

iSense GSM Transmitters

Pro iSense Series

Part of the Hanwell iSense range, iSense GSM Transmitters are used for measuring RH/T, Pressure and other parameters indoors and outdoors, utilising highly accurate temperature and humidity sensors.

Hanwell iSense GSM transmitters can, as an option, include an embedded Chip SIM (a removable SIM being provided as standard) and are preconfigured to point at the Hanwell Data Routing Service.

Features

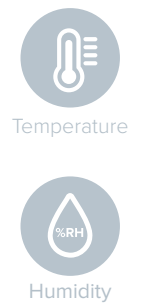
- ✓ Data and time stamped data
- ✓ Superior performance hardware & high accuracy sensors
- ✓ Immediate transmission of alarm events at logging interval
- ✓ Versatile power options as standard, from battery, external and vehicle
- ✓ Remote setup options
- ✓ Data stored in non-volatile memory
- ✓ All data recovered in the event of temporary GSM coverage problems
- ✓ Easy to understand journey profile information
- ✓ Complies with RoHS, EU & WEEE directives and carries UKCA and CE Marking

Typical Applications

- Remote locations
- Off-site storage
- Temporary monitoring
- Delivery vehicles

Instrumentation specification	
Dimension (Excl. ancillaries)	180 x 120 x 63mm
Weight	600 grams
Power supply	*2 x 1.5V Alkaline C cells or 2 x Lithium C size bobbin cell Or: *12V external power supply, 0.5A fuse protected Or: Vehicle up to 24V external power supply, 0.5A fuse protected
Battery Life	Up to 2 years for Alkaline batteries and Lithium batteries (based on one message a day and 6 measurements daily, no events enabled)
Case material	Polycarbonate
Memory capacity	Up to 400K readings
Storage temperature	-40°C to +80°C (without battery)
IP rating	IP67

Transmitter functions	
Network compatibility	For use on GSM networks at 850MHz to 1900MHz bands for worldwide use. 3G technology with 2G fallback.
Aerial Connection	SMA connector jack, female socket 50 Ohms



Product code: ISXX-XX

Product Code Key:

- IS** = iSense
- 01** = is the first in the series in this case RH/T with EE07 sensor.
- B** = For use Globally
- N** = Normal (standard SIM card and holder no potting)
- A** = For use in Australia only
- R** = Rugged (Embedded Chip SIM, fully potted)

Accessories	
88702	1.5V Alkaline C cell battery
88704	3.6V Lithium C cell battery
G422F	12VDC power supply

Aerial Types		
Description	Part codes	Specifications
Standard knuckle aerial*	G205	Can be used indoors or outdoors
Dome aerial*	G455	Suitable for use outdoors
Flat blade aerial*	AM36913	Suitable for indoor use only. Would be used when an indoor remote aerial is required

See: iSense GSM Transmitters - Compatible Aerials on page 5

Software Compatibility

iSense GSM Transmitters are compatible with existing systems running:

Software	Version
EMS	Any Version**
Synergy	1.6.0 / 2.2.0 or above inclusive
Notion	1.3.0 / 2.0.0 or above inclusive

** *Specific Units may require EMS 1.1.0 2.1.0 or later, see individual Unit specifications.*

- If iSense GSM Transmitters are to form part of a new system, it will be necessary to purchase:

Either: W900 – Standard EMS Software Package.

Or: W906 – Validated EMS Software Package.

See [EMS Datasheet](#) for further options.

***Note:**
Aerials, batteries and the 12V external power supply are not supplied as standard and must be purchased separately.



