4000RHT

Temperature & humidity monitoring

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The 4000RHT 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 the user's requirements.

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
- Supports (optional) hidden wall brackets
- Complies with RoHS, EU directives and WEEE
- Carries CE Marking

Benefits

- Assists with national regulatory compliance
- High performance technology with accurate probes
- Low power radio for long distance transmission (Over 3km over open ground)
- Up to 3 years battery life (depending on format of data retrieval, see below)
- Superior performance hardware with high accuracy sensors

Always ask for a long-range signal strength test.

We can prove ours to be unrivalled.

CE RoHS

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DATA LOGGER AND RADIO TRANSMITTER FUNCTIONS

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

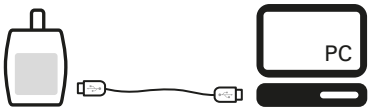
DATA LOGGER FUNCTIONS

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
Accessories:	G129 - 3.6V AA Lithium battery Y055 - USB cable Y119 - Wall mount bracket* 88706 - AA Lithium battery

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 *See Synergy datasheet for further options
Hardware required:	SR2 – Smart Receiver CR2 – Controller REP – Repeater
Accessories:	88706 - AA Lithium battery Y119 – Wall mount bracket* *for 4106, 4107, 4108, 4114 or 4115 only

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

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4106

4106 – Radio transmitter & data logger
RH/T unit with fixed onboard sensors

Data logger code: HL4106
Radio transmitter code: RL4106-434.075 *(other frequencies are available)*

Technical 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 Dependance:	$< (0.025 + 0.0003 \times RH) [\frac{\%RH}{°C}]$
Resolution:	0.1% RH

4107

4107 – Radio transmitter
RH/T unit with onboard sensors & optional flood probe

Radio transmitter code: RL4107-434.075 *(other frequencies are available)*

Technical 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
Add Addition 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 Dependance:	$< (0.025 + 0.0003 \times RH) [\frac{\%RH}{°C}]$
Resolution:	0.1% RH

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4108

4108 – Radio transmitter & data logger
RH/T unit with onboard sensors & optional remote surface temperature probe.

Data logger code: HL4108
Radio transmitter code: RL4108-434.075 *(other frequencies are available)*

Technical 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
Add Your Probe	Option 1: J095-3-05 100mm x 4mm precision Thermistor probe, 3 mtr cable Option 2: J095-5-05 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
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 Dependance:	$< (0.025 + 0.0003 \times RH) \left[\frac{\%RH}{°C}\right]$
Resolution:	0.1% RH

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4109

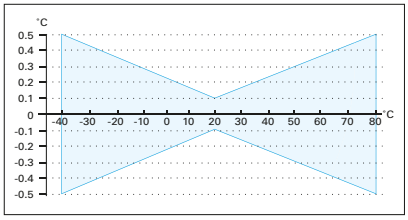
Radio transmitter code: RL4109-434.075 *(other frequencies are available)*

4109 – Radio transmitter & data logger
Outdoor RH/T unit with onboard sensors.

Technical Specification:

Dimensions:	150 x 88 x 50mm
Weight:	485 grams
Power supply:	3.6V 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 Dependance:	$< (0.025 + 0.0003 \times RH) \left[\frac{\%RH}{°C}\right]$

Temperature accuracy chart for EE07 probe



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4114

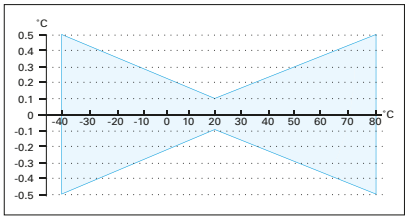
4114 – Radio transmitter & data logger
RH/T unit high accuracy EE07 probe

Data logger code: HL4114
Radio transmitter code: RL4114-434.075 *(other frequencies are available)*

Technical 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
Add Your Probe	Option 1: J140 EE07-02 RH/T probe Y421-3 RH remote lead 3mtrs Y421-5 RH remote lead 5m
External Temp. probe (internal to RH 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 Dependance:	$< (0.025 + 0.0003 \times RH) [\frac{\%RH}{°C}]$
Resolution:	0.1% RH

Temperature accuracy chart for EE07 probe



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4115

4115 – Radio transmitter & data logger
RH/T unit with C-Sense external temperature and EE07-02 RH probes

Data logger code: HL4115
Radio transmitter code: RL4115-434.075 *(other frequencies are available)*

Technical Specification:

Dimensions:	110 x 80 x 35mm
Weight:	200 grams
Power supply:	3.6V Lithium battery
Case material:	ABS & PC
Memory capacity:	100,000 readings
IP Rating:	IP50
Add Your Probe	Option 1: Y300 Short precision Thermistor probe mounted directly on a 2-pin lemo plug Option 2: Y300-80 Long (80mm) precision Thermistor robe mounted directly on a 2-pin Lemo plug Option 3: J140 EE07-02 RH/T probe Y421-3 RH remote lead 3mtrs Y421-5 RH remote lead 5m Option 4: J095-3-05 100mm x 4mm precision Thermistor robe, 3 mtr cable Option 5: J095-5-05 100mm x 4mm precision Thermistor probe, 5 mtr cable
External Temp. Probe:	Precision Thermistor
Range:	-40°C to +60°C
Accuracy:	+/- 0.1°C between -20°C to +50°C +/-0.3 elsewhere
Resolution:	0.1°C
Humidity Probes:	Capacitive Polymer
Recommended Range:	0-100%RH non condensing
Accuracy:	±2% (0-90%) ±3% (90-100%)
Temp Dependance:	$< (0.025 + 0.0003 \times RH) \left[\frac{\%RH}{°C}\right]$
Resolution:	0.1% RH

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4116

4116 – Radio transmitter & data logger

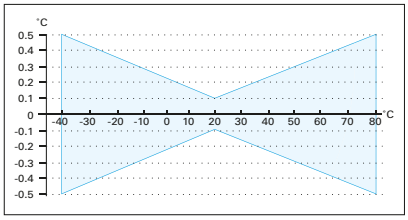
RH/T unit with external C-Sense temperature and EE07-02 RH probes, with internal PT1000 temperature sensor.

Data logger code: HL4116
Radio transmitter code: RL4116-434.075 *(other frequencies are available)*

Technical Specification:

Dimensions:	110 x 80 x 35mm
Weight:	200 grams
Power supply:	3.6V Lithium battery
Case material:	ABS & PC
Memory capacity:	100,000 readings
IP Rating:	IP50
Add Your Probe	Option 1: J095-3-05 100mm x 4mm precision Thermistor probe, 3 mtr cable Option 2: J095-5-05 100mm x 4mm precision Thermistor probe, 5 mtr cable Option 3: J140 EE07-02 RH/T probe Y421-3 RH remote lead 3mtrs Y421-5 RH remote lead 5m
External Temp. Probe:	Precision Thermistor
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
External Temp. probe (internal to RH 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 Dependance:	$< (0.025 + 0.0003 \times RH) [\frac{\%RH}{°C}]$
Resolution:	0.1% RH

Temperature accuracy chart for EE07 probe



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