

# multi::lyser

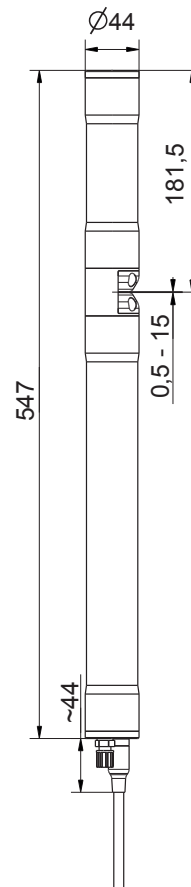
multi::lyser™ II monitors NO<sub>3</sub>-N & one organic parameter (COD, BOD, TOC, DOC or UV254)

multi::lyser™ III monitors turbidity / TSS & NO<sub>3</sub>-N & one organic parameter (COD, BOD, TOC, DOC or UV254)

- s::can plug & measure
- measuring principle: UV-Vis spectrometry over the total range (190-720 nm)
- multiparameter probe with adjustable open path length
- ideal for surface water, ground water, drinking water and waste water
- long term stable and maintenance free in operation
- factory precalibrated, local multi-point calibration possible
- automatic cleaning with compressed air
- mounting and measurement directly in the media (InSitu) or in a flow cell (monitoring station)
- operation via s::can terminals & s::can software
- robust and precise adaption of optical path lengths to 35 mm, 15 mm or 5 mm possible
- easy mounting without clogging

## recommended accessories

| part number     | article name   |
|-----------------|--|
| A-005-s         | Inserts for optical pathlength 5 mm, stainless steel       |
| A-015-s         | Inserts for optical pathlength 15 mm, stainless steel      |
| B-32-xxx        | s::can compressor  |
| B-44            | cleaning valve   |
| B-44-2          |  |
| B-61-1          | cleaning agent   |
| C-1-010-spectro | 1 m connection cable for s::can spectrometer probes        |
| D-315-xxx       | con::cube  |
| F-110-spectro   | carrier s::can™ spectrometer probe                         |
| F-120-spectro   | carrier s::can™ spectrometer probe                         |
| F-445-1         | flow cell - for pathlengths from 0.5 mm to 35 mm           |
| F-446-1         | flow cell autobrush - for spectro::lyser™ pathlength 35 mm |
| S-11-xx-moni    | moni::tool Software  |



**technical specification**

|  |   |  |   |
|--|---|--|---|
| measuring principle                        | UV-Vis spectrometry 190 - 750 nm  | cable type                             | PU jacket   |
| measuring principle detail                 | xenon flash lamp, 256 photo diodes  | housing material                       | stainless steel 1.4404  |
| automatic compensation instrument          | two beam measurement, complete spectrum   | window material                        | optical path length 15 ... 0.5 mm:<br>sapphire<br>optional:<br>optical path length 100 ... 5 mm:<br>fused silica (UV-grade)   |
| automatic compensation cross sensitivities | turbidity / solids / organic substances   | weight (min.)                          | 3.4 kg (incl. cable)  |
| precalibrated ex-works                     | all parameters  | dimensions (Ø x l)                     | 44 mm x 547 mm / 591 mm   |
| accuracy standard solution (>1 mg/l)       | NO <sub>3</sub> -N: +/- 3% +1/OPL[mg/l]*<br>COD-KHP: +/-3% +10/OPL[mg/l]*<br>(* OPL ... optical pathlength in mm) | operating temperature                  | 0 ... 45 °C   |
| access to raw signals                      | no  | storage temperature                    | -10 ... 50 °C   |
| reference standard                         | distilled water   | operating pressure                     | 0 ... 3 bar   |
| onboard memory                             | 656 KB  | high pressure specification (optional) | 10 bar  |
| integrated temperature sensor              | -10 ... 50 °C   | installation / mounting                | submersed or in a flow cell   |
| resolution temperature sensor              | 0.1 °C  | flow velocity                          | 3 m/s (max.)  |
| integrated pressure sensor (optional)      | 0 ... 1,2/2/11 bar  | mechanical stability                   | 30 Nm   |
| resolution pressure sensor                 | 1:1000 of measuring range   | ingress protection class               | IP68  |
| integration via                            | con::cube<br>con::lyte<br>con::nect   | automatic cleaning                     | media: compressed air<br>permissible pressure: 3 ... 6 bar<br>air volume: 7 ... 20 l per cleaning<br>duration: 1 ... 5 sec. per cleaning<br>cleaning interval: every 1st to 10th<br>measuring interval<br>delay: 10 ... 30 sec. |
| power supply                               | 11 ... 15 VDC   | conformity - EMC                       | EN 61326-1, EN 61326-2-3  |
| power consumption (typical)                | 4.2 W   | conformity - safety                    | EN 61010-1  |
| power consumption (max.)                   | 20 W  | extended warranty (optional)           | 3 years   |
| interface to s:can terminals               | MIL connector (IP68), RS485   |  |   |
| interface to third party terminals         | con::nect incl. gateway modbusRTU   |  |   |
| cable length                               | 7.5 m fixed cable (-075) or<br>1 m fixed cable (-010)   |  |   |