RoHS Manufactured by Ellab Monitoring Solutions

iSense GSM Transmitters - Model Specific Details

IS01 BN GSM Transmitter

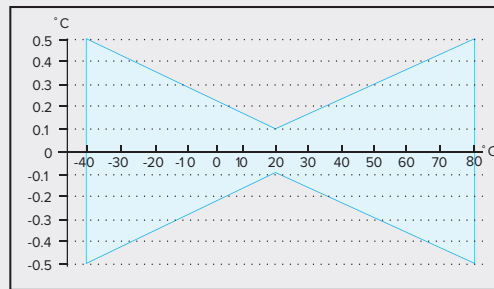
This unit is for use indoors for the measurement of RH/T

Compatible Sensors EE07 (J140) or EE07 (J223).
 The sensors are typically mounted on the case via a socket.
 For remote mounting Y41-1 (1 metre), Y421-3 (3 metre) or Y421-5 (5 metre) extension cables can be used.
[See Hanwell Pro Sensor Options Technical Data Sheet for further details](#)

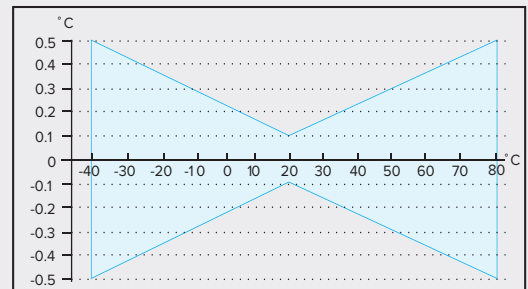
Instrument Operating Range **Battery pack:** Alkaline 0°C to +55°C Lithium -10°C to +55°C **External supply:** -30°C to +55°C

Instrument Measurement Range -40°C to +60°C

System Accuracy (Transmitter Unit + J140 or J223 Sensor)
Temp: $\pm 0.1^\circ\text{C}$ at 20°C (see temp accuracy chart)
RH: $\pm 2\%$ (0 - 90%)
 $\pm 3\%$ (90 - 100%)



Temperature accuracy chart for J140 probe



Temperature accuracy chart for J223 probe

Compatible Aerials G205, G455 or AM36913

IS02 BN GSM Transmitter

This unit is a three channel device for use indoors for the measurement of temperature using a Thermistor probe (J095).

Compatible Sensors
 J095-3-03 Thermistor Probe 3 metre cable
 J095-5-03 Thermistor Probe 5 metre cable
 J095-10-03 Thermistor Probe 10 metre cable
[See Hanwell Pro Sensor Options Technical Data Sheet for further details](#)

Software Compatibility Use of Channel 3 requires EMS 1.0.8 / 2.0.2 or later.
 The Unit can be used as Single or Dual Channel digital device with existing software; see [Software Compatibility](#) on Page 1 for details.

Instrument Operating Range **Battery pack:** Alkaline 0°C to +55°C Lithium -10°C to +55°C **External supply:** -30°C to +55°C

Instrument Measurement Range -40°C to +60°C

System Temperature Accuracy (Transmitter Unit + J095 Probe)
 $\pm 0.2^\circ\text{C}$ between -10°C to +40°C
 $\pm 0.4^\circ\text{C}$ outside these extremes

Instrument Accuracy 0.1°C

Instrument Resolution 0.1°C

Compatible Aerials G205, G455 or AM36913

IS03 BR GSM Transmitter

This is a specialist URSL unit for monitoring internal moisture in transformers.

Compatible Sensors	J236	GEMS 2200 Series Absolute Pressure Transducer
	J253	Digital Dew Point & Temperature Probe
Instrument Measurement Range	J236	GEMS 2200 Series Absolute Pressure Transducer
		Sensor operating range: 0 to 1600mBar
		Accuracy (offset and linearity): ±20mBar
		Resolution: 1mBar
		Pressure Connector: 2 x Lemo pressure connectors
		Long term drift: 3.2mBar/year (non-cumulative)
	J253	Digital Dew Point & Temperature Probe
		Sensor operating range: -70 to 60°C Td / -40 to 60°C
		Dewpoint accuracy (@ 23°C): ±2°C Td (-50 to 20°C Td)
		±3.5°C Td (-60 to -50°C Td)
		Temperature accuracy (@ 23°C): ±0.25°C
		Long Term Drift <1°C Td/year
System Accuracy (Transmitter Unit + J236 Probe)	± 30mbar	
Compatible Aerials	G455	

IS04 BR GSM Transmitter

This unit monitors pressure and is supplied with a 1.6 Bar Absolute Pressure sensor. Ruggedised unit, with Chip (encapsulated) SIM.

