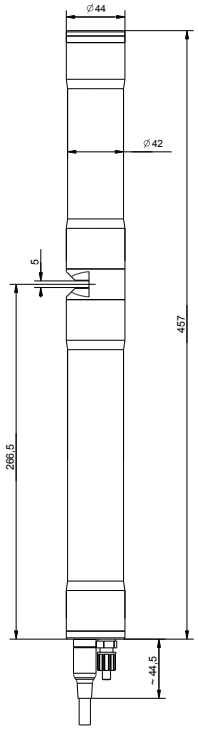
spectro::lyser V3 (UV)

spectro::lyser® V3 UV monitors depending on the application an individual selection of: NO_2-N, TSS (est), turbidity (est), NO_3-N, COD, TOC, UV254, BTX, fingerprints and spectral alarms and temperature

- measuring principle: UV spectrometry over the total range (200-390 nm)
- web server on board - IoT enabled, no user software is needed to configure the probe
- communicates directly with your mobile device via WLAN
- choose exactly the parameters you want to measure – unlimited number of parameters possible
- 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
- non aging optics, long term stable and maintenance free in operation
- factory precalibrated, local multi-point calibration possible
- automatic cleaning with compressed air or brush/ruck::sack
- simple web interface for visualization & operation - Io::Tool



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recommended accessories	
part number	**article name**
D-500-012	con::line
D-330-xxx	con::cube V3
B-33-012	con::nect V3
B-32-xxx	s::can compressor
B-44 B-44-2	cleaning valve
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-48-V3	spectrometer V3 & V2 flow-cell (bypass setup), PVC
S-11-XX-MONI	moni::tool Software
F-146-RS-X	ruck::sack (submersible Autobrush)

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A Badger Meter® Brand

technical specification

measuring principle	UV spectrometry (200 - 390 nm)
automatic compensation instrument	real dual beam measurement for compensation and detailed diagnostics
automatic compensation cross sensitivities	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) con::line
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
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 … 45 °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 year
extended guarantee (optional)	3 years

municipal WWTP influent

		parameter					
		TSS est [mg/l]	COD [mg/l]	NO_2-N [mg/l]	NO_3-N [mg/l]	UV254 [Abs/m]	part number
spectro::lyser V3 UV (01 mm OPL)	min.	0	0	0	0	0	SP3-2-01-NO-xxx
	max.	8000	10000	80	100	3300	
spectro::lyser V3 UV (05 mm OPL)	min.	0	0	0	0	0	SP3-2-05-NO-xxx
	max.	1200	1500	12	16	500	

municipal WWTP effluent

		parameter					
		TSS est [mg/l]	COD [mg/l]	NO_2-N [mg/l]	NO_3-N [mg/l]	UV254 [Abs/m]	part number
spectro::lyser V3 UV (01 mm OPL)	min.	0	0	0	0	0	SP3-2-01-NO-xxx
	max.	2300	3300	130	300	3300	
spectro::lyser V3 UV (05 mm OPL)	min.	0	0	0	0	0	SP3-2-05-NO-xxx
	max.	350	500	20	45	500	
spectro::lyser V3 UV (35 mm OPL)	min.	0	0	0	0	0	SP3-2-35-NO-xxx
	max.	50	70	2.8	6.4	70	

municipal WWTP aeration

		parameter					
		TS [mg/l]	COD f [mg/l]	NO_2-N [mg/l]	NO_3-N [mg/l]	UV254 [Abs/m]	part number
spectro::lyser V3 UV (01 mm OPL)	min.	0	0	0	0	0	SP3-2-01-NO-xxx
	max.	8000	2600	240	120	3300	
spectro::lyser V3 UV (05 mm OPL)	min.	0	0	0	0	0	SP3-2-05-NO-xxx
	max.	1200	400	36	18	500	

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