

Hanwell iSense



Remote monitoring

Evolved from Hanwell's existing range of established radio logging products the iSense is an innovative self contained unit enabling remote monitoring of diverse parameters via wireless GPRS technology.

Locations that previously seemed inaccessible including, buildings, machinery, infrastructure or vehicles can now easily be accessed and monitored.



A number of different sensors can be attached to the iSense in order to monitor parameters such as energy, temperature, pressure, structural stress and many more.

This real-time information is then transmitted via GPRS to a central database, and can be accessed immediately on a PC for viewing, recording and assessment. This range has been designed to comply with the RoHS and WEEE EU directives, and carries the CE mark.

Features

- Battery, mains or vehicle powered
- Date and time stamped monitoring
- Up to five year battery life (depending on use)
- Transmit rate increase on event
- Remote setup options
- Data stored in non volatile memory
- All data recovered in the event of temporary GPRS coverage problems
- Works with a range of sensor families

Benefits

- GPRS technology
- Non-Intrusive design
- Easy installation
- A wide range of monitoring parameters available
- Individual configuration options
- Easy reading management system
- Comprehensive analysis and data history

Parameter options

- Temperature
- Humidity
- Current
- Pulse Counting

Always ask for a long-range signal strength test.

We can prove ours to be unrivalled.

Ultimate peace of mind    RoHS

Version 2

Disclaimer: The information contained herein is believed to be reliable. Hanwell Solutions 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 Hanwell products.

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TECHNICAL SPECIFICATIONS

Instrumentation Specification:

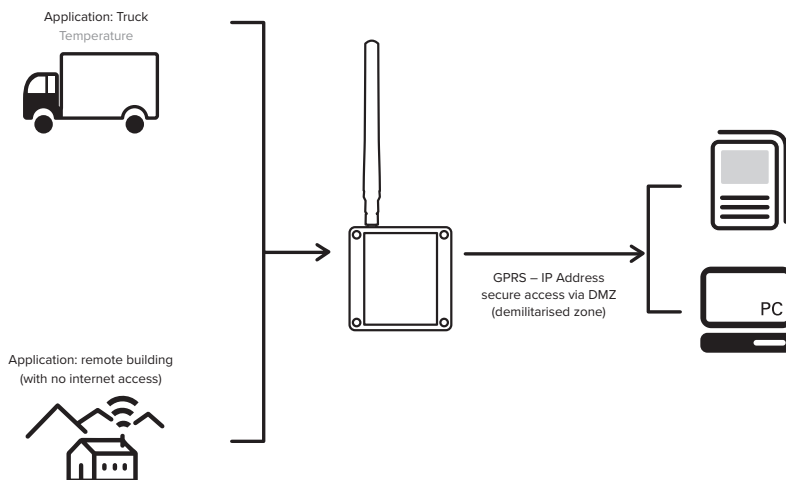
Dimensions:	100 x 100 x 60mm
Weight:	600 grams
Power Supply:	User replaceable 2 x alkaline 'D' cell Battery pack
Battery Life:	Up to five years (Based on one message a day i.e. 30 minute pulse count and no events enabled)
Case material:	ABS & PC

GPRS Transmitter functions:

Network Compatibility:	For use on GSM/GPRS networks at 850MHz to 1900MHz (Quad Band)
Aerial Connection:	SMA Socket
Aerial Type:	Stubby straight/right angle Remote mount on 2mtrs cable Aerial
Software required:	W900 – Standard EMS Software Package W906 – Validate EMS Software Package *See EMS datasheet for further options

Note: Each iSense unit requires a valid sim card contract and adequate network coverage at the intended location. Ask for details.

Schematic:



Ultimate peace of mind



RoHS

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INSTRUMENT OPTIONS AND SPECIFICATIONS

The iSense unit can be used for multiple applications. Below is a list of typical probe options used with the iSense unit and their typical applications. Please contact us regarding your own unique application as we will almost certainly have a monitoring solution for you.