Compatible Sensors	J236	GEMS 2200 Series Absolute Pressure Transducer
Instrument Operating Range	Battery pack: Alkaline 0°C to +55°C Lithium -10°C to +55°C External supply: -30°C to +55°C	
Instrument Measurement Range	J236	GEMS 2200 Series Absolute Pressure Transducer
		Sensor operating range: 0 to 1600mBar
		Accuracy (offset and linearity): ±20mBar
		Resolution: 1mBar
		Pressure Connector: 2 x Lemo pressure connectors
		Long term drift: 3.2mBar/year (non-cumulative)
System Accuracy (Transmitter Unit + J236 Probe)	± 30mbar	
Compatible Aerials	G205 or G455	

IS04 BN GSM Transmitter

This unit monitors pressure and is supplied with a 1.6 Bar Absolute Pressure sensor. Non-ruggedised unit, with normal (non-encapsulated) SIM.

Compatible Sensors	J236	GEMS 2200 Series Absolute Pressure Transducer
Instrument Operating Range	Battery pack: Alkaline 0°C to +55°C Lithium -10°C to +55°C External supply: -30°C to +55°C	
Instrument Measurement Range	J236	GEMS 2200 Series Absolute Pressure Transducer
		Sensor operating range: 0 to 1600mBar
		Accuracy (offset and linearity): ±20mBar
		Resolution: 1mBar
		Pressure Connector: 2 x Lemo pressure connectors
		Long term drift: 3.2mBar/year (non-cumulative)
System Accuracy (Transmitter Unit + J236 Probe)	± 30mbar	
Compatible Aerials	G205 or G455	



RoHS

Manufactured by Ellab Monitoring Solutions

IS05 BN GSM Transmitter

This unit is for use indoors for the measurement of RH/T using the Rotronic HC2-S sensor (J115).

Compatible Sensors

Rotronic HC2-S sensor (J115)
[See Hanwell Pro Sensor Options Technical Data Sheet for further details](#)
 The sensor is typically mounted on the case via a socket.
 For remote mounting Y527 (2 metre) or Y528 (5 metre) extension cables can be used.

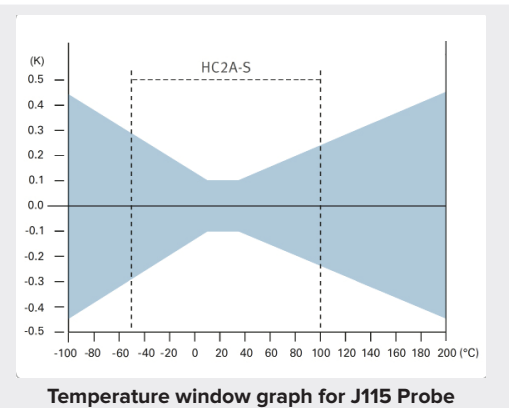
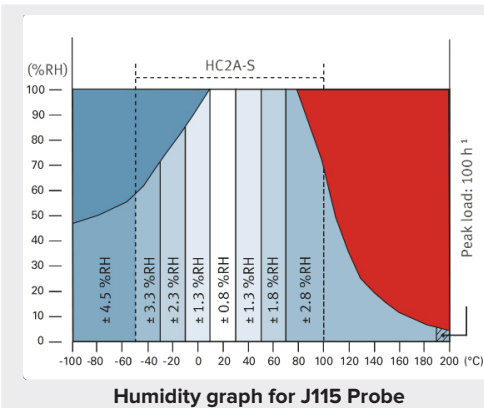
Instrument Operating Range

Battery pack: Alkaline 0°C to +55°C Lithium -10°C to +55°C **External supply:** -30°C to +55°C

System Humidity Accuracy:

Accuracy: $\pm 0.8\%RH/\pm 0.1^\circ C$ at 10°C to +30°C
 (see Humidity graph for J115 Probe)
Resolution: 0.1%RH
Long term stability: <1% per annum
System Temperature Accuracy:
 Temperature accuracy PT100 1/3 DIN Class B
 (see Temperature window graph for J115 Probe)
Resolution: 0.1°C

**System Accuracy
 (Transmitter Unit + J115 Probe)**



Compatible Aerials

G205 or G455 or AM36913

IS06 BN GSM Transmitter

This unit is a three-channel PT1000 transmitter for measuring temperature using the PT1000 (J182) sensor.

Compatible Sensors

PT1000 (J182)
[See Hanwell Pro Sensor Options Technical Data Sheet for further details](#)

Software Compatibility

EMS 11.0 / 2.2.0 or later

Instrument Operating Range

Battery pack: Alkaline 0°C to +55°C Lithium -10°C to +55°C **External supply:** -30°C to +55°C

Instrument Measurement Range

-200°C to +200°C

Instrument Accuracy

- 0.2°C: From -200°C to 70°C
 - 0.3°C: From 70°C to 200°C

Instrument Resolution

0.1°C

System Accuracy

(Transmitter Unit + J182 Probe)

$\pm(0.35+0.0020*|t|)^\circ C$: From -200°C to 70°C
 $\pm(0.45+0.0020*|t|)^\circ C$: From 70°C to 200°C

Compatible Aerials

G205 or G455 or AM36913

IS07 BN GSM Transmitter

This unit is for monitoring SF6 (Sulphur Hexafluoride) concentrations using the WIKA Model GDT-20 Sensor/Probe.

Compatible Sensors	WIKA Model GDT-20 sensor/probe	
Instrument Operating Range	24V External supply: -30°C to +55°C	
Instrument Measurement Range	Pressure:	0 to 16 Bar.
	Temperature:	-40°C to 60°C
	Density:	0 to 60 Kg/m ³
System Accuracy (Transmitter Unit + GDT20 Probe)	Density:	±0.60 %, ±0.35 g/litre (-40 to +50°C)
	Temperature:	±1 C
	Pressure:	±0.20 %, ±32 mbar (-40 to < 0°C) ±0.06 %, ±10 mbar (0 to 50°C)

G205 or G455 or AM36913

IS08 BN GSM Transmitter

This unit is a three-channel linear transmitter for measuring Current and Voltage.

Compatible Sensors	See Hanwell Pro Sensor Options Technical Data Sheet for further details	
Instrument Operating Range	Battery pack: Alkaline 0°C to +55°C Lithium -10°C to +55°C External supply: -30°C to +55°C	
Instrument Measurement Range	Accuracy	
	0 to 10V:	- 0.4%
	0 to 5V:	- 0.4%
	0 to 1V:	- 0.150%
	4 to 20mA:	- 0.150%

Compatible Aerials G205 or G455 or AM36913

IS09 BN GSM Transmitter

This unit is a three-channel digital transmitter.

Compatible Sensors	See Hanwell Pro Sensor Options Technical Data Sheet for further details	
Software Compatibility	Use of Channel 3 requires EMS 1.1.0 / 2.2.0 or later. The Unit can be used as Single or Dual Channel digital device with existing software; see Software Compatibility on Page 1 for details.	
Instrument Operating Range	Battery pack: Alkaline 0°C to +55°C Lithium -10°C to +55°C External supply: -30°C to +55°C	
Instrument Measurement Range	This unit used with Hanwell manufactured door switches (DC001, DC002 and DC003). Alternatively, other inputs should comply with the following specifications: Max Load Capacitance: 5nF Max Impedance: 100R	

Compatible Aerials G205 or G455 or AM36913



RoHS

Manufactured by Ellab Monitoring Solutions

iSense GSM Transmitters - Compatible Aerials

Flat blade aerial - AM36913



Standard knuckle aerial - G205



Dome aerial - G455

