

# ML4109 transmitter

## Pro ML4000RH/T Series

Part of the **Hanwell Pro ML4000RHT Series**, the ML4109 outdoor transmitter combines temperature and humidity measurements and is configured to 434.075MHz frequency as standard.

### Features

- ✓ Combined temperature & humidity measurement for outdoor use
- ✓ 50,000 data readings per channel & up to 2 years battery life
- ✓ Superior performance hardware & high accuracy sensors
- ✓ Easily accessible battery & USB socket
- ✓ Low power radio for long distance transmission (3km over open ground)
- ✓ Complies with RoHS, EU & WEEE directives
- ✓ Carries CE Marking
- ✓ Supplied with wall bracket

### Typical Applications

- Outdoor comparative data



Always ask for a long-range signal strength test. We can prove ours to be unrivalled.

Product code: ML4109-OD-434.075

Instrumentation specification	
Dimension (Excl. ancillaries)	150 x 88 x 50mm
Weight	485 grams
Power supply	1 x 3.6V AA Lithium battery
Case material	ABS & PC
Memory capacity	50,000 readings per channel (unit will wrap when full)
Clock accuracy (logging)	20 ppm at 25°C
IP Rating	IP65
Instrument measuring range	-20°C to +60°C
Instrument operating range	-20°C to +60°C in a non-condensing RH environment
Instrument storage temperature	-40°C to +60°C
Resolution	0.1°C (temp), 0.1%RH (humidity)

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 2 years (dependent on conditions of use and instrument settings)
Software required	W900 – Standard EMS Software Package *See EMS datasheet for further options
Hardware required	CR2 / CR3 – Controller SR2 – Smart Receiver REP – Repeater

Accessories	
Y119	Wall mounting bracket
88706	AA Lithium battery

Manufactured by Hanwell | Ellab RoHS

Version 5 - EC190194

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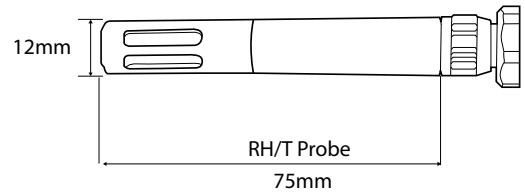
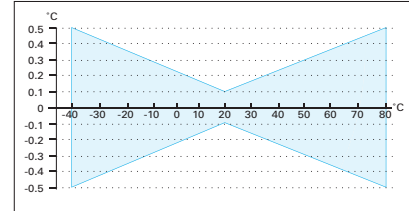
# Sensor (supplied with unit)

## J223

Temperature Probe	PT1000 (Tolerance class A)
Temperature operating range	-40°C to +80°C (restricted by instrument operating range)
Temperature accuracy	+/- 0.1°C at 20°C (see temp accuracy chart)
Long term drift	+/- 0.05°C per year
Humidity Probe	Capacitive Polymer
Recommended range	0-100% RH non condensing
Accuracy	+/- 2% (0-90%) +/- 3% (90-100%)
Temperature dependance	<(0.025+0.0003xRH)[%RH/°C]

The J223 variant has an additional coating which substantially extends the lifetime and the measurement performance of the humidity sensor in corrosive environments. Additionally it improves the long term stability in dusty, dirty or oily applications by preventing stray impedances caused by deposits on the active sensor surface.

Temperature accuracy chart for EE07 probe



# Solar and rain shield

## T351-G18

Operating environment	
Operating/Storage temperature	-40°C to +80°C
Maximum wind speed	75 m/s (168mph)
Shielding performance	
Shielding efficiency <i>(temperature rise/error due to incident solar radiation)</i>	2.3°C/KW/m <sup>2</sup> at 1m/s typical
Mechanics	
Diameter	76mm
Shield materials	Nylon/polyamide, polycarbonate, ABS, aluminium, stainless-steel
Overall height	118mm
Typical weight	110g

