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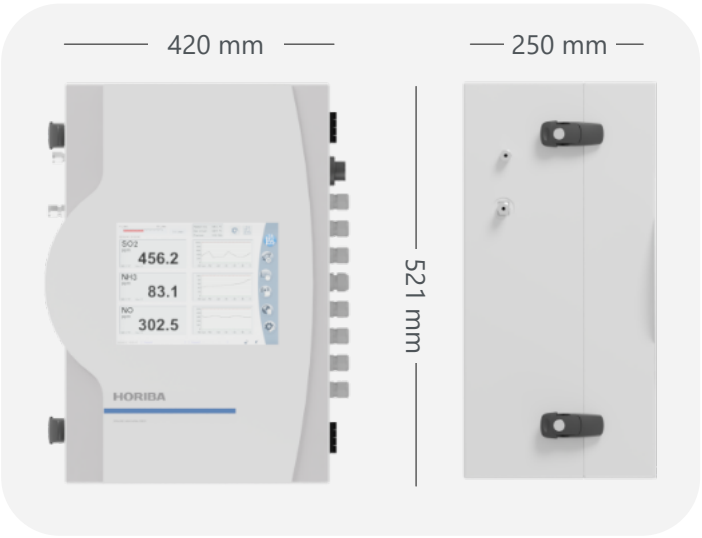
UV500

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) 0 - 0.5 bar for NH_4^+ or H_2S
Sample temperature	0 - 80 °C 0 - 30 °C for NH_4^+ or H_2S
Operating temperature	0 - 60 °C
Wet part materials	Quartz, PP, PE, FPM(viton), PMMA, Pharmed, PVC Glass for NH_4^+ or H_2S
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 ± 10% / maxi 100 VA / 50 - 60 Hz 24 V DC 3A max (not available for NH_4^+ or H_2S)
Touch Screen	Colour TFT LCD 640x480 pixels with LED backlight
Outputs	RS232 with MODBUS protocol RS485 with MODBUS protocol* 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
Enclosure	Stainless Steel 316L, epoxy coating, wall mounting bracket
Weight	25 to 30 kg depending on the configuration

** Optional module*

> Parameters & Technologies

> Optical parameters

UV254	UV Absorbance
UV254 T	UV Absorbance
COD	UV254 correlation
TOC	UV254 correlation
BOD	UV254 correlation
Hydrocarbons (poly aromatic)	UV Fluorescence
Chlorophyll A	UV Fluorescence
Oil in Water	UV Fluoresence
Color	UV Absorbance
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	**Chlorine**	Amperometry
Dissolved Oxygen	Fluoresence	**Total Suspended Solids**	Absorbance
Turbidity	Nephemometry		

> Key Features

- Automatic cleaning with sulfuric acid 5%
- Automatic zero
- Low maintenance
- Multiparameters : up to 16 parameters in one single unit
- Multiplexing : analyse up to 6 streams with one unit

> Parts number

> Basic unit

UV500 ***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

P-EXT ***External Peristaltic sampling pump for unpressurized water***
Flow of about 0.94 litre/min
Heavy duty brushless motor
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: 10^9 flashes, ~10 years
Wet materials: PMMA, Viton, Quartz

STRIP500 ***Stripping system for NH4 or H2S***
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 measurment
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

M-232-485 ***Converter module from RS232 to RS/422/485***

COND500 ***Conductivity module***
Range: 0 – 100 µS/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 optionnal sampling pump)***

>Analytical Parameters

Parameter	Standard range *Other ranges on request*	Parts reference	Chemical consumption *per measurement*	Measuring time	Typical repeatability FS[1]	Detection Limit[1] *Zero value*	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 *254 nm transmitance*	0 - 100 %	UV254T	-	<5 s	± 0,25 %	0,75 %	2%
COD *by UV correlation*	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 *by UV correlation*	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 *by UV correlation*	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_2S	H2S-500	2 mL	180 s	± 1 mg/L H_2S	0,2 mg/L H_2S	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_6H_6 0 - 10 mg/L C_6H_6	PAH-500	-	<5 s	± 0,01 mg/L C_6H_6 ± 0,1 mg/L C_6H_6	0,1 mg/L C_6H_6 0,1 mg/L C_6H_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%
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 DO-F-AC	-	<5 s	± 0,01 mg/L		2%
Conductivity	0 - 200 mS/cm	ELCOND	-	<5 s	± 1 µS/cm		2%
Turbidity	0 - 40 NTU 0 - 400 NTU	EXT-TURBNEPH-L EXT-TURBNEPH-H	-	<5 s	± 1 mg/L		2%
Total Suspended Solid	0 -1500 mg/L TSS 0 - 30000 mg/L TSS	EXT-TURB-L EXT-TURB-H	-	<5 s	± 1 mg/L		2%
Temperature	0 - 80 °C	TEMP	-	<5 s	± 0,1 °C		2%

[1] On standard solution & standard cabinet temperature 25°C
[2] On river water
[3] On municipal waste water