

# MicroLog & MicroLog plus Specifications

## MicroLog

**Models** EC600 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  $\pm 1^\circ\text{C}$ )  
**Relative Humidity** 0 - 90%  
(resolution 0.5%, accuracy  $\pm 3\%$ )

### 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 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

### 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

## MicroLog Cradle

Audible Alarm

### Serial Communication

**Channels** RS232 at 19.2 Kbps  
USB at 1.5 Mbps

### Connectors

4-pin flat connection to the MicroLog  
4-pin flat connection to any MicroLog external sensor  
Screw terminal for External DC supply

### Power Supply

**Internal** Lithium battery, 3.6V  
**External** 6-30V, minimum 300mA

### RF Transmission

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

CE and FCC standard compliance

## MicroLog Plus Receiver

**Communication Ports:** RS232 at 19.2Kbps  
USB at 1.5Mbps

**Power Supply:** External 9-12VDC, minimum 300mA

### RF receiver

European Version:  
Frequency: 433.92MHz  
Type approved to ETS 300-20  
Usable range to 300m (75 indoors)  
  
North America Version:  
Frequency: 914.5MHz  
Usable range to 120m (30m indoors)

### Antenna:

SMA connector  
Supplied with rubber whip antenna (with a hinge)

**Dimensions:** 10x9x25 cm

CE and FCC standard compliance

## 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:**  $\pm 2\%$  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:**  $\pm 3\%$  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:**  $\pm 0.1$  mA  
**Accuracy:**  $\pm 3\%$  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

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