



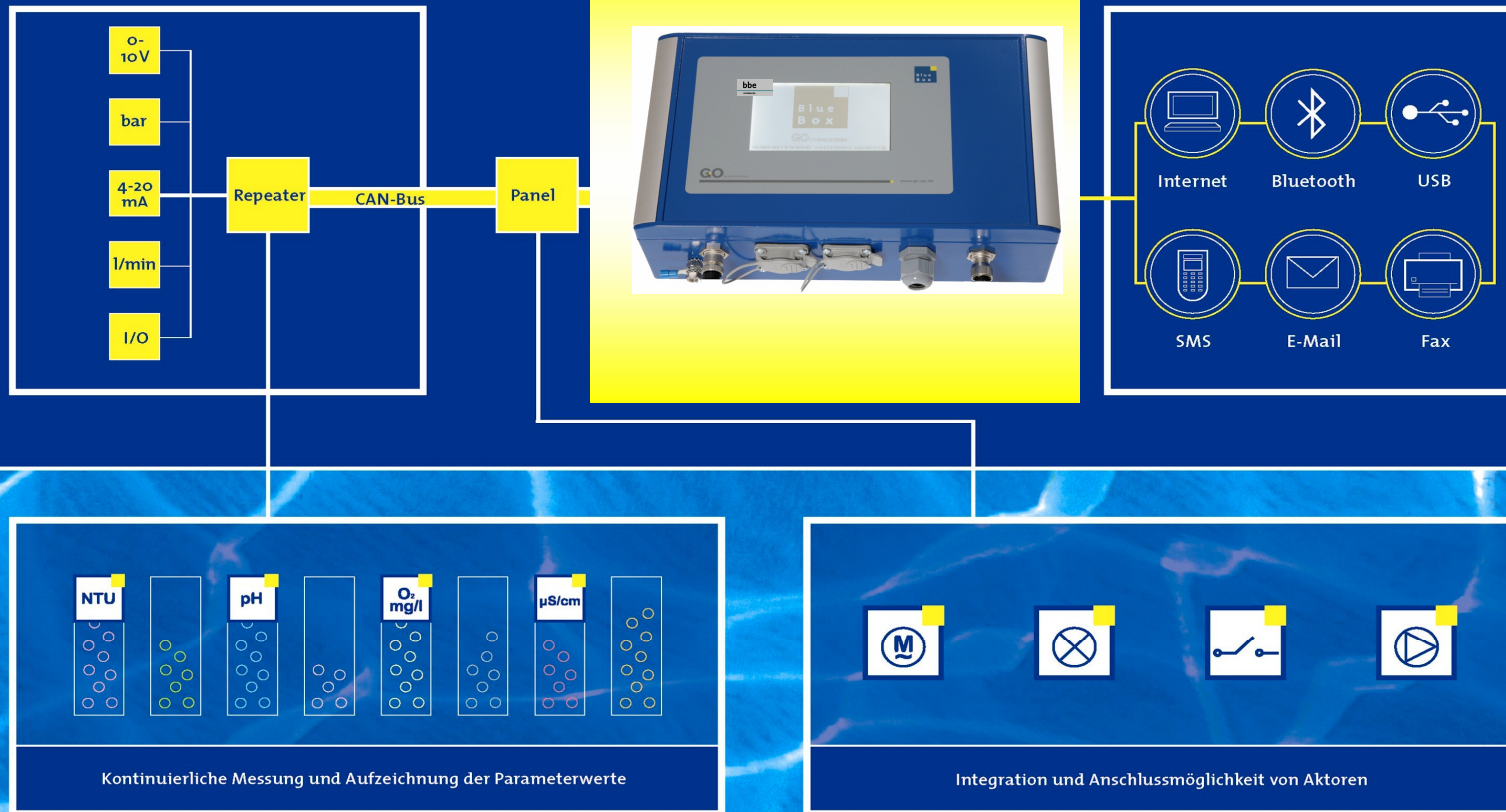
AquaBioTox

New Biological Microsensors and
Sensor Combinations for Drinking
Water Monitoring

New Biological Microsensors

- Overview of existing biological sensors
- Identification of the needs
- Development of capable biological broadband sensors
- Development of specific sensors