**surface water**

|   |      | concentration ranges and sensor/probe type for this application |                           |            |            |               |                 |                           |
|---|------|---|---------------------------|------------|------------|---------------|-----------------|---------------------------|
|   |      | turbidity [NTU/FTU]   | NO <sub>3</sub> -N [mg/l] | TOC [mg/l] | DOC [mg/l] | UV254 [Abs/m] | UV254 f [Abs/m] | part number               |
| multi::lyser™ II (NO <sub>3</sub> -N, DOC)                | min. | 0   | 0                         |            | 0          |               |                 | M2-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       |            | 140        |               |                 |                           |
| multi::lyser™ II (NO <sub>3</sub> -N, TOC)                | min. | 0   | 0                         | 0          |            |               |                 | M2-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       | 180        |            |               |                 |                           |
| multi::lyser™ II (NO <sub>3</sub> -N, UV254)              | min. | 0   | 0                         |            |            | 0             |                 | M2-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       |            |            | 500           |                 |                           |
| multi::lyser™ II (NO <sub>3</sub> -N, UV254f)             | min. | 0   | 0                         |            |            |               | 0               | M2-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       |            |            |               | 400             |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, TOC)    | min. | 0   | 0                         | 0          |            |               |                 | M3-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       | 180        |            |               |                 |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, UV254)  | min. | 0   | 0                         |            |            | 0             |                 | M3-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       |            |            | 500           |                 |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, UV254f) | min. | 0   | 0                         |            |            |               | 0               | M3-r005-p0-sNO-010 / -075 |
|   | max. | 1400  | 100                       |            |            |               | 400             |                           |

**drinking water**

|   |      | concentration ranges and sensor/probe type for this application |                           |            |            |               |                 |                           |
|---|------|---|---------------------------|------------|------------|---------------|-----------------|---------------------------|
|   |      | turbidity [NTU/FTU]   | NO <sub>3</sub> -N [mg/l] | TOC [mg/l] | DOC [mg/l] | UV254 [Abs/m] | UV254 f [Abs/m] | part number               |
| multi::lyser™ II (NO <sub>3</sub> -N, DOC)                | min. | 0   | 0                         |            | 0          |               |                 | M2-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        |            | 15         |               |                 |                           |
| multi::lyser™ II (NO <sub>3</sub> -N, TOC)                | min. | 0   | 0                         | 0          |            |               |                 | M2-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        | 20         |            |               |                 |                           |
| multi::lyser™ II (NO <sub>3</sub> -N, UV254)              | min. | 0   | 0                         |            |            | 0             |                 | M2-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        |            |            | 70            |                 |                           |
| multi::lyser™ II (NO <sub>3</sub> -N, UV254f)             | min. | 0   | 0                         |            |            |               | 0               | M2-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        |            |            |               | 55              |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, DOC)    | min. | 0   | 0                         |            | 0          |               |                 | M3-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        |            | 15         |               |                 |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, TOC)    | min. | 0   | 0                         | 0          |            |               |                 | M3-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        | 20         |            |               |                 |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, UV254)  | min. | 0   | 0                         |            |            | 0             |                 | M3-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        |            |            | 70            |                 |                           |
| multi::lyser™ III (turbidity, NO <sub>3</sub> -N, UV254f) | min. | 0   | 0                         |            |            |               | 0               | M3-d035-p0-sNO-010 / -075 |
|   | max. | 170   | 20                        |            |            |               | 55              |                           |