

# COLIMINDER® - INDUSTRIAL – CMI-01

## AUTOMATED MONITORING MICROBIOLOGICAL WATER QUALITY

Customer information sheet V.8.10 November 2017

### Description:

ColiMinder® is a fully automated measurement system which is able to measure microbiological contamination of liquid samples within 15 minutes. ColiMinder® is measuring the microbiological contamination through the specific enzymatic activity of the respective target microorganisms.

### Measurement Principle:

- Fluorometric measurement technology
- Effects of turbidity are compensated automatically
- No sample pretreatment is needed
- The device is self calibrating and self cleaning
- 2 sample intakes for processes monitoring (more sample intakes is optional)
- Automatic dilution of sample possible

### Reagents and consumables needed:

- Two component measurement reagents
- Cleaning solution
- Rinsing water



The device is able to hold consumables for 1200 measurements.

Unpressurized sample has to be in a 2 m range of the ColiMinder® device.

Sample delivery can be accomplished using a *Sample Delivery Add-on Module* (see next page).

### Measurement Frequency:

The measurement process is a batch process.

- 15 min measurement time followed by a 9 min cleaning cycle
- 2 measurements per hour, 48 per day in continuous mode
- Measurement interval can be set in minutes in interval mode
- Measurements can be set for sample 1, sample 2 or alternating (process monitoring)

Under special occasions measurement frequency can be increased to approx. 74 measurements per day. No contaminated or hazardous waste is produced.

### Data transfer and visualization:

- Measurements data is directly transmitted to server through internet/network connection
- Live data visualization on dedicated website, results can be downloaded
- Automatic notifications can be set (E-mail, SMS)
- Measurement results are also available through RS232/RS485 or Modbus TCP
- **Measurement results can be stored to USB Stick directly from the device**

### Remote Control:

All functions and programming can be performed through remote control (internet or network connection required)

The ColiMinder® is able to control ISCO 6700 auto samplers, which also can be controlled remotely through ColiMinder® remote control.



**Connections ports:**

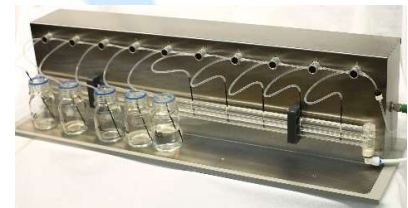
- Wi-Fi
- LAN
- Internal GPRS/LTE – Modem (option)
- RS232
- USB
- Alarm – Relay output or alarm flashlight
- Auto sampler control port (option to control ISCO auto samplers)



Example of contamination timeline online visualisation

**Add-on modules:**

- Internal GSM Modem:** Built in GSM Modem for data transfer and remote control
- Sample Delivery Module:** An additional module (free programmable) to control sample delivery to the device. The module is able to control pumps and valves to deliver sample to the measurement device.
- Sample Line Extension:** The number of sample intakes can be expanded to 10 samples if needed.
- GPS Position Sensor:** To store actual geo-position at sampling.
- Auto sampler Control Module:** To trigger and control ISCO 6700 auto samplers.



**Versions:**

- ColiMinder® INDUSTRIAL Standard
- ColiMinder® INDUSTRIAL-LE low energy consuming version (approx. 55W 12V)
- ColiMinder® Mobile (on request)
- ColiMinder® OMS – complete outdoor measurement station (on request)

**Reagents are available for the following target organisms:**

- Fecal Contamination - *E. coli* (GUS - Beta-D-Glucuronidase Activity)
- Total Bacteria (ALP - Alkaline Phosphatase Activity)
- Enterococci (GLU - Beta-D-Glucosidase Activity)

**Measurement Units, Calibration of the Instrument:**

ColiMinder® devices deliver quantitative results calibrated to respective enzymatic units according to the scientific definition for the given enzymatic activity. For *E. coli* contamination, the devices are calibrated to **Modified Fishman Units per 100ml (MFU/100ml)**.

**OVERVIEW:**

Measurement time for quantitative results:	15 min.
Full working cycle incl. automatic cleaning:	< 30 min.
Detection Limit ( <i>E.coli</i> activity):	0.0008 MFU/100ml
Performance (measurements per day):	Standard 56 (up to 84)
Number of sample intakes:	Standard 2 (more optional)
Housing:	Stainless Steel A4 - IP 65
Dimensions W x H x D	55 cm x 50cm x 21 cm
Space for device W x H x D	60 cm x 60cm x 30cm
Weight	20 kg
Power Supply	90 to 264 V AC - 150W max. Option 12V
Temperature range for operation	0°C to 40°C