

DECT ULE-HUM

HUMIDITY SENSOR

CR-DU-HUM EURO
CR-DU-HUM USA



ELECTRONIC ENGINEERING LTD.

INSTALLATION INSTRUCTIONS

P/N 7102340 REV. A (O.Z.)

Issue Date: January 31st, 2016

INTRODUCTION

This DECT ULE HUM sensor is an advanced, fully supervised low-current wireless detector that includes a DECT ULE transceiver for reliable system operation.

This DECT ULE HUM uses smart message control, which verifies that all messages are successfully transmitted.

This DECT ULE HUM sensor includes series of messages for full communication administration (Keep Alive, Battery Status, Configuration, etc.) as well as Information transmission signals.

This DECT ULE HUM sensor reports about the measured Humidity, Temperature & Air-Pressure.

FEATURES

- DECT ULE RF protocol.
- Low current Technology.
- Powered by a single 3V Lithium battery.
- Battery life: up to T.B.D. years.
- Frequency Band: All DECT Standard Bands.
- Keep Alive transmission.
- Battery status transmission.
- Bi-Color LED indications for monitoring & Pairing.
- Range up to 500m on open space.
- Remotely configurable.
- Friendly Pairing and Installation processes.
- Reports about measure Humidity, Temperature & Air-Pressure.
- Includes a wide – clear display.
- Displayed Temperature value can be change from Celsius to Fahrenheit locally or remotely from Base.

OPERATION

The DECT ULE HUM sensor transmits the following events data:

KEEP ALIVE – A periodical transmission indicating detector's presence. The time interval is configurable – the minimum value is 3 seconds.

MEASURED DATA – Measured data of Humidity, Temperature & Air Pressure transmission.

LOW BAT – Whenever the battery reaches a pre-set low level (~2.5V) Battery Low signal will be sent. When Battery level drops below Cut Off level (~2.3V) the sensor will stop functioning and the Red LED will blink for 10 seconds.

ALARM – Indicating that measured Temperature / Humidity is out of defined Low / High thresholds.

FIGURE 1 – SEPARATE FROM BRACKET

