

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

Application examples

- Quality assurance of conductivity measurements in the pharmaceutical industry.

Measuring range

- From 0.055 $\mu\text{S}/\text{cm}$ to 2000 $\mu\text{S}/\text{cm}$.
- Displays uncompensated and temperature-compensated (25 °C) conductivity simultaneously.

Instrument features

- Transmitter with rechargeable battery in a rugged aluminum enclosure (IP66).
- USB stick for data logging.
- **QV-Flow UP-CON SL HT**
High-temperature flow cell 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} .



Compliance

- Pre-programmed USP <645> stage 1 conductivity limits with individual action limit of 20–100 % configurable.

Scope of delivery

- AMI INSPECTOR Pharmacon.
- 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 Pharmacon	A-75.311.000
Option	Instrument certificate	A-97.017.311



Conductivity Measurement

Conductivity sensor type
2-electrode conductivity sensor.

Measuring range	Resolution
0.055 to 0.999 $\mu\text{S/cm}$	0.001 $\mu\text{S/cm}$
1.00 to 9.99 $\mu\text{S/cm}$	0.01 $\mu\text{S/cm}$
10.0 to 199.9 $\mu\text{S/cm}$	0.1 $\mu\text{S/cm}$
200 to 2000 $\mu\text{S/cm}$	1 $\mu\text{S/cm}$

Automatic range switching.

System accuracy

0.05 to 500 $\mu\text{S/cm}$	$\pm 2\%$
500 to 2000 $\mu\text{S/cm}$	$\pm 3\%$

or $\pm 0.001 \mu\text{S/cm}$ whichever is greater.

Temperature compensations

- Absolute (none)
- Non-linear function (NLF) for high purity water
- Linear coefficient 0.00 – 10.00 $\%/^{\circ}\text{C}$
- Various chemicals

USP <645>

- Pre-programmed stage 1 conductivity limits.
- Individual action limit of 20–100 % configurable.

Auxiliary sensors

- Temperature measurement with Pt1000 type sensor (DIN class A).
Measuring range: -30 to $+250^{\circ}\text{C}$
Accuracy (0–50 $^{\circ}\text{C}$): $\pm 0.25^{\circ}\text{C}$
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 $+50^{\circ}\text{C}$
Humidity: 10 – 90% rel., non-condensing

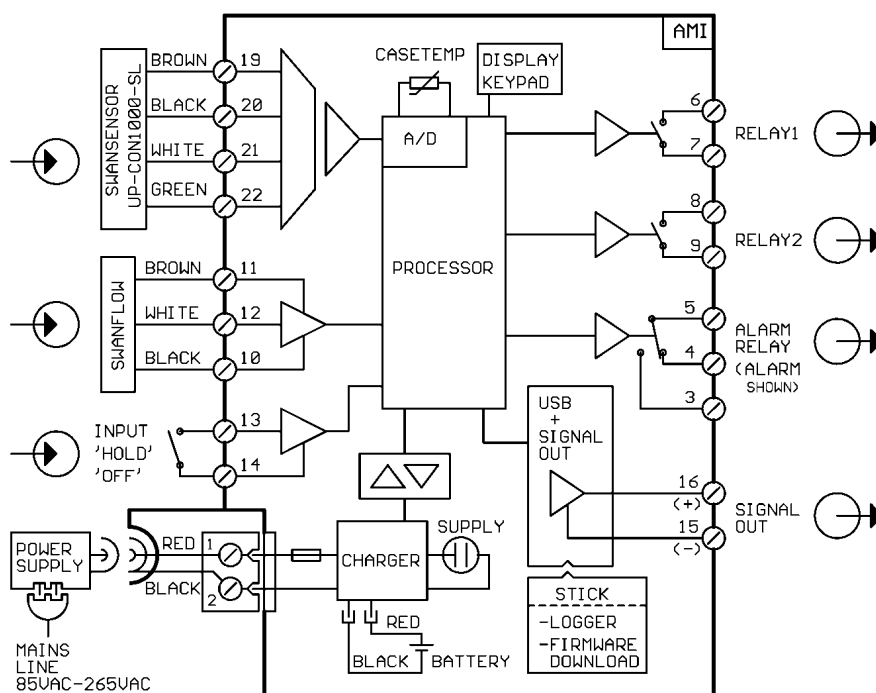
Power supply

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 and Spanish.
Separate, menu-specific password protection.

Electrical Connection Scheme



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

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 95 $^{\circ}\text{C}$
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: 6 mm Serto tube adapter (PVDF)

Panel

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

