

Temperature & humidity monitoring

The ML4000RHT series of data logger and radio transmitter units are well established as the most flexible units on the market today. Each unit has been designed to be compatible with a wide range of temperature and humidity probes to provide accurate and reliable measurement specifically selected for conservation requirements.



ML4000RHT



Temperature



Humidity

Additionally, depending on the format required by the user, temperature and humidity data can either be downloaded directly to a local PC using a USB cable or wirelessly transmitted directly to a local PC for automatic and immediate notification and analysis. Most wireless devices include the logging facility to guarantee against data loss in the event of radio communication loss.

The units are powered by a single 3.6 Volt AA Lithium battery, which can be replaced by the user as and when required. The battery life will be dependent on the method of data collection, but can last up to 3 years, with notification of when a change is required.

Product Features

- Data logging and radio transmitter formats
- LCD display with data readings and battery life
- Logger memory capacity 100,000 readings
- Easily accessible battery and USB socket
- Low power radio for long distance transmission (Over 3km over open ground)
- Up to 3 years battery life (depending on format of data retrieval)
- Superior performance hardware with high accuracy sensor
- Supports (optional) hidden wall brackets
- Complies with RoHS, EU directives and WEEE
- Carries CE Marking

Benefits

- Assists with museum accreditation
- High performance technology with accurate probes
- Designed for discreet monitoring
- Ensure comfortable environment for visitors
- Prevent damage to organic materials

Always ask for a long-range signal strength test.

We can prove ours to be unrivalled.



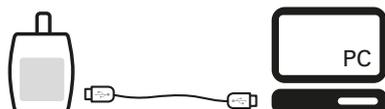
Data logger and Radio formats are available within this range and each will contain the typical functions below:

DATA LOGGER FUNCTIONS

Memory:	256K EEPROM
Logging intervals:	Programmable from 10 seconds to 24 hours.
Record Capacity	100,000 records
PC Interface:	USB communications
Battery Life	Up to 3 years
Software required:	W200 – HanLog 4.5+ W300 – HanLog 4.5+ Validated software for Heritage
Accessories:	G129 – 3.6V AA Lithium battery Y055 – USB cable Y119 – Wall mount bracket* This product can be calibrated to your specifications, contact us for further details.

N.B Instrument operating range -20°C to +65°C in a non-condensing RH environment

Standalone data logger

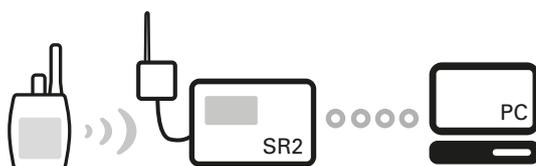


RADIO TRANSMITTER FUNCTIONS

Frequency options:	A range of frequencies are available between 433-458MHz. Country specific regulations apply.
Radio power:	10mW
Radio range:	3km over open ground
Battery Life:	Up to 18 months
Software required:	W700 – Standard Synergy Software Package W706 – Validated Synergy Software Package W813 – Legacy RadioLog Standard Software Package for Museums *See Synergy datasheet for further options
Hardware required:	CR2 – Controller SR2 – Smart Receiver REP – Repeater
Accessories:	88706 – 3.6V AA Lithium battery Y119 – Wall mounting bracket This product can be calibrated to your specifications, contact us for further details.

N.B Instrument operating range -20°C to +65°C in a non-condensing RH environment (operating range dependant on sensor)

Radio system (requires radio receiver)



Disclaimer

The information contained herein is believed to be reliable. The IMC Group Ltd is not responsible for any incorrect or incomplete information on this datasheet and the information or product may be changed without notice. Customers should obtain and verify the latest relevant information before placing orders for IMC products.
Version 4

ML4106



ML4106 - Radio transmitter & data logger
RH/T unit with onboard sensors

Data logger code: ML4106

Radio transmitter code: ML4106-434.075 (other frequencies are available)

SPECIFICATIONS

Instrumentation Specification:

Dimensions:	110 x 80 x 35mm
Weight:	200 grams
Power supply:	3.6V AA Lithium battery
Case material:	ABS & PC
Memory capacity:	100,000 readings
IP Rating:	IP50

Internal Temp. probe:	Precision Thermistor
Range:	-20°C to +60°C
Accuracy:	±0.1°C between -10°C to +40°C ±0.3°C Outside these extremes
Display resolution:	0.1°C
Humidity probes:	Capacitive Polymer
Recommended range:	10-90%RH non condensing
Accuracy:	±3%RH
Temp dependence:	< (0.025 + 0.0003 x RH) [$\frac{\%RH}{^{\circ}C}$]
Resolution:	0.1% RH

ML4107



ML4107 - Radio transmitter
RH/T unit with onboard sensors and optional flood probe

Radio transmitter code: ML4107-434.075 (other frequencies are available)

SPECIFICATIONS

Instrumentation Specification:

