HORIBA
Process & Environmental

For pharmaceutical water & semiconductor production

Quality control of PW, WFI, HPW and cleaning validation

On-line TOC Analyzer

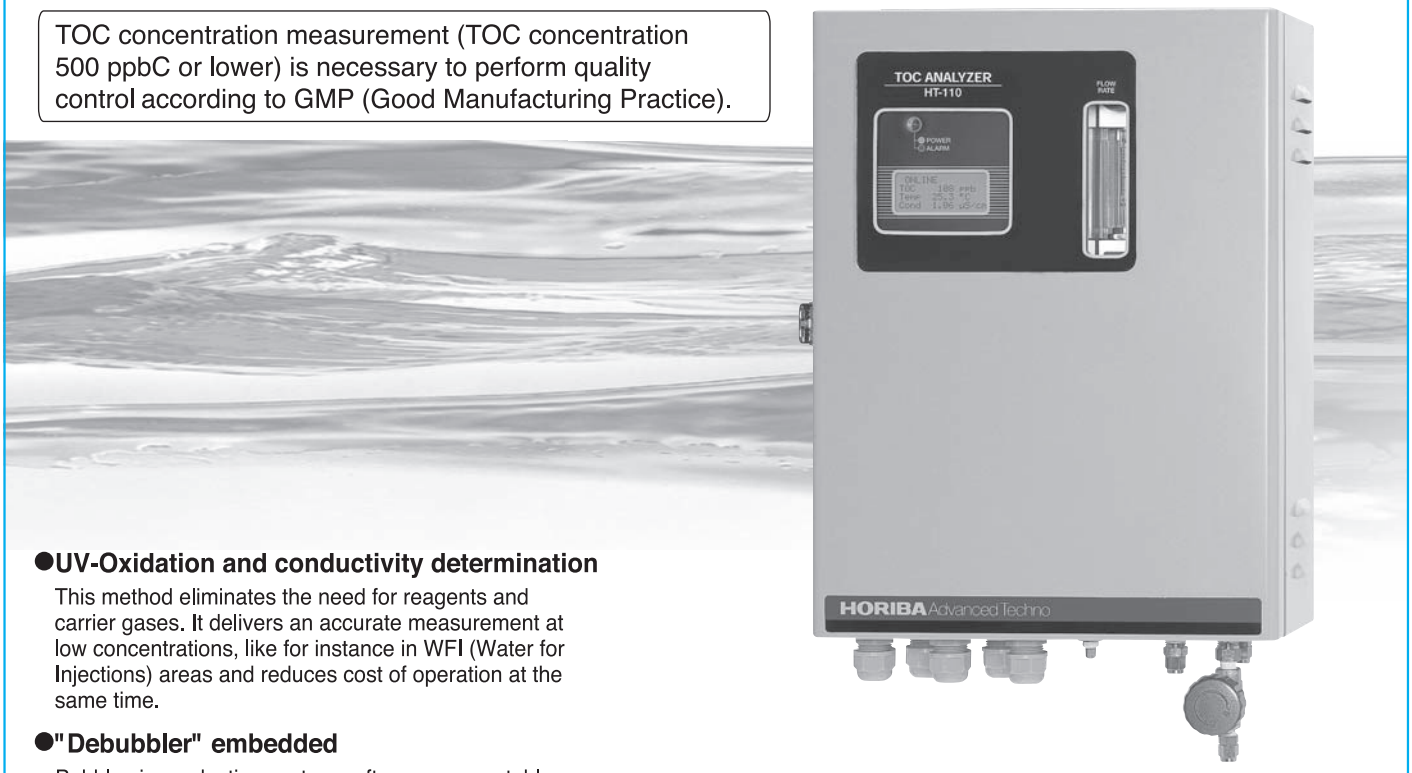
HT-110

CE marking compliant

Continuous on-line TOC measurement of Purified Water (PW), Water For Injection (WFI) and Highly Purified Water (HPW). Applicable for pharmaceutical and/or semiconductor manufacturing.

The HT - 110 is a Total Organic Carbon (TOC) analyzer for use in pharmaceutical water production. The measuring principle is based on UV - Oxidation and measurement of the difference in conductivity.

TOC concentration measurement (TOC concentration 500 ppbC or lower) is necessary to perform quality control according to GMP (Good Manufacturing Practice).



●UV-Oxidation and conductivity determination

This method eliminates the need for reagents and carrier gases. It delivers an accurate measurement at low concentrations, like for instance in WFI (Water for Injections) areas and reduces cost of operation at the same time.