TEMPERATURE



iSense single channel thermistor with 1 x cable gland

UNIT PRODUCT CODES:

Internal battery - IS-11-00-00-PSB

Vehicle Power supply - IS-11-00-00-PSV

Probes used with this instrument: B

iSense dual channel thermistor with 2 x cable glands

UNIT PRODUCT CODES:

Vehicle Power supply - IS-11-11-00-PSV

Probes used with this instrument: B

iSense three channel thermistor with 3 x cable glands

PRODUCT CODES:

Internal battery - IS-11-11-11-PSB

Probes used with this instrument: B

Typical application:

- Fridges
- Freezers
- Walk in chillers
- Refrigerated transportation

TEMPERATURE AND HUMIDITY



iSense with sockets for J140 & Y300 sensors

See sensor page for spec

UNIT PRODUCT CODES:

Vehicle Power supply - IS-05-06-00-PSV

Sensors used with this instrument: A & C

iSense with socket for J140 RH/T sensor

See sensor page for spec

UNIT PRODUCT CODES:

Internal battery - IS-07-08-00-PSB

Sensors used with this instrument: C

Typical application:

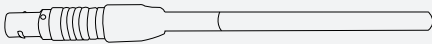
- Storage facilities
- Stability chambers
- Food processing
- Refrigerated transportation

PROBE OPTIONS

A: Y300

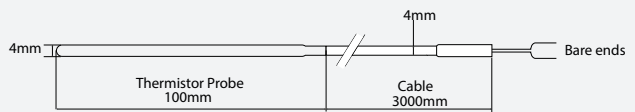
External temperature probe:	Short precision thermistor
Range:	-40°C to +60°C
Accuracy:	±0.1°C between -20°C to +50°C ±0.3°C Outside these extremes
Display resolution:	0.1°C

2 pin Lemo



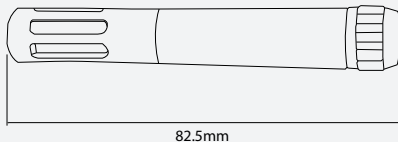
B: Thermistor - J095

External temperature probe:	Precision thermistor
Range:	-40°C to +60°C
Accuracy:	±0.1°C between -20°C to +50°C ±0.3°C Outside these extremes
Resolution:	0.1°C

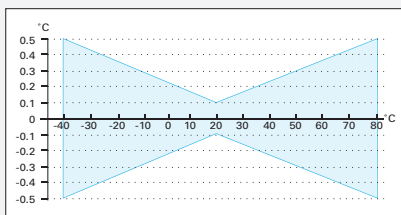


C: J140

External humidity probe:	EE07 probe (11.8mm x 83mm) PT1000 (Tolerance class A)
Temperature Range:	-40°C to +80°C
Accuracy	±0.1°C at 20°C (see temperature accuracy chart below)
Display resolution:	0.1°C
Humidity range:	0-100% RH non-condensing



Temperature accuracy chart for J140 probe



For more information see the Hanwell Pro Sensors datasheet.

iSense Alarm handling

It is possible to set level alarms on each individual iSense channel. It is important to remember that as the device only calls in then these values can only be changed on a standard connect cycle. This cycle will happen at some time later – possibly many hours later – after the EMS change.

Prior to an alarm the sensors are sampled at the nominal interval and sent periodically, but if an alarm condition is detected it will transmit this within the following 4 minutes. Thus the maximum iSense response time to an alarm is (nominal logging interval + 4min).

Assuming that the GSM network is up and running perfectly then there will be up to a further 8 minutes before it appears on screens because of redirector and EMS delays. Any provider network delays are outside of our control and may be added to this time

The device will continue to send data rapidly for two hours (every 15 minutes) after the initial transition and then revert to normal mode. If the alarm condition persists then this will start the sequence again.

To cope with the system delays you should set the alarm reactivation time on the PC to a minimum of 30 minutes, and not manually reset it prior to this or you risk seeing the same alarm reported twice.