Sensoren und Steuerung – verbunden in einem System





Preliminary Physical Sensors

Temperature/pH

Pressure

Conductivity

Flow

Oxygen

Spectral Absorption

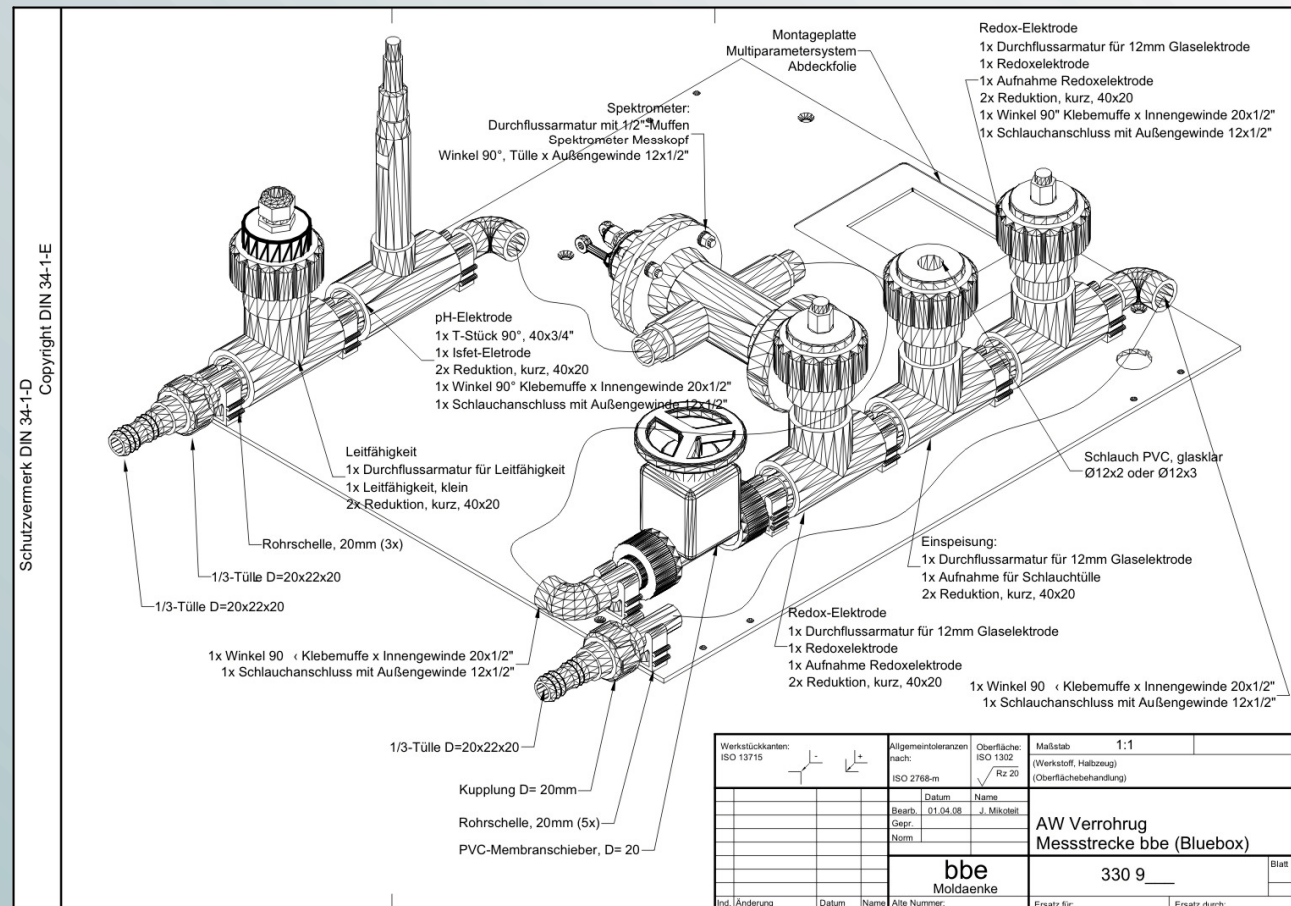
(also TOC/DOC/COD/BOD)?

