steel
 Total weight: 7 kg

