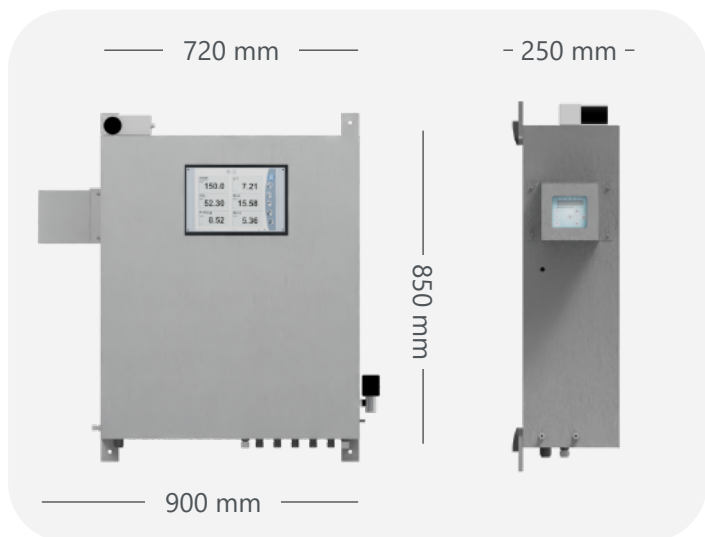


UV500 ATEX

Multiparameter online water analyser



> Technical specifications

Sample flow	Recommended : 0 - 5 L/min 0 - 0.5 L/min for NH_4^+ or H_2S
Sample pressure	0 - 4 Bar (0 - 1 Bar with sampling peristaltic pump)
Sample temperature	0 - 0.5 bar for NH_4^+ or H_2S 0 - 80 °C 0 - 30 °C for NH_4^+ or H_2S
Operating temperature	-20 - 60 °C
Wet part materials	Quartz, PP, PE, FPM(viton), PMMA, Pharmed, PVC Glass for NH_4^+ or HS^-
Measuring interval	Continuous or periodic: 1 min to 720 min
Memory	5000 lines of measurement (up to 16 channels) with date and time.
Chemical consumption	Cleaning solution (5% sulfuric acid) : 220 mL/day
Maintenance interval	Recommended : 6 months to 1 year (except for refilling)
Power supply	100 - 240 VAC $\pm$ 10% / maxi 150 VA / 50 - 60 Hz
Touch Screen	Colour TFT LCD 640x480 pixels with LED backlight RS232 with MODBUS protocol
Outputs	4-20 mA output* Relays*
Inputs	pH/ORP modules* 4-20 mA input* RS485 for probes
Free sockets	12 free sockets for optional modules among : 4-20 mA I/O, Relays, pH, ORP, conductivity
EMC & Safety standard	CE, EN61010-1, EN61326
Certification	ATEX : II 2 G Ex pxb IIC T4 Gb IECEx : Ex pxb IIC T4 Gb
Enclosure	Stainless Steel 316L
Weight	70 kg

* Optional module

> Parameters & Technologies

> Optical parameters

UV254	UV Absorbance	Nitrite	Colorimetry
UV254 T	UV Absorbance	Aluminium	Colorimetry
COD	UV254 correlation	Ortho-phosphate	Colorimetry
TOC	UV254 correlation	Chlorine	Colorimetry
BOD	UV254 correlation	Iron	Colorimetry
Hydrocarbons (poly aromatic)	UV Fluorescence	Manganese	Colorimetry
Chlorophyll A	UV Fluorescence	Copper	Colorimetry
Oil in Water	UV Fluorescence	Silica	Colorimetry
Color	UV Absorbance	Chromium	Colorimetry
Nitrate	UV Absorbance	Turbidity	Nephelometry
		Hydrogen Sulfide	UV Abs, Gas stripping
		Ammonia	UV Abs, Gas stripping

> Probes and sensors

pH	Potentiometric	ORP	Potentiometric
Conductivity	Conductivity	Dissolved Oxygen	Fluorescence

> Key Features

- Automatic cleaning with sulfuric acid 5%
- Automatic zero
- Low maintenance
- Multiparameters : up to 16 parameters in one single unit

> Parts number

> Basic unit

UV500ATEX *Basic unit (no measurement included)*

> Sampling

P-500 *Sampling peristaltic pump for unpressurized water*
 Built-in on the left side of the enclosure
 Flow of about 0.6 litre/min
 Discontinuous operating to increase tube lifetime