Scattering

Redox

Chlorine Consumption

Monitoring System – for the online surveillance of drinking water



Computer Unit

- connection of sensors and actors of almost any manufacturer
- simple operation via touch display
- logbook function
- SPS functionality / event handling
- LAN, WLAN, GSM modem
- SMS, E-Mail
- decentralised location of sensors, actors and displays via bus technology across distances of several kilometres
- modular system construction – existing systems can be changed easily or expanded
- comprehensive software for data evaluation and the implementation of control functions
- virtual sensors - calculation of measurement data in real time

In Situ Absorption SpectraAnalyser (ISA)

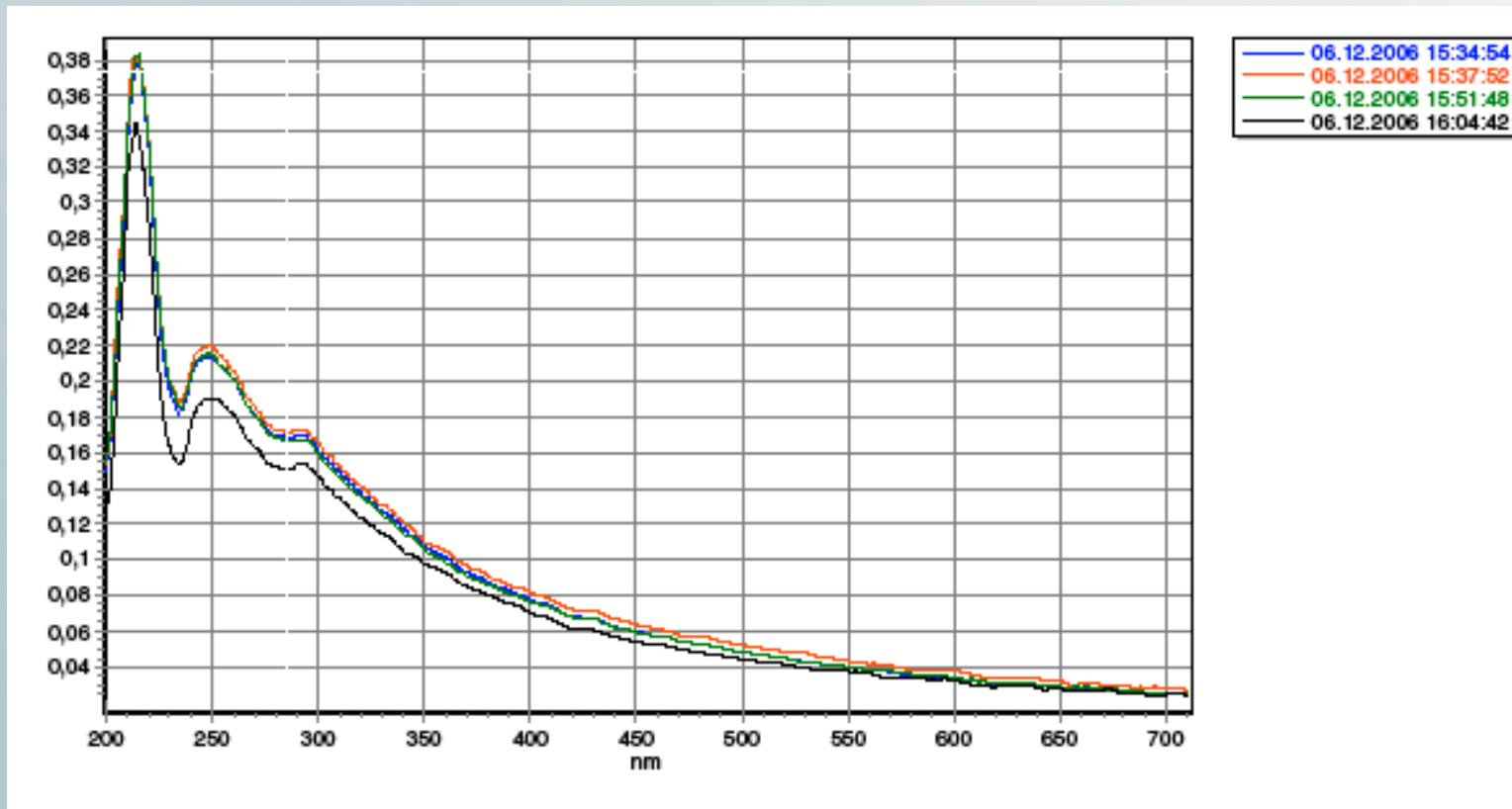


Characteristics

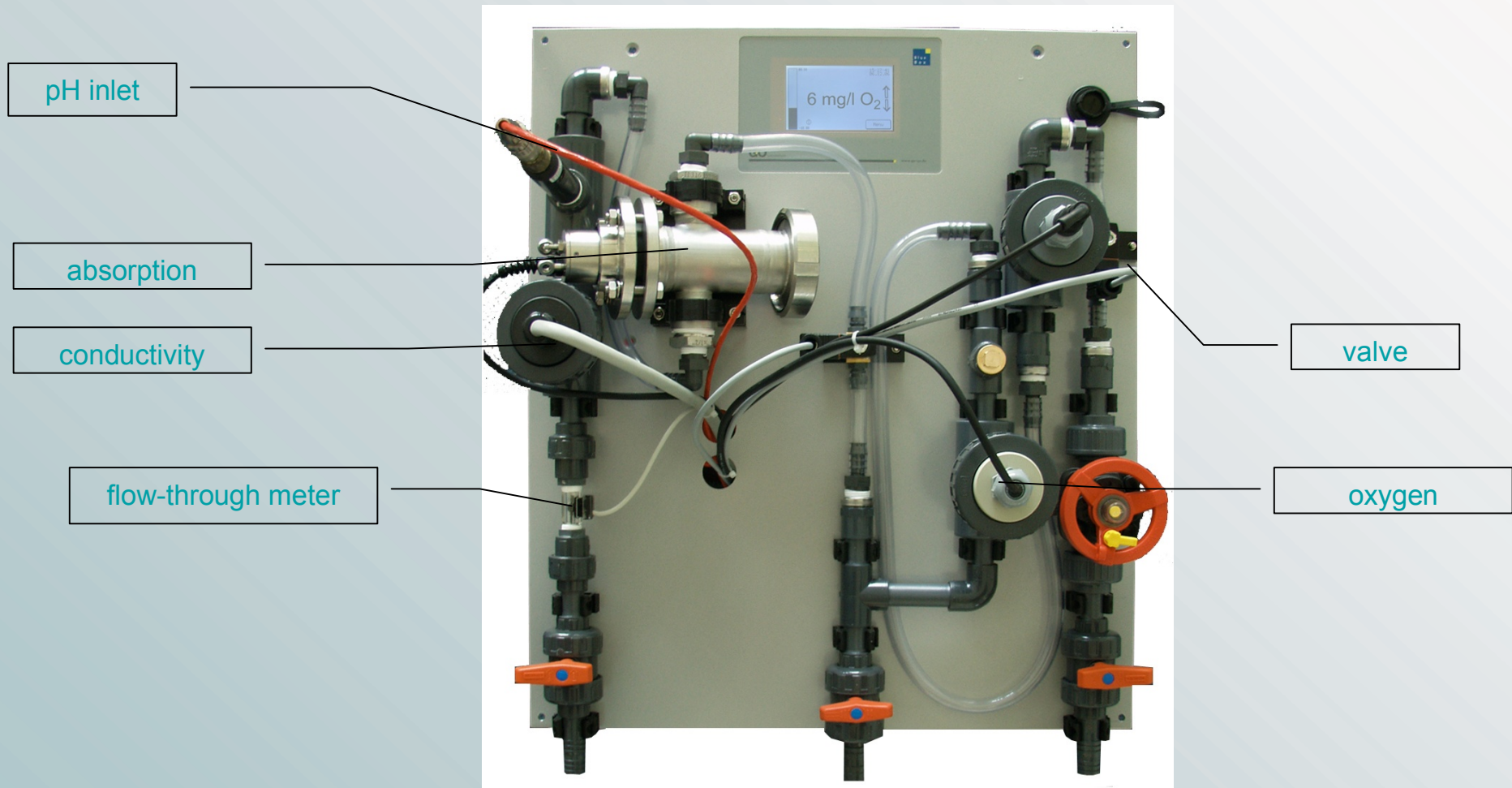
- optical sensors connected to the evaluation unit via fibre glass
- record of absorption spectrum 190 – 720 nm
- saving of raw and calibrated data
- adaptation of calibration via remote control
- cleaning of the measurement path with compressed air

