TOC COD BOD $TN_b$/TP

ONLINE WATER ANALYZERS

DATASHEET

# QuickTOCuv

*The continuous TOC monitoring system for clean and pure water.*

## *Quick and precise – **QuickTOCuv** a product you can rely on!*

LAR's QuickTOCuv is a measuring device for continuous online determination of total carbon (TC), total organic carbon (TOC), biochemical oxygen demand (BOD), and chemical oxygen demand (COD) in pure water e.g. condensate return and boiler feed water.

Process Insights
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# QUICKTOCUV

*LAR's TOC analyzer QuickTOCuv is an online measurement system for the determination of total carbon (TC), total organic carbon (TOC), non-purgeable organic carbon (NPOC), and after correlation for the biochemical oxygen demand (BOD) and chemical oxygen demand (COD) in solid-free water such as pure, drinking, surface and waste water.*

## Applications

LAR's QuickTOCuv is an online analyzer for the continuous determination of TOC and TC in various industries. It is used to detect product spills and leakages and is used for process control and optimization.

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

## Features

The TOC analyzer oxidizes carbon compounds using UV light and the digestion reagent (sodium persulfate). The generated $CO_2$ is then measured by a NDIR (non-dispersive infrared) detector.

- Continuous determination of TOC and TC, after correlation BOD and COD
- UV persulfate oxidation
- Automatic system check (zero point correction, sensitivity)

## Benefits

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

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

# Technical Data

## Measurement Technique and Sample Preparation

| | |
|---|---|
| Measurement Method | UV persulfate oxidation |
| Measurement Compliance | According to DIN EN 1484:1997-08/ ISO 8245:1999-03/ US-EPA 415.1 |
| Measurement Ranges | 0.1 - 1,500 mg/l |
| Response Time | < 6 min |
| Parameter measured | TOC, TC |
| Parameter calculated by correlation | BOD, COD |
| Calibration | Automatic and manual |
| Sample Streams | 1 or 2 (optional) |
| Sample Preparation | Overflow vessel (optional) |
| Sample Flowrate | 4.80 l/h |
| Oxidation Principle | UV Oxidation, supported by potassium peroxodisulfate |
| Repeatability | Max. 2% of FSR or 10 ppb whatever is greater |
| Accuracy | Max. 3% of FSR or 10 ppb whatever is greater |
| Carrier gas Flowrate | RN1: 5 l/h ±1<br>RN2: 21 l/h ±1 |
| Carrier gas Preassure | Between 1,2 to 2,0 bar |

## Temperature and Humidity

| | |
|---|---|
| Permissible sample temperature | Until 50 °C |
| Ambient Temperature | 5 to 35 °C |
| Ambient Air Humidity | < 60% |

## Dimensions and Weight

| | |
|---|---|
| Housings | IP 65<br>optional: EXp Zone I and II (ATEX,IECEx) |
| Dimensions | H 980 x W 600 x D 350 mm |
| Weight | Approx. 53 kg (standard) |

## Electric, Hydraulic Specifications and Data Output

| | |
|---|---|
| Inflow and Outflow | Sample inlet: 1,6mm ID, Sample outlet: 9mm ID<br>Carrier gas inlet and outlet: 4mm ID, 6mm ID |
| Power Supply | 230 /115 V AC, 50 Hz |
| Analogue Output | 2 pcs 0/4 - 20mA |
| Serial Interface | Collective alarm, USB, profinet |
| Safety | 2/6 A intern, 10 A extern |
| Remote Control | via VPN/IP protocol (Internet) (optional) |

## Equipment Devices

| | |
|---|---|
| 4" touchpanel | |
| Self explanatory software, Autostart function | |
| Digital Output | 4 freely programmable system relays (2 optional) |

# Advantages & Features

- Recognized UV persulfate method
- Continuous determination of TOC, TC, after correlation BOD and COD
- Accuracy of +/- 3%
- Auto-calibration
- Reduced consumption of chemicals
- Certified housing for EX zones (options for ATEX, IECEx, etc.)
- Analyzer availability of minim. 98%
- Maintenance and service max. 15 min per week
- Very low maintenance and operational costs

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