●"Debubbler" embedded

Bubbles in production systems often cause unstable readings in many instruments.The embedded "Debubbler" eliminates the influence and guarantees a stable measurement.

●Optional external ON/OFF control of contact input terminals.

●Maintenance cycle: ONLY ONCE PER YEAR

Maintenance only consists of annual UV-lamp exchange and annual calibration.

●Conform to:

United States Pharmacopeia: USP <643> TOC Measurements,
Reference solutions for System Suitability Test (SST):
1,4 Benzoquinone, and Sucrose
European norms: EP 2.2.44.
Japanese norms: JP16

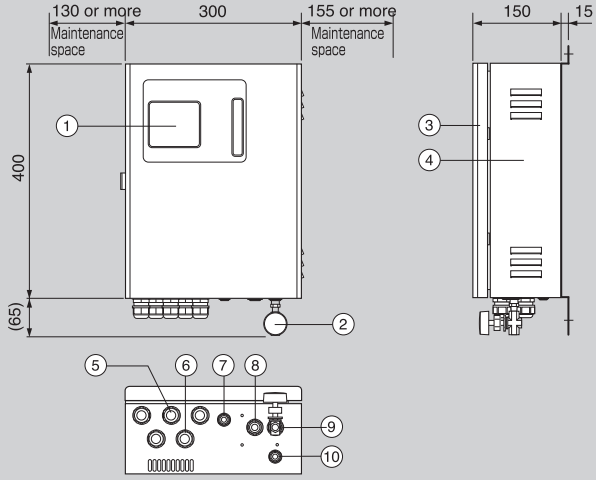
●Choice of 3 installation methods

Possible to install on a pole, wall or desktop.

Specifications

Model	HT-110	
Measurement method	Continuous UV-Oxidation and measurement of conductivity differential, according to USP 643, EP 2.2.44, JP16	
Measuring range	0 to 1000 ppbC (Measuring range : 0 to 100/500/1000 ppbC)	
Display resolution	0 to 100 ppbC	0.1 ppbC
	0 to 500 ppbC	
	0 to 1000 ppbC	1 ppbC
Repeatability	Within ±2% of the full scale	
Analog output	Number of outputs : 1 4 to 20mA DC / 0 to 1V DC (option) : Input/Output isolated type Max. load resistance : (4 to 20mA DC) 600Ω. Min. load resistance (0 to 1V DC) : 100kΩ [with option selected] Analog output range : Freely selectable within the measurement range Output contents : TOC concentration	
Contact output	Number of outputs : 2 Alarm contact output (RLY1) Contact type : Relay contact, SPDT Contact rating : 125V AC 3A, 24V DC 3A (resistance load) Contact function : Upper/lower limit action (ON/OFF control) Output contents : Selectable between TOC concentration, Temperature, Conductivity, Hold, and Error (Operation is reversed when Hold or Error is selected) Alarm contact output (RLY2) Contact type : Relay contact, SPST Contact rating : 125V AC 3A , 24V DC 3A (resistance load) Contact function : Upper/lower limit action (ON/OFF control) Output contents : TOC concentration	
Contact Input	Number of input point : 1	
Sample conditions	Conductivity : < 10 μS/cm or lower (0 to 100 ppb: < 2 μS/cm or lower) Temperature : 5 to 99℃ Pressure : 0.03 MPa to 0.50 MPa Sample flow rate : adjustable 10 to 30mL/min (Recommended 15mL/min for measurement)	
Ambient environment	Temperature : 5 to 40℃ Humidity : 85% or lower	
Display functions	LC with backlight Display content (TOC concentration, conductivity, temperature, alarm)	
Structure	Protection : IP43 ; Paint color 5PB8/1; Epoxy coating (indoor-use panel installation type)	
Power supply	100 to 240V AC ±10% 50/60 Hz 80 VA (max.)	
Mass	13 kg	
Conforming standards	CE marking, FCC Part 15	

External dimensions Unit: mm



Names of parts	Notes
① Display	———
② Needle valve	———
③ Door	SUS304
④ Case	SUS304
⑤ Wiring part	External cable diameter: 7 to 12 mm
⑥ Wiring part for electric cable	External cable diameter: 7 to 12 mm
⑦ Calibration inlet	Rc1/8
⑧ Sample outlet 2	Rc1/4
⑨ Sample outlet 1	Rc1/4
⑩ Sample inlet	Rc1/8

Please read the manual before using this product to assure safe and proper handling of the product.

Manufacturer

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