

Monitor AMI LineTOC Compact Version

Data sheet no. DenA23613100

Complete monitoring system for the automatic, continuous measurement of total organic carbon (TOC) in ultrapure water and water for pharmaceutical purposes.

Application examples

- Monitoring of production, storage and distribution systems for purified water (PW) and water for injection (WFI) in accordance with the requirements of the Pharmacopoeias.
- Measurement of TOC in the purification and quality control of ultrapure water, e.g. in the semiconductor industry.

Measuring range

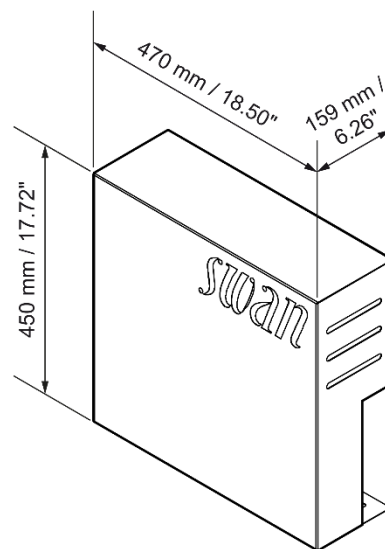
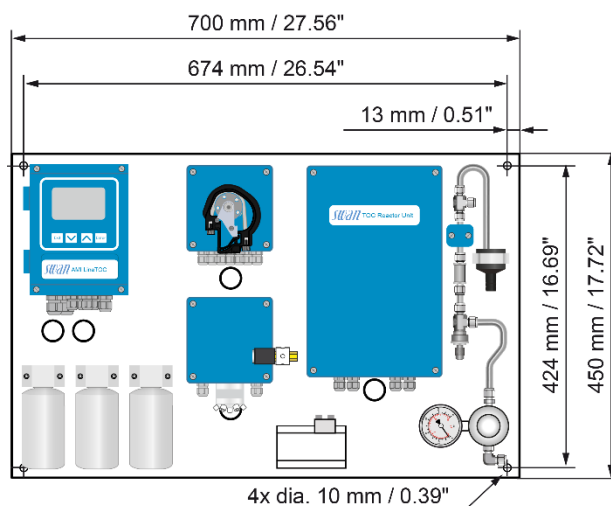
- From 0 to 1000 ppb.

Compliance

- Fully integrated and automatic system suitability test (SST) according to USP <643> and Ph. Eur 2.2.44.
- Hassle-free instrument qualification during commissioning with optional validation package.
- Firmware provides access protection/user management and audit trail/event logging.

Instrument features

- Smart design with easy grab sample function.
- Thin sample film and a large oxidation surface combined with strict temperature management guarantee 100% oxidation efficiency.
- Compact version for installation in common mounting spaces for TOC analyzers on water purification or distribution skids.



(optional cover for fluidic components)

Order numbers:	AMI LineTOC Compact Version AC	A-23.613.100
Option 1	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
Option 2	Inlet pressure regulator	A-82.589.000
Option 3	Sample cooler	A-82.300.010
Option 4	Stainless steel protection cover for fluidic components	A-89.200.130
Option 5	Validation package (English or German)	A-96.260.11X



TOC Measurement

Analytical method

Reagent-free UV oxidation with differential conductivity detection.
Response time <math>< 2 \text{ min}</math>

Measuring range TOC

0.00 to 9.99 ppb
10.0 to 99.9 ppb
100 to 999 ppb

Resolution

0.01 ppb
0.1 ppb
1 ppb

Reproducibility

0.1 to 50 ppb ± 1 ppb
50 to 1000 ppb ± 2 %

Accuracy conductivity

0.055 to 2 $\mu\text{S/cm}$ (25 °C) ± 1 %

System suitability test (SST)

Fully automatic, according to USP<643> and Ph.Eur.2.2.44.

Auxiliary sensors

- Temperature measurement with NT5K-type sensors, ± 0.2 °C accuracy in the operating range of the TOC reactor.
- Sample flow detection.

UV emitter

Service life 6 months
depending on application: up to 12 months
Power 11 W

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: 100 – 240 VAC (± 10 %),
50/60 Hz (± 5 %)
Power consumption: max. 55 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.

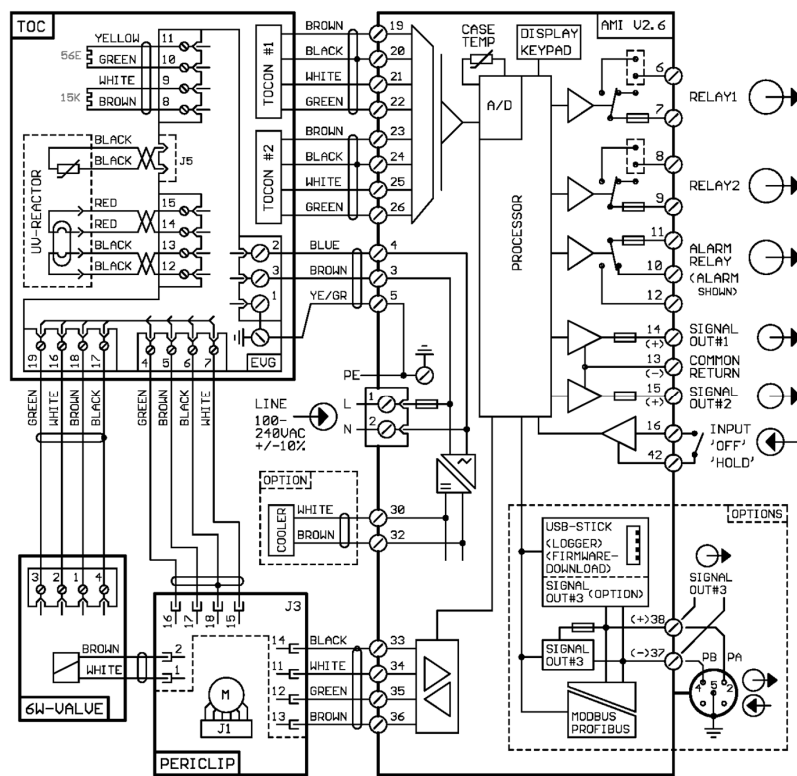
Transmitter temperature monitoring

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 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: 1 to 5 l/h
Temperature: 10 to 40 °C
with sample cooler: up to 90 °C
Inlet pressure_{abs.} (25 °C): up to 1.5 bar
with pressure regulator: up to 5 bar
Outlet pressure: pressure free
Conductivity: 0.055 to 2 $\mu\text{S/cm}$
Particle size: <math>< 100 \mu\text{m}</math>
No sand, no oil

Sample connections

Sample inlet: Swagelok 1/4" tube adapter
Sample outlet: for flexible tube, 15 mm inner \varnothing

Panel

Dimensions: 700 x 450 x 180 mm
Material: stainless steel
Total weight: 18 kg