Dimensions	110 x 80 x 35mm
Weight	200 grams
Power Supply:	3.6 Volt AA Lithium battery
Case Material:	ABS & PC
Memory Capacity:	100,000 readings
IP Rating:	IP50

Add additional probe:	V053 – Flood Cable
Internal Temp. probe:	Precision Thermistor
Range:	-20°C to +60°C
Accuracy:	±0.1°C between -10°C to +40°C ±0.3°C Outside these extremes
Display resolution:	0.1°C
Humidity probes:	Capacitive Polymer
Recommended range:	10-90%RH non condensing
Accuracy:	±3%RH
Temp dependence:	< (0.025 + 0.0003 x RH) [$\frac{\%RH}{^{\circ}C}$]
Resolution:	0.1% RH

ML4108



ML4108 - Radio transmitter & data logger

RH/T unit with onboard sensors and optional remote surface temperature probe.

Data logger code: ML4108

Radio transmitter code: ML4108-434.075 (other frequencies are available)

SPECIFICATIONS

Instrumentation Specification:

Dimensions	110 x 80 x 35mm
Weight	200 grams
Power Supply:	3.6 Volt AA Lithium battery
Case Material:	ABS & PC
Memory Capacity:	100,000 readings
IP Rating:	IP50

Add your probe:

- Option 1: J095-05** 100mm x 4mm precision Thermistor probe, 3 mtr cable
- Option 2: J097-05** 100mm x 4mm precision Thermistor probe, 5 mtr cable
- Option 3: Y306-1-05** Precision Thermistor surface probe with 1 mtr cable
- Option 4: Y306-3-05** Precision Thermistor surface probe with 3 mtr cable
- Option 5: Y306-5-05** Precision Thermistor surface probe with 5 mtr cable

Internal Temp. probe:	Precision Thermistor
Range:	-20°C to +60°C
Accuracy:	±0.1°C between -10°C to +40°C ±0.3°C Outside these extremes
Display resolution:	0.1°C
External temp. probe:	Precision Thermistor (remote surface probe)
Range:	-40°C to +60°C
Accuracy:	±0.1°C between -10°C to +40°C ±0.3°C Outside these extremes
Resolution:	0.1°C
Humidity probes:	Capacitive Polymer
Recommended range:	10-90%RH non condensing
Accuracy:	±3%RH
Temp dependence:	< (0.025 + 0.0003 x RH) [$\frac{\%RH}{^{\circ}C}$]
Resolution:	0.1% RH

ML4109



Data logger code: ML4109-OD

Radio transmitter code: ML4109-OD-434.075 (other frequencies are available)

SPECIFICATIONS

Instrumentation Specification:

Dimensions	150 x 88 x 50mm
Weight	485 grams
Power Supply:	3.6 Volt AA Lithium battery
Case Material:	ABS & PC
Memory Capacity:	100,000 readings
IP Rating:	IP65

Internal Temp. probe:	EE07 probe (11.8mm x 83mm)
Range:	-20°C to +60°C
Accuracy:	±0.1°C between -10°C to +40°C ±0.3°C Outside these extremes
Display resolution:	0.1°C
External Temp. probe:	Pt1000 (tolerance class A)
Range:	-40°C to +60°C
Accuracy:	±0.1°C at 20°C
Resolution:	0.1°C
Humidity probes:	Capacitive Polymer
Recommended range:	0-100% RH non-condensing
Accuracy:	±2% (0-90%) ±3% (90-100%)
Temp. dependence:	$< (0.025 + 0.0003 \times \text{RH}) \left[\frac{\% \text{RH}}{^{\circ}\text{C}} \right]$

ML4109-OD – Radio transmitter & data logger

Outdoor RH/T unit with onboard sensors.

*All specifications above refer to unadjusted units, custom adjustment can be performed to order to improve stated accuracies

ML4114



ML4114 - Radio transmitter & data logger
RH/T unit high accuracy EE07 probe.

Data logger code: ML4114

Radio transmitter code: ML4114-434.075 (other frequencies are available)

SPECIFICATIONS

Instrumentation Specification:

Dimensions	110 x 80 x 35mm
Weight	200 grams
Power Supply:	3.6 Volt AA Lithium battery
Case Material:	ABS & PC
Memory Capacity:	100,000 readings
IP Rating:	IP65

Add your probe:

- Option 1: J140 EE07-02 RH/T probe
- Option 2: Y421-3 RH remote lead 3mtrs
- Option 3: Y421-5 RH remote lead 5m

External temp. probe: EE07 probe (11.8mm x 83mm) PT1000 (Tolerance class A)

Range:	-40°C to +80°C
Accuracy:	±0.1°C at 20°C (see Temperature accuracy chart below)
Resolution:	0.1°C

Humidity probes:	Capacitive Polymer
Recommended range:	0-100%RH non condensing
Accuracy:	±2% (0-90%) ±3% (90-100%)
Temp dependence:	< (0.025 + 0.0003 x RH) [%RH / °C]
Resolution:	0.1% RH

Temperature accuracy chart