> Optical parts

SPECTRO500 *UV-Visible spectrograph*
 Range: 180 - 720 nm
 Resolution 0.28 nm
 2048 pixels

ABS500 *Flow cell and xenon lamp for absorbance measurements*
 Optical path: 1 or 3 or 10 or 15 mm
 Lamp lifetime: 10⁶ flashes, ~10 years
 Wet materials: PMMA, Viton, Quartz

STRIP500 *Stripping system for NH_4 or H_2S*
 Includes xenon lamp, flow cell, stripping pot, air pump, air filter, solenoid valve, reagent pump and internal heater

> 12 available emplacements for optional modules and probes

IN4-20-500 *Isolated 4-20 mA input module*
 Input resistance : 100 ohm

OUT4-20-500 *Isolated 4-20 mA output module*
 Active output, max load 500 ohm

LOGIC500 *Double logical inputs module*
 Input no 1: external pulse command for measurement
 Input no 2: measurements inhibition
 Isolated 0 - 48 VDC inputs
 Impedance: > 10 Kohm

RELAY500 *Relay module*
 Contact rating : 2 A/220 V
 Maximum 6 relays modules allowed

COND500 *Conductivity module*
 Range: 0 - 100 $\mu\text{S}/\text{cm}$ to 0 - 100 mS/cm
 ATC input for platinum RTD 100 Ohm

PH500 *pH/ORP module*
 pH range: 0 - 14
 ORP range: -2000 mV to +2000 mV
 ATC input for platinum RTD 100 Ohm

