Trace Analyzer for water

Powered by German Hardware

GreenMon Online-Analyser

The GreenMon is a fully automatic,
wet-chemical multichannel online analyser.
It detects trace concentrations in fluids.
The operating interface is especially user-friendly.

Features:

- Newly designed Flow-Chart-Method software to program analysis cycles
- New photometer technology with high stability allows trustworthy measurements at low trace levels
- Many functions are included in the standard version, eg. Cyclical self-calibration and dilution processes
- RS-232/RS-485, LAN, CAN-bus
- Intelligent event handling via SMS, Fax or E-Mail
- Communication via TCP/IP over LAN, (optional W-LAN, GSM, GPRS and UMTS)
- Comprehensive software products are offered for archiving (SQL database), programming, visualization and real-time representation
- Administration of operation and analysis data in a MYSQL databank with data interface for integration, interrogation and further analysis of the data
- Use of wet chemical methods (Ionometry, Colorimetry, Titrimetry)
- Connection for a spectrometer
- Fully automatic operation with self-monitoring
- Compact user-friendly construction with minimal maintenance expenditure
- Actuation and control (PID) of metering pumps, metering units, valves analog and digital, PLC functionality
- Implementation of all BlueBox functions e.g. connection of external sensors and calculation of complex parameters
- Remote Control via cable, Intranet, Internet and GPRS or UMTS
- Easy maintenance due clear and easy setup and easy reachable parts.

GreenWorks Co., Ltd.
11F, No.1-23, Kuojian Rd.
80672 Kaohsiung City
Taiwan, R.O.C.

Asia's Competence Center
Phone: +886 7 841 3105
Fax: +886 7 811 8391
E-mail: greenworks33@gmail.com

GreenMon   Boron

GreenMon Colorimeter Boron

Full automatic online analyzer for measuring medium concentrations in fluids according to wet chemical methods
The Colorimeter Ammonia version of the GreenMon system comprises the following equipment:
Analyzer unit, control and measurement electronics in powder coated cabinet
Number of probe channels: 1 (optional up to 10 Channels on request)

Procedure :   **Boron**
            Range: 0 - 1 ppm (higher concentration with Dillution)
 Boron reacts with azomethine-H in weak acid to neutral solution to form a yellow compound
 measured at 430 nm. Water soluble Boron-compounds are measured. The reagent zero is detected
 during the calibration to compensate the color of the azomthine-H reagent. The sample color is
detected during each measurement. Possible interferences are masked with EDTA. The method
 without dilution is linear until 1.0 mg/L, at 2.0 mg/L the deviation is less than 5%.

Typical performance data using aqueous standards:
Test conditions: range 0 – 1,0 mg/L, Kolorimeter with 10 mm flow cell, LED 430 nm

Minimal measuring time (at 68°F)	approx. 15 min
Interferences	Al, Be, Fe, Cu, V, Cr, Zr, Ti
Sensitivity : (Extinction at 1 ppm B/L) $\approx 1,0$	
Measurement accuracy	± 5 %

Reagent consumption per Year at 100 measurements per day:

Calibration solution A	90 L/year	Calibration solution B	90 L/year
Reagent 1	82 L/year	Reagent 2	82 L/year

System description GreenMon:
- Optimal dilution rate programmable
- Integrated PC with Linux-based operating system
- Graphical user interface with interactive touch screen operation
- Full network capability via direct LAN connection
- All standard communications interfaces are supported CAN-Bus, LAN, Modem and RS232 or RS485
- Protocols Modbus TCP and Modbus serial, other on request
- (Profibus DP optional)
- Connection of additional sensors (e.g. pH, conductivity, O2, Turbidity,
  ISA spectrometer or other) is optional via the CAN-Bus §

Modem: The following modem types are optional available: UMTS, ISDN or Analog modem.

Technical Details:
Power 110/220 VAC or 24V DC
Protection classification: IP 54 (optional IP65)
Dimensions (HxBxD): 450 x 450 x 260 mm
Cabinet material: Aluminum (powder coated)
Color: blue (RAL 5010)
Sample pressure: 0 bar (max 0.05 bar overpressure)
Sample temperature: 10 ... 35°C
Sample flow rate: 2... 10 l/h, no suspended solids
Environmental temperature: 15 ... 35°C
Operating system: Embedded Linux
Power consumption (average): 45W

Measurement, control inputs and outputs
Interfaces:
1x Ethernet (incl. MOD Bus)
1x RS232 or RS485 (incl. MOD Bus)
1x CAN bus (for connecting further BlueBox system modules for sensors and actuators)
1x modem slot for UMTS, ISDN or analog modem (modem optional)