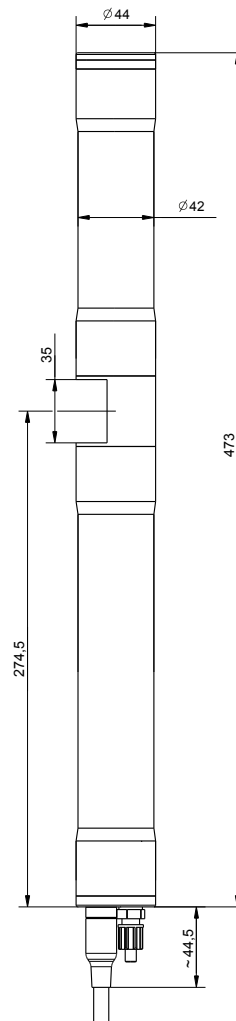# spectro::lyser V3

spectro::lyser® UV-Vis monitors depending on the application an individual selection of: TSS, TS, turbidity, color, TOC, DOC, BOD, COD, NO_3-N, NO_3, HS-, O_3, CLD, UV254, fingerprints, spectral alarms and temperature

· measuring principle: UV-Vis spectrometry over the total range (190-750 nm)
· web server on board - IoT enabled, no user software is needed to configure the probe
· communicates directly with your mobile device via WLAN
· 8 GB onboard memory - capacity for logging data for many years
· improved optical performance - revolutionary precision
· fast measurement interval - every 30 seconds possible
· extremely power efficient - sleep mode for low energy consumption
· multiparameter probe with 1 mm, 5 mm or 35 mm optical path length, ideal for waste water, surface water and drinking water
· long term stable and maintenance free in operation
· factory precalibrated, local multi-point calibration possible
· automatic cleaning with compressed air or brush

recommended accessories	
part number	**article name**
D-330-xxx	con::cube V3
B-33-012	con::nect V3
B-32-xxx	s::can compressor
B-44	cleaning valve
B-44-2	
C-32-V3	Adapter cable to connect a V3 spectrometer (M12) to V2 Terminal (MIL Plug)
F-110-V3	carrier s::can spectrometer V3 & V2 probe, 45°
F-120-V3	carrier s::can spectrometer V3 & V2 probe, vertical attachment
F-446-V3	flow cell AutoBrush, POM-C (for spectrometer V3 & V2 pathlength 35 mm)
S-11-xx-moni	moni::tool Software
F-146-rs-x	ruck::sack (submersible Autobrush)

technical specification

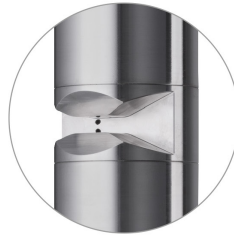|	
measuring principle	UV-Vis spectrometry 200 - 750 nm
measuring principle detail	xenon flash lamp, pixel array detector
measurement interval	30 sec (configurable, depending on application)
automatic compensation instrument	real dual beam measurement for compensation and detailed diagnostics
automatic compensation cross sensitivities	turbidity / solids / organic substances
precalibrated ex-works	all parameters
accuracy standard solution (>1 mg/l)	NO_3-N: +/- 2% +1/OPL[mg/l]* COD-KHP: +/-2% +10/OPL[mg/l]* (* OPL … optical pathlength in mm)
access to raw signals	access to spectral information
reference standard	distilled water
onboard memory	8 GB
integrated temperature sensor	0 ... 45 °C
resolution temperature sensor	0.1 °C
integration via	con::cube V3 con::nect V3 con::lyte V5 (D-320-pro2) and adapter cable (C-32-V3)
power supply	10 ... 18 VDC
power consumption (typical)	3 W
power consumption (sleep model)	60 mW
power consumption (max.)	20 W
interface to s::can terminals	M12 RSTS 8Y (IP67), RS485, Ethernet
interface to third party terminals	con::nect V3 incl. Modbus RTU, REST API, Modbus TCP/IP
digital interface (for cleaning devices)	1 digital in/out 1 digital out
internal sensors	supply voltage sensor, tilt sensor, rotation sensor
network connection	100Base-T Ethernet, WLAN
status information	RGB LED ring
cable length	1 m fixed cable (-010) or 7.5 m fixed cable (-075) or 15 m fixed cable (-150)
cable type	PU jacket
housing material	stainless steel 1.4404 (optional titanium)
window material	optical path length 5 and 1 mm: sapphire optical path length 35 mm: fused silica (UV-grade)
weight (min.)	3.4 kg (incl. cable)
dimensions (Ø x l)	optical path length 35 mm: 44 x 473 mm / 517.5 mm optical path length 5 mm: 44 x 457 mm / 501.5 mm optical path length 1 mm: 44 x 453 mm / 497.5 mm
operating temperature	0 ... 50 °C
operating pressure	0 ... 3 bar
installation / mounting	submersed or in a flow cell
flow velocity	3 m/s (max.)
mechanical stability	30 Nm
ingress protection class	IP68
automatic cleaning	media: compressed air or autobrush permissible pressure: 3 ... 6 bar
storage temperature	-10 ... 65 °C
conformity - environmental testing	EN 60721-3
conformity - EMC	EN 61326-1
conformity - RoHS 2	EN 50581
standard guarantee	1 years
extended guarantee (optional)	3 years

The perfect accuracy for every application

The spectro::lyser V3 is available with three different optical path lengths.
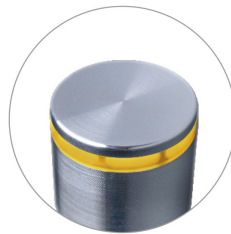
drinking water:

35 mm

surface water:

5 mm

waste water:

1 mm

Optical information ring

The color of the optical information ring signals the state of the sensor.

everything
okay

sensor in
service mode

parameter or device
error

Wireless communication - Io::Tool

Intuitive web interface for data visualization and configuration of the spectro::lyser V3.

ground water

		turbidity [NTU/FTU]	color (app) [Hazen]	color (tru) [Hazen]	TOC [mg/l]	DOC [mg/l]	NO$_3$ [mg/l]	UV254 [Abs/m]	UV254 f [Abs/m]	BTX [mg/l]	H$_2$S [mg/l]	part number
		parameter										
spectro::lyser™ V3 (35 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	SP3-1-35-NO-xxx
	max.	170	500	300	20	15	88	71	60	51	5	

surface water

		TSS [mg/l]	turbidity [NTU/FTU]	color (app) [Hazen]	color (tru) [Hazen]	TOC [mg/l]	DOC [mg/l]	BOD [mg/l]	COD [mg/l]	COD f [mg/l]	NO$_3$ [mg/l]	HS- [mg/l]	Chl-a [µg/l]	UV254 [Abs/m]	UV254 f [Abs/m]	BTX [mg/l]	part number
		parameter															
spectro::lyser™ V3 (35 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-35-NO-xxx
	max.	170	200	500	300	30	25	42	71	42	66	5	100	71	60	51	
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	1200	1400	3500	2100	210	180	300	500	300	460	35	700	500	420	360	

drinking water

		turbidity [NTU/FTU]	color (app) [Hazen]	color (tru) [Hazen]	TOC [mg/l]	DOC [mg/l]	NO$_3$ [mg/l]	chloramine [mg/l]	O$_3$ [mg/l]	CLD [mg/l]	UV254 [Abs/m]	UV254 f [Abs/m]	part number
		parameter											
spectro::lyser™ V3 (35 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	SP3-1-35-NO-xxx
	max.	170	500	300	22	17	88	42	25	22	71	60	