Absorption Spectrum

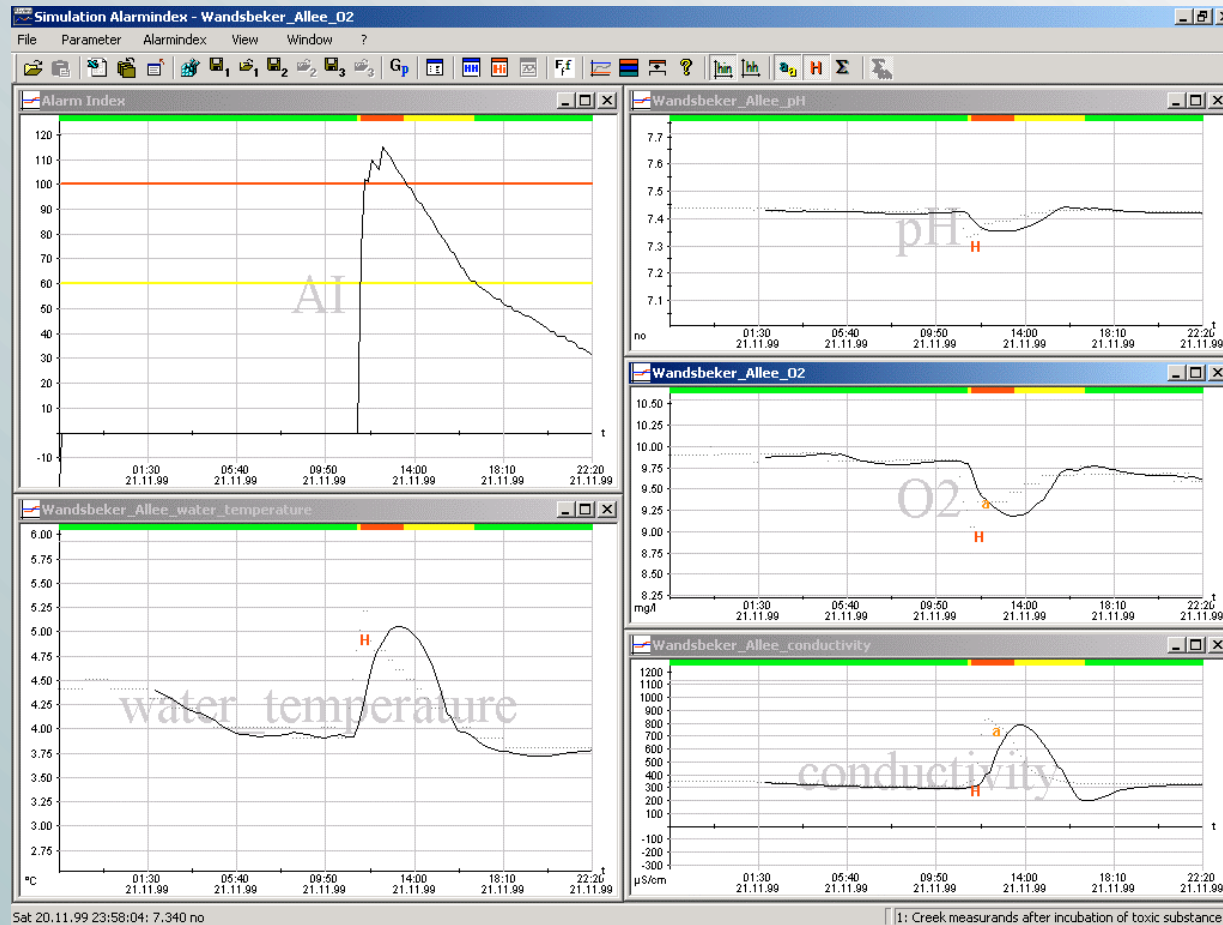
Variable: Nitrate



The Drinking Water Monitoring System



Evaluation System of Additional Parameters





Perspectives

- integration of the IT SEES software
- testing of chemical components
- installation in the system of the Berlin Water Authority