> 2 years operation spare parts

T-TYG-1 *Tygon tube 3.2x6.4 mm - 1 meter*

P-ACI-HD-1 *Head of cleaning peristaltic pump or reagent pump*

T-PHAR-1 *Pharmed tube 6.4x9.6 mm - 0.75 meters (for optional sampling pump)*

>Analytical Parameters

Parameter	Standard range <i>Other ranges on request</i>	Parts reference	Chemical consumption <i>per measurement</i>	Measuring time	Typical repeatability FS ⁽¹⁾	Detection Limit ⁽¹⁾ <i>Zero value</i>	Accuracy ⁽¹⁾
UV254	0 - 200 Abs/m 0 - 600 Abs/m 0 - 2000 Abs/m	UV254-L-500 UV254-M-500 UV254-H-500	-	<5s	± 0,30 Abs/m ± 0,50 Abs/m ± 5,00 Abs/m	0,30 Abs/m 0,30 Abs/m 3,20 Abs/m	2%
UVT <i>254 nm transmittance</i>	0 - 100 %	UV254T	-	<5 s	± 0,25 %	0,75 %	2%
COD <i>by UV correlation</i>	0 - 100 mg/L COD ⁽²⁾ 0 - 2000 mg/L COD ⁽²⁾ 0 - 20000 mg/L COD ⁽³⁾	COD-L-500 COD-M-500 COD-H-500	-	<5 s	± 0,15 mg/L ± 3 mg/L ± 30 mg/L	0,15 mg/L 3 mg/L 30 mg/L	2%
BOD <i>by UV correlation</i>	0 - 100 mg/L BOD ⁽²⁾ 0 - 1000 mg/L BOD ⁽²⁾ 0 - 10000 mg/L BOD ⁽³⁾	BOD-L-500 BOD-M-500 BOD-H-500	-	<5 s	± 0,15 mg/L ± 1,5 mg/L ± 15 mg/L	0,15 mg/L 1,5 mg/L 15 mg/L	2%
TOC <i>by UV correlation</i>	0 - 100 mg/L TOC ⁽²⁾ 0 - 1000 mg/L TOC ⁽²⁾ 0 - 10000 mg/L TOC ⁽³⁾	TOC-L-500 TOC-M-500 TOC-H-500	-	<5 s	± 0,15 mg/L ± 1,5 mg/L ± 15 mg/L	0,15 mg/L 1,5 mg/L 15 mg/L	2%
Nitrate	0 - 100 mg/L NO ₃	NO3-500	-	<5 s	± 0,25 mg/L	1 mg/L	2%
Ammonia	0 - 100 mg/L NH ₄ ⁺	NH4-500	2 mL	180 s	± 1 mg/L NH ₄ ⁺	0,15 mg/L NH ₄ ⁺	5%
Hydrogen Sulfide	0 - 20 mg/L H ₂ S	H2S-500	2 mL	180 s	± 1 mg/L H ₂ S	0,2 mg/L H ₂ S	5%
Color	0 - 100 Pt-Co 0 - 1000 Pt-Co	CO-L-500 CO-H-500	-	<5 s	± 0,25 Pt-Co ± 3 Pt-Co	0,8 Pt-Co 6 Pt-Co	2%
PAH	0 - 1 mg/L C ₆ H ₆ 0 - 10 mg/L C ₆ H ₆	PAH-500	-	<5 s	± 0,01 mg/L C ₆ H ₆ ± 0,1 mg/L C ₆ H ₆	0,1 mg/L C ₆ H ₆ 0,1 mg/L C ₆ H ₆	2%
Oil in water	0 - 100 ppm OIW 0 - 1000 ppm OIW	PAH-500	-	<5 s	± 1 mg/L OIW	1 mg/L OIW	2%
Chlorophyll A	0 - 100 µg/L ChlA	CHLOA-500	-	<5 s	± 2µg/L CHL A	-	2%
Ortho-Phosphate	0 - 2 mg/L P-PO ₄ 0 - 20 mg/L P-PO ₄	PO4-L-500 PO4-H-500	0,6 mL	180 s	± 0,04 mg/L P-PO ₄	0,01 mg/L P-PO ₄	2%
Nitrite	0 - 5 mg/L NO ₂	NO2-500	0,6 mL	180 s	± 0,1 mg/L	0.03 mg/L	2%
Chlorine colorimetric	0 - 5 mg/L Cl ₂	CL2-500	0,6 mL	120 s			
Nitrite	0 - 5 mg/L NO ₂	NO2-500	0,6 mL	180 s			
Aluminium III	0 - 500 ppb Al	AL-500	0,5 mL	120 s			
Iron II	0 - 2 mg/L Fe	FE-500	0,6 mL	180 s			
Silica	0 - 20 mg/L SiO ₂	SIO2-500	1,2 mL	180 s			
Chromium VI	0 - 2 mg/L Cr VI	CR6-500	0,6 mL	180 s			
Manganese II	0 - 2 mg/L Mn 0 - 10 mg/L Mn	MN-L-500 MN-H-500	0,6 mL	180 s			
Copper II	0 - 5 mg/L Cu 0 - 200 mg/L Cu	CU-L-500 CU-H-500	1,2 mL 0,6 ml	120 s 90 s			
Turbidity TSS by correlation	0 - 10 NTU 0 - 100 NTU 0 - 1000 NTU	IRTURB-L-500 IRTURB-M-500 IRTURB-H-500	-	<5 s			
pH	0 - 14	ELPH	-	<5 s	± 0,1		2%
ORP	± 2000 mV	ELORP	-	<5 s	± 1 mV		2%
Dissolved Oxygen	0 - 25 mg/L O ₂	DO-F	-	<5 s	± 0,01 mg/L		2%
Conductivity	0 - 200 mS/cm	ELCOND	-	<5 s	± 1 µS/cm		2%
Temperature	0 - 80 °C	TEMP	-	<5 s	± 0,1 °C		2%

For further information, please contact your local HORIBA representative.

⁽¹⁾ On standard solution & standard cabinet temperature 25°C

⁽²⁾ On river water

⁽³⁾ On municipal waste water

>Protective gas specifications

Recommended purging flow rate of protective gas 20 to 25 Nm³/h

Overpressure minimum 600 Pa (6 mbar)

Minimum supply pressure to air regulator inlet 200 kPa (2 bar) and maximum: 2000 kPa (20 bar) for purge process

Minimum pressure to the pressurization system 100 kPa (1 bar) and maximum: 300 kPa (3 bar) for purge process

Minimum purging time 4 minutes at 20 Nm³/h

Maximum leakage rate from the pressurized enclosure ≤ 1 Nm³/h at 6 mbar

Maximum temperature for the protective gas 60°C

>ATEX Certification



IECEx : Ex pxb IIC T4 Gb



ATEX certificate available on demand

ATEX : II 2G Ex pxb IIC T4 Gb

For more information on this product, please call your nearest HORIBA representative.