

RL4901-04 transmitters

Pro 4900 Series

Part of the **Hanwell Pro** RL4900 Series, the Units in the RL4901 - RL4904 range are thermocouple transmitters which include LCD display and 434.075MHz frequency as standard. They are available in two temperature ranges, with or without door sensors.

Features

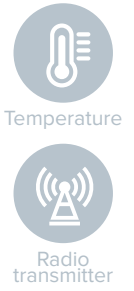
- ✓ Single Channel Thermocouple instruments
- ✓ LCD display with data readings & battery life
- ✓ Superior performance hardware & high accuracy sensors
- ✓ Easily accessible battery & USB socket
- ✓ Low power radio for long distance transmission (3km over open ground)
- ✓ Complies with RoHS, EU & WEEE directives and carries CE Marking

Typical Applications

- Cryogenic monitoring
- High temperature applications up to 350°C



Photo shows RL4901 - 434.075 (Other frequencies are available)



Instrumentation specification

Dimension	110 x 80 x 35mm (Excl. ancillaries)
Weight	200 grams
Power supply	3.6V AA Lithium battery
Battery life	Up to 2 years (dependent on conditions of use and instrument settings)
Case material	ABS & PC
Memory capacity ¹	100,000 readings. Unit will wrap when full
Clock accuracy (logging)	20 ppm at 25°C
Instrument measuring range	See relevant Product code (Measurement Range is dependent on probe selection)
Instrument operating range	-20°C to +60°C (non-condensing RH environment)
Instrument storage temperature	-40°C to +60°C
IP Rating	IP30
Unit accuracy	+/- 0.2°C
Resolution	0.1°C

¹ Note: RL4902 and RL4904 Units do not log.

System accuracy (Unit with Hanwell Probes)

Unit with:	J043 Probe	J044 Probe
Type	Ultra precision Teflon coated Type T (Thermocouple junction is isolated)	Mineral insulated Type T (Thermocouple junction is isolated)
Probe diameter	3mm	3mm
Operating Range	RL4901 & RL4902 -200°C to +200°C RL4903 & RL4904 -50°C to +200°C	RL4901 & RL4902 -200°C to +200°C RL4903 & RL4904 -50°C to +350°C
Accuracy above -40°C	+/- 0.7°C or +/- (0.4% of reading + 0.2°C) (whichever is greater)	+/- 0.7°C or +/- (0.4% of reading + 0.2°C), (whichever is greater)
Accuracy below -40°C	-40°C +/-1.2C or +/- (1.5% of reading + 0.2C), (whichever is greater)	-40°C +/-1.2C or +/- (1.5% of reading + 0.2C), (whichever is greater)
Long term drift	< 0.1°C per year	< 0.1°C per year

Note: If using non-Hanwell probes, the Unit accuracy stated in the Instrument specification table above will need to be added the the non-Hanwell Probes stated accuracy to give the appropriate System accuracy.

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
Software required	W900 – Standard EMS Software Package W906 – Validated EMS Software Package See EMS datasheet for further options
Software compatibility ²	RL4901, RL4902, RL4903 and RL4904: EMS - From Version 1.0.8/2.0.2 inclusive

²**Note:** EMS 1.0.8 requires both the **Management Tools Digital Patch** and the **Digital Patch for EMS**. Customers with EMS Version 1.0.8 must contact Hanwell Technical Support (support.hanwell@ellab.com) before buying and ask them for these patches.

Hardware required	SR2 – Smart Receiver REP – Repeater
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Product codes

RL4901	Single Thermocouple -200°C to +200°C
RL4902 ³	Single Thermocouple with Door Sensor -200°C to +200°C
RL4903	Single Thermocouple -50°C to +350°C
RL4904 ³	Single Thermocouple with Door Sensor -50°C to +350°C
88706	AA Lithium battery

Probe options [Please refer to the Hanwell Pro Sensor datasheet](#)

³**Note:** When these Units are used with Hanwell manufactured door switches they are guaranteed to function correctly. Other inputs should comply with the following specification; an interface cable is available upon request:

Max load capacitance	5nF
Max impedance	100R