Process Insights™
Premium Insights Into Process

INNOVATIVE ONLINE TOC WATER ANALYSIS SOLUTION

PRODUCT DATASHEET

QuickTOCuv™

NEW

REAL-TIME ONLINE TOC WATER ANALYZER

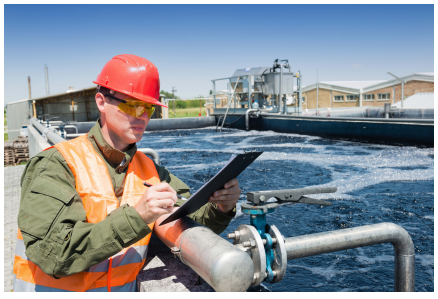
Fast, accurate, and affordable TOC analysis

- Pure water
- Boiler feed water
- Condensate return
- Drinking water
- Surface water
- Wastewater

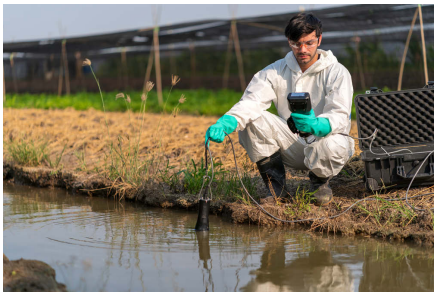
Key applications

Industrial Water Treatment

Wastewater Monitoring



Environmental Monitoring



Quick and Precise TOC Water Monitoring

The QuickTOCuv™ TOC water analyzer provides real-time monitoring of water quality, continuously measuring total carbon (TC), true TOC (detection of NPOC and POC/VOC), biochemical oxygen demand (BOD), and chemical oxygen demand (COD) in various pure water applications, including condensate return and boiler feed water.

This TOC analyzer oxidizes carbon compounds using UV light and the digestion reagent (sodium persulfate). The generated CO2 is then measured by a NDIR (non-dispersive infrared) detector. It is ideal for the continuous determination of TOC and TC, after correlation BOD and COD.

Applications

QuickTOCuv can be used across many industries to detect product spills or leakage in process control to optimize production and yield.

- Pure water
- Boiler feed water
- Condensate return
- Drinking water
- Surface water
- Wastewater

Benefits

The QuickTOCuv is designed to provide highest operational safety and a maintenance as well as user-friendly operation. Process safety can be safe-guarded through continuous TOC monitoring.

- Reliable sample analysis with high reproducibility
- Very low maintenance and operational costs
- Fast process control possible

Features

- Recognized UV persulfate method
- Continuous determination of true TOC (detection of NPOC and POC/VOC), TC, after correlation BOD and COD
- Accuracy of +/- 3%
- Auto-calibration
- Low maintenance
- Reduced consumption of chemicals
- Certified housing for EX zones (options for IECEx, etc.) Explosion protection Class I, Division 2, Zone 2 Groups ABCD
- Temperature Class: T4
- Analyzer availability of min. 98%
- Utilizes UV persulfate oxidation
- Automatic system check (zero point correction, sensitivity)
- Measuring range 0,1-1000 ppm

Benefits

- Improved reliability
- Low cost of ownership
- Meet compliance requirements
- Backed by global service and support

Technical data according to NE61

A.1 General details

1.1	Device designation	QuickTOCuv
1.2	Device type / Serial number	Water sum parameter online analyzer SN type UVXXXXXX, X denotes a number
1.3	Manufacturer / Supplier	Process Insights GmbH
1.4	Measuring principle	UV oxidation
1.4	Measurement compliance	TOC according to DIN EN 1484:1997-08/ ISO 8245:1999-03/ US-EPA 415.1, US-EPA 415.2
1.5	Measuring range examples, (approximately):	TOC=NPOC+POC/VOC, NPOC, TC (measured)
	TOC µg/l (ppb) TOC mg/l (ppm) TOC mg/l (ppm) TOC mg/l (ppm)	Water-steam cycles / condensate (100 - 1,000) Wastewater semiconductor (1 - 10) Cooling water (1 - 50) Drinking water / surface water (1 - 10)
	Measuring range: mg/l (ppm)	0,1- 1000 ppm TC or TOC DOC by correlation COD
1.7.1	Analog output signals / Analog input signals	2x Analog output signals: 0/4 - 20mA
1.7.3	Digital interface	OPC UA, Ethernet
1.8	Electrical power consumption	70 W
1.9	Power supply	100 - 240 VAC, 50 / 60 Hz
1.9.1	Safety	4A
1.10	Ambient temperatures for Measuring transducers and Sensors (°C)	5 - 35°C (we recommend: 10 - 30°C)
1.11	Storage temperature (°C)	5 - 35°C
1.12	Medium temperature Limits (°C)	50 °C
1.13	Thermostat control or Temperature compensation	CO_2-detector
1.14	Medium pressure limits on Input (absolute; bar)	Max. 0.2 bar
1.15	Medium pressure limits on Output (absolute; bar)	Pressure-less
1.16	Constant pressure Maintenance or pressure Compensation	None
1.17	Medium flow limits	Continuous flow
1.18	Constant flow maintenance or Flow compensation	Constant flow when using a flow sampler or Providing the necessary sample quantity without pressure load
1.19	Housing material	Standard: 1.5 mm 1,0330 housing, powder coated (RAL7035); IP65, powder-coated steel housing; optional: Stainless steel 1.4307 / AISI 304L Stainless steel 1.4404 / AISI 316L for corr. Env.
1.20	Material of parts in Contact with medium	Influent-tubing: Peripren; glassware: Duran-Glas Effluent: PVC; metalic parts: stainless steel

Technical data according to NE61

A.1 General details

1.21	Design / Dimensions Standard housing	W 1140 x W 600 x D 350 mm
1.22	Weight	75 kg (standard housing)
1.23	Installation conditions	Wall-mounted or rack
1.24	Process connection	4.8 mm, 8 mm, 12 mm ID tube
1.25	Electrical connection	Connection to customer terminal box
1.26	Ingress protection (DIN EN 60529)	Protection class according to DIN EN 60529: Housing corresponds to IP65*
1.27	Explosion protection	Class I, Division 2, Zone 2 Groups ABCD Temperature Class: T4
1.29	EMC immunity requirements	2014/30/ EU
1.30	CE Declaration of Conformity	Yes
1.31	Official approvals Special certificates	cETLus, NFPA 496, UL 61010, UL61010-1; UL611010-2, CSA C22.2, UL 698A
1.32	User interface specifications	7" Siemens HMI (touchscreen)

Further information

Measurement technique and sample preparation

Sensitivity	Depending on the detector / measuring range used
Accuracy	Max. 3 % of FSR
Repeatability limit	Max. 3 % of FSR
Cycle Time	Continuous determination
Calibration / Validation	Auto-calibration and automatic system check with liquid-standard
Particle size	Particles less than or equal 100 µm

Other used directives

Machinery directive	2006/42/ EG
HazLoc	Purged and Pressurized Enclosures for Electrical Equipment [NFPA 496:2020 Ed.2021] Industrial Control Panels Relating To Hazardous (Classified) Locations [UL 698A:2018 Ed.4+R:17Jan2019]
Restriction of Hazardous substances	2011/65 EU 2015/863/ EU2015/EU

* The housing has been tested to comply with IP65. For this, during testing ventilation ducts and ports where closed.

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GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights delivers premium analytical sensors, analyzers, instrumentation, software and solutions that are mission-critical to keep your operations, personnel, and the environment safe. Our commitment to customer satisfaction is evident through our diverse range of products, programs, and services, designed to accommodate various budgets and application needs.

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