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| **PLEASE NOTE: The following specification contains areas, highlighted with the [ ] symbol. In these areas, the engineer has to make a selection, add specific, project related information and has to delete what is not applicable for the specific project.** |

**Single or multi-stream online Total Nitrogen (TN) Analyser**

Analyser for automatic measurement of Total Nitrogen (TN) in water. The method is colorimetric measurement at 546 nm using hydrazine reduction and NEDD color solution after persulphate digestion in alkaline medium. Reagents are dosed by high precision micropumps. The analyser performs automatic priming, cleaning, calibration and validation. Up to 8 process streams can be monitored. Single sample ("grab sample") measurement is possible. The analyser is capable of measuring up to 3 parameters in parallel.

**Technical Data**

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| --- | --- |
| **Measurement method** | Colorimetric measurement at 546 nm using hydrazine reduction and NEDD colour solution after persulphate digestion in alkaline medium, conform with APHA 4500-N |
| **Measuring range** | See Scope of delivery section |
| **Precision** | Better than 4% full scale range for standard test solutions |
| **Detection limit** | ≤ 150 µg/L |
| **Cycle time** | 30 min including digestion of 10 min (standard) |
| **Automatic cleaning** | Yes |
| **Calibration** | Automatic, 2-point; frequency freely programmable |
| **Validation** | Automatic; frequency freely programmable |
| **Ambient temperature** | 10 - 30 °C ± 4 °C deviation at 5 - 95% relative humidity (non-condensing) |
| **Reagent requirements** | Keep between 10 - 30 °C |
| **Sample pressure** | By external overflow vessel |
| **Flow rate** | 100 - 300 mL/min |
| **Sample temperature** | 10 - 30 °C |
| **Sample quality** | Maximum particle size 100 µm, ≤ 0.1 g/L; Turbidity ≤ 50 NTU |
| **Power** | 230 VAC, 50/60 Hz  120 VAC, 50/60 Hz  Max. power consumption: 440 VA |
| **Instrument air** | Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air |
| **Demineralised water** | For rinsing |
| **Drain** | Atmospheric pressure, vented, min. Ø 64 mm |
| **Earth connection** | Dry and clean earth pole with low impedance (≤ 1 Ohm) using an earth cable of Ø 2.5 mm² |
| **Analogue outputs** | Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option) |
| **Digital outputs** | Optional: Modbus RS232, RS485 |
| **Alarm** | 1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts |
| **Protection class** | Analyser cabinet: IP55 / Panel PC: IP65 |
| **Material** | Hinged part: Thermoform ABS, door: plexiglass  Wall section: Galvanised steel, powder coated |
| **Dimensions ( H x W x D)** | 690 mm x 465 mm x 330 mm |
| **Weight** | 25 kg |
| **Certifications** | CE compliant / UL certified |

**Scope of delivery**

[ ] (delete what is not needed)

Analytical Instrument

Online analyser for

[ ] Total Nitrogen

[ ] Total Nitrogen and Nitrate and Nitrite

Measuring Range

[ ] 0.1 - 2 mg/L TN

[ ] 0.2 - 5 mg/L TN

[ ] 0.25 - 10 mg/L TN

[ ] 0.5 - 20 mg/L TN

[ ] 0.75 - 10 mg/L TN and 0.125 - 10 mg/L NO3-N and 0.05 - 5 mg/L NO2-N

Process Streams/Channels

[\_\_\_\_\_] streams (fill in, select up to 8)

Accessories and options

[\_\_\_\_\_]x 4-20 mA outputs (fill in, select up to 8)

[\_\_\_\_\_]x 4-20 mA Outputs and Modbus RS485 (fill in, select up to 4)

[\_\_\_\_\_]x 4-20 mA Outputs and Modbus TC/IP (fill in, select up to 4)

[ ] Modbus RS485

[ ] Modbus TCP/IP

[ ] Filtration System, for immersion, pore size [\_\_\_\_\_] µm (fill in, select from 50/100/200 µm)

[ ] Filtration System, fast loop, pore size [\_\_\_\_\_] µm (fill in, select from 50/100/200 µm)

[ ] Table stand

[ ] Floor stand

Services

[ ] Manufacturer’s services to perform start-up on instrument to include basic operational training and certification of performance of the instrument.

[ ] Manufacturer’s Service Agreement that covers all the manufacturer’s recommended preventative maintenance, regularly scheduled calibration and any necessary repairs beginning from the time of equipment start-up through to end user acceptance / plant turnover and the first 12 months of end-user operation post turnover.

**Brand:** Hach

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**Product:** EZ7700 Total Nitrogen Analyser