

MicroLog

Models

- EC600 (IP 65) temperature and external sensor data logger
- EC650 temperature, relative humidity and external sensor data logger

Inputs (Two built-in sensors)

Temperature

-30°C – 50°C (resolution 0.5°C, accuracy ±1°C)

Relative Humidity

0 - 90% (resolution 0.5%, accuracy ±3%)

External Sensors

Voltage

0 to 10V

Current

0 to 20mA

Temperature

-50 to 100°C

pH

0 to 14pH

Contact

Open/Closed

Outputs

- Three digit 7 segment LCD
- IRDA interface to HP-printer and host computer
- RS232 serial communication at 19,200 bps

Memory Capacity

16,000 recording samples

Power Supply

Internal Battery

Lithium - 3.6V 1.2AH 1/2AA

Battery Life

Approximately two years, replaceable (May vary when connecting external sensor)

Sampling Rate

User Defined

From every 10 second to every 2 hours

Dimensions

Round

72 mm diameter

Thickness

22.9 mm

Weight

55 gr

CE and FCC standard compliance

MicroLog Cradle

Cradle Alarms

- Audible Alarm
- Visual Alarm Led

Serial Communication Channels

- RS232 at 19.2 Kbps
- USB at 1.5 Mbps

Cradle Memory

2000 samples holding the sensor samples

Connectors

- 4-pin flat connection to the MicroLog
- 4-pin flat connection to any MicroLog external sensor
- Screw terminal for External DC supply
- Screw Terminal Board connections:
 - Power supply: DC 6-30 V
 - External sensor
 - External contact sensor
 - High alarm open collector 30V/2A
 - Low alarm relay open collector 30V/2A

Power Supply

Internal

Lithium battery, 3.6V

External

6-30V, minimum 300mA

- EMC conformant to EN 301 489-3
- Type approved to ETS 300-220
- Usable range to 300m (75m indoors)
- 418 (UK) & 433.92MHz
- 1mW on 418 MHz, 10mW on 433.92MHz
- 2nd harmonic < -60dBc
- 16cm length antenna

CE and FCC standard compliance

MicroLog Plus Receiver

- Usable range to 300m (75m indoors)
- One RS232 communication port to the computer

Power Supply

Internal

Lithium battery 3.6V, 1.2AH, 1/2 AA

External

AC/DC 6V adapter

RF Receiver

- Red LED indicating RF signal
- Green LED indicating valid data being received
- Type approved to ETS 300-220

CE and FCC standard compliance

MicroLab Plus Software

Data Displaying

(from up to 200 MicroLogs)

- Real-time temperature and humidity readings
- Visual alarm when the logger crosses an upper or lower alarm threshold for temperature or humidity
- Battery level
- An Excel file containing all of the measured data received from the device
- email/SMS messaging

Setting up the MicroLog

- The ID of each of the monitors
- The alarm levels of each monitor
- Comment
- The sampling rate from every minute to every hour

Minimum PC requirements

- Windows 95/98 or higher
- 6MB available disk space
- CD ROM drive for software installation
- Available communication port

External Sensors

Temperature Sensor

This MicroLog sensor takes external temperature measurements in a wider range than the internal temperature sensor. With a faster response time than the internal sensor, it enables measuring materials that cannot be measured with the internal sensor.

Range:

-50°C to 100°C

Resolution:

Better than 1°C

Between -20° to 75°

Accuracy:

±2% of reading

Probe Length:

150 mm

Probe OD

6 mm

Max. temperature

150°C

pH Sensor

Will help you monitor pH level of liquids.

Range:

1-14pH

Resolution:

0.116pH

Accuracy:

2% of reading

Calibration single point, done with a small trimmer on the sensor.

0-10 Voltage Sensor

A general sensor that will measure any device or transmitter that produces a linear analog 0-10V output.

The voltage can easily be converted to the correct measured units with the help of the MicroLab program.

Range:

0-10V

Accuracy:

± 3% before calibration

Input Impedance:

3 M

Calibration:

Two point calibration

OV protection:

+30V

Resolution:

0.05V

0-20 mA Current Sensor

This MicroLog external sensor can sample any device or transmitter, producing a linear current between 0-20 mA. The 0-20 mA can be converted to the correct measured units by using MicroLab's calibration option.

Range:

0-20 mA

Resolution:

±0.1 mA

Accuracy:

± 3% before calibration

Calibration:

Two point calibration

OC protection:

55 mA

Contact Adapter

This MicroLog sensor monitors reed relay contacts and switch status (open/closed), to identify the correlation between phenomena such as temperature change and door status.

Range:

open/close

Connector:

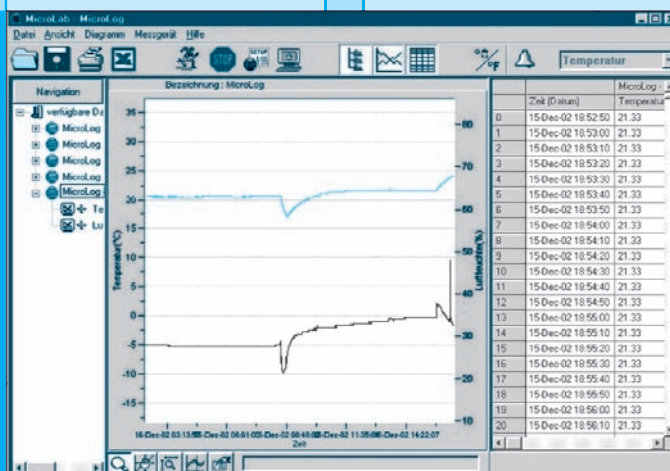
Screw Terminal

Cable Length:

2.5 m

Internal Pull-Up Resistor:

No need for external power source

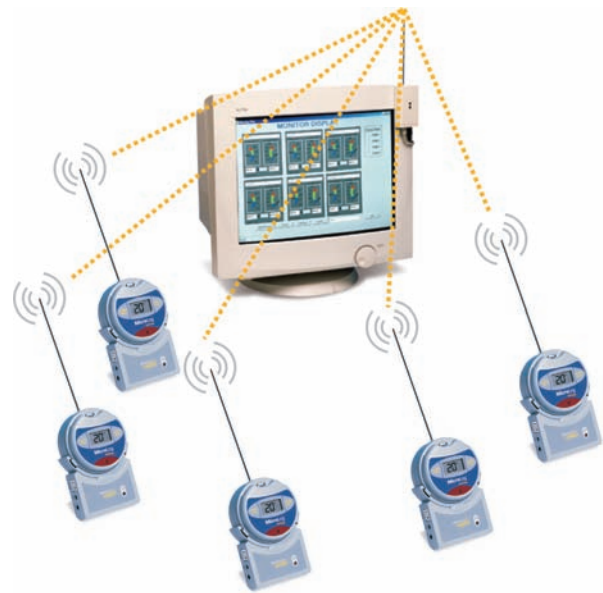


Ordering Information

Art.no.	Description
5005-0010	MicroLog Temperature (IP 65 protection)
5005-0011	MicroLog Temperature and humidity
External Sensors	
6040-0031	External temperature sensor with 2.5 m of cable (-50°C to +100°C)
6040-0032	External temperature sensor with 8 m of cable (-50°C to +100°C)
6040-0033	External current sensor 0 to 20 mA
6040-0034	External voltage sensor 0 to 10 V
6040-0035	External contact sensor (e.g. door open)
6040-0036	Adapter for external pH probe
6040-0037	pH probe
6040-0039	External light sensor 0 to 5000 Lux
Radio Modules	
5005-0013	Radio module with alarm function for cable-free transmission
5005-0014	PC radio receiver
5090-0045	RS232 cable for radio module and radio receiver
5090-0046	USB cable for radio module and radio receiver
5005-0017	Power pack 230 V AC for radio module and radio receiver
Software & Accessories	
5090-0044	RS232 cable
5090-0040	MicroLab software and cable (5090-0044)
5090-0041	MicroLab Software Plus (for radio transmission)
5090-0043	Software DeLux
5020-0375	Replacement Battery



MicroLog™ Radio Data Logger



MicroLog™ Radio Data Logger Can also be used without the radio function!

- Evaluation of communication either via radio or by means of a logger at the PC
- Usable range of the radio connection: max. 350 m in the open air, and max. 75 m indoors
- Data transmission of up to 200 loggers simultaneously onto the screen
- All data is automatically stored on the PC in an Excel file
- Alternatively, stored data can be transmitted conventionally directly at the PC via a logger interface or IRDA (infra-red).
- All loggers have a 3-digit LCD display for the currently measured values
- Up to 16,000 measured values can be stored in the logger
- Sampling rate: between every 10 seconds and every 2 hours (variable)
- Storage capacity between 40 days and 3 years
- Internal temperature and moisture sensor
- Variable hi/low limit alarm (with visual warning)
- Min/max value indication according to hours or days
- Each logger has its own ID number
- Radio module with acoustic and LED alarm and hi/low alarm contact 30V/2A
- The external sensor can also be connected directly to the radio module
- Replaceable battery (battery life approx. 2 years)
- Accuracy of the time basis ± 1 minute/week (20°C)
- Size: 72 mm \varnothing x 23 mm
- Weight: 55 g

Attention: To operate the Micrologger, you need at least one software PC Kit. Each PC Kit comprises the necessary software, a PC interface cable, and detailed documentation. The software is available in German or English language.

For radio operation, you need the logger, radio module, radio receiver, interface cable, and the Microlab Plus software.