

## Radio telemetry

The repeater is a Hanwell radio telemetry transmitter, designed for use with the Radiolog environmental monitoring system. The units are in IP65- rated cases, suitable for use in tough environments and are powered by an external 12 DC supply.



The repeater is used for transparently forwarding radio data between Hanwell's range of radio sensors and receivers. Applications for the repeater include extending transmitter range, frequency shifting, reception/transmission to and from shielded areas and repeaters with internal receivers and external transmitters can be used to make jumps between buildings.

The repeater can be supplied with either an internal or external receiver and transmitter set at a user requested frequency.

### Frequency options:

- 434.075MHz fixed frequency
- 433.920MHz fixed frequency
- 457.600MHz fixed frequency
- Synth frequencies in 25kHz steps

### Receiver/transmitter options:

- Internal receiver
- External receiver
- Internal transmitter
- External transmitter

Any combination of these is permissible, giving greater flexibility for different applications.

No more than 4 repeaters should be used within range of each other. More than 4 repeaters can be used in a large system, provided they are not in range of one another.

Always ask for a long-range signal strength test.

We can prove ours to be unrivalled.

#### 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 2



## REP01PU



Radio transmitter code: REP01PU-434.075 (other frequencies are available)

### SPECIFICATIONS

#### Instrumentation Specification:

Dimensions:	100 x 100 x 60mm
Weight:	600 grams
Power Supply:	User replaceable 2 x alkaline 'D' cell Battery pack
Battery Life:	Up to five years (Based on one message a day i.e. 30 minute pulse count and no events enabled)
Case material:	ABS & PC

### TECHNICAL SPECIFICATIONS

Operating Temperature Range:	-20°C to +60°C
Operating Humidity Range:	0..95% RH, non-condensing
Power Consumption:	0.6 Watts

### RADIO TRANSMITTER FUNCTIONS

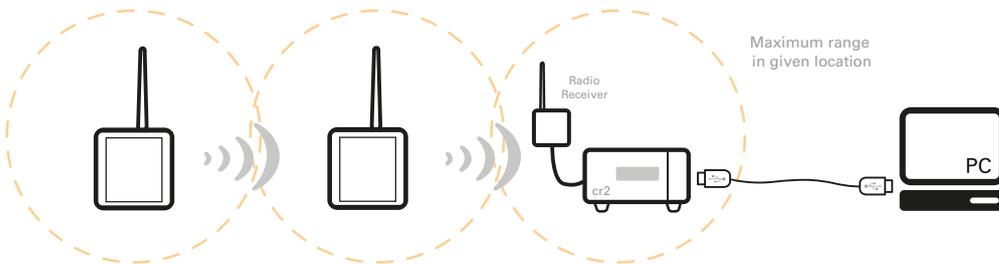
Fixed frequency modules:	434.075 MHz (EU), 433.920 MHz (EU).
Synthesised modules:	433.875 to 434.650 MHz (EU) in 25 KHz increments, 458.650MHz (US)
Radio Power:	10mW
Radio Range:	3km over open ground

#### Other Information

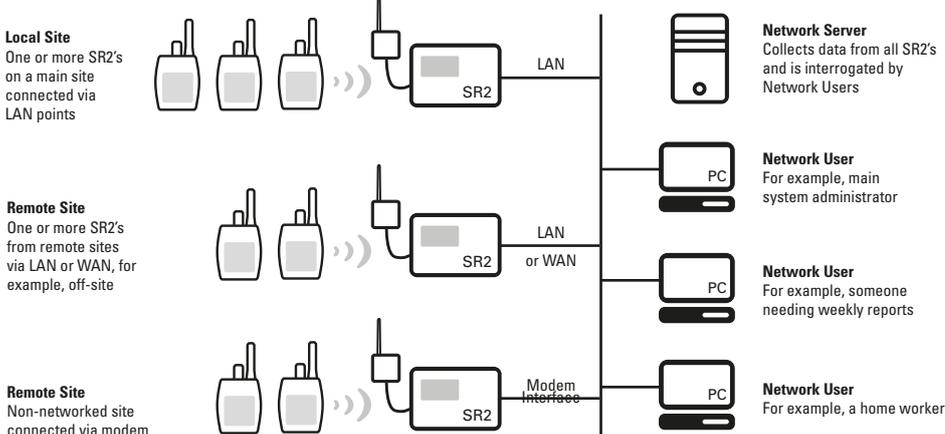
Reaction Time at Receiver Unit: < 5 seconds

**REP01PU** - Radio telemetry transmitter

**Schematic - CR2**



**Schematic - SR2**



One system can comprise up to 16 separate sites but all data is treated the same way

## REPEATER

Radio transmitter code: REP04PU-434.075 (other frequencies are available)

Radio transmitter code: REP05PU-434.075 (other frequencies are available)

### SPECIFICATIONS

#### Instrumentation Specification:

Dimensions:	197 x 106 x 35mm
Weight:	300 grams
Case material:	ABS & PC
Power Supply:	External 12v D/C

### TECHNICAL SPECIFICATIONS

Operating Temperature Range:	-20°C to +60°C
Operating Humidity Range:	0...95% RH, non-condensing
Power Consumption:	0.6 Watts

### RADIO TRANSMITTER FUNCTIONS

Fixed frequency modules:	434.075 MHz (EU), 433.920 MHz (EU).
Synthesised modules:	433.875 to 434.650 MHz (EU) in 25 KHz increments, 458.650MHz (US)
Radio Power:	10mW
Radio Range:	3km over open ground

#### Other Information

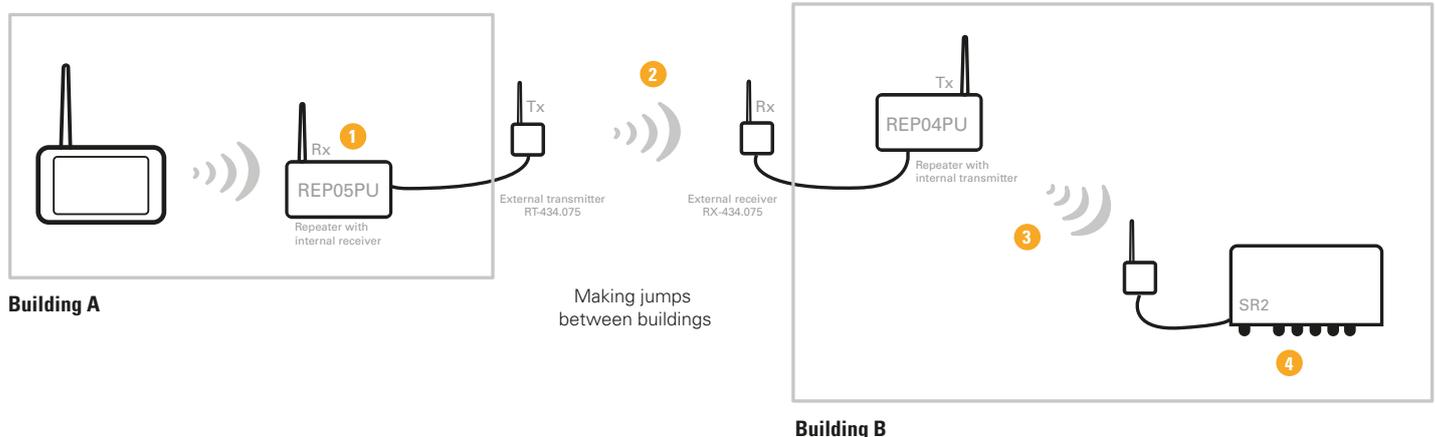
Reaction Time at Receiver Unit: < 5 seconds



**REP05PU** - Repeater with internal receiver (left)

**REP04PU** - Repeater with internal transmitter (right)

### Schematic



**Building A** - Repeater with internal receiver and external transmitter

1. Repeater sends signal to repeater in Building B
2. Up to 3 km in line of sight

**Building B** - Building with external receiver and repeater with internal transmitter

3. Repeater sends signal to SR2 base station
4. SR2 receiving signal from repeater and other sensors in Building B