

TOC 2100C Process Analyzer

APPLICATIONS

Control of:

- Organic loading of process streams
- Condensate return
- Cooling water
- Potable water
- Boiler feed water

FEATURES

- Control panel with two-line display and pull-down menus for selection of the system functions and function monitoring
- Automatic two-point calibration with solenoid valves
- Compact industrial design for easy installation and maintenance
- Two cabinets for electrical and chemical components
- Electronic flow and leakage control
- High availability with sensoric plus alarm and status reports
- Design and operation procedure corresponding to NAMUR recommendations and VDE
- PLC: automatic calibration function
self control functions with status report
high availability by easy maintenance
- Standard measuring ranges from 0 - 2 ppm (mg C/l) up to 0 - 2,500 ppm (mg C/l) are available, 0 - 5,000 ppm as option.

DESCRIPTION

The TOC Analyzer Model 2100C is designed for the continuous measurement of organic carbon in industrial and waste water.

This instrument is the consequent new development of the Model COA 2100 which

has been modified especially to the requirements of the European market and corresponds to all regulations like as NAMUR, VDE etc. The detection is based on the ultraviolet promoted persulfate oxidation of the dissolved not purgeable organic carbon components in a liquid solution. The organic carbons are oxidized to CO₂. After the removal of water vapors with peltier cooler and permeation dryer followed by an additional filtering the concentrations of CO₂ are measured by a process NDIR Analyzer. The results are indicated in ppm or mg C/l.

This proven concept provides for fast, reliable, realtime response while maintaining high accuracy. Optionally the instrument can be supplied as total carbon analyzer, i.e. also the inorganic and purgeable carbons are measured.



GENERAL SPECIFICATIONS

Measuring component	TOC (optional TC)
Principle of operation	UV-promoted persulfate oxidation
Detection	CO ₂ with infrared analyzer
Measuring range, min.	0 - 2 mgC/l
Measuring range, max.	0 - 2,500 mgC/l (0 - 5,000 mg C/l)
Response time	< 3 - 5 min to 90% fs; of most ranges
Repeatability	<3 % of measuring range FS
Drift	<3 % of FS per 24 hours
IC conversion rate	99.5 % in water with max. 0.1 % salt 98 % in water with max. 3 % salt

SPECIFIC DATA

Power requirements	230 VAC Option: 110 VAC
Sample requirements	Flow: 50 - 2,000 ml/min at bypass Pressure: min. 2 psig
Reagent	Sodium or ammonium persulfate with phosphoric acid 19 l/month (except 0 - 5,000 mgC/l: 47 l/month)
Carrier gas	Nitrogen: 40 - 260 ml/min, approx. 14 - 30 psig, depending on range
Drying gas	Dry instrumentation air, containing low CO ₂ approx. 28 - 50 psig 200 - 1000 ml/min, depending on range
Indication/Operation panel	Two-line alphanumeric VF-indicator; menus for operation and maintenance functions
Calibration	Automatic two-point calibration or manual
Cooling system	Temperature controlled Peltier cooler / permeation dryer
Material in contact w. sample	Glass, PVDF, PTFE, Viton
Enclosure	
Chemical components:	Polyester
Electrical components:	Steel
Ambient temperature range	+ 2 °C up to + 30 °C (operating)
Dimensions (HxWxD)	1250x570x345 mm

SIGNAL OUTPUTS, INTERFACES

Alarms

2 high/low measurement concentration alarms
8 relays for alarm and status signals

Signals

Signals for status: 'Operation', 'Failure', 'Maintenance', 'Calibration' and 'Need of Maintenance'

Electrical output

4 - 20 mA, optically isolated
0 - 1 V, non isolated

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Emerson Process Management

GmbH & Co. OHG
Industriestrasse 1
D-63594 Hasselroth • Germany
T +49 (6055) 884-0
F +49 (6055) 884-209

<http://www.emersonprocess.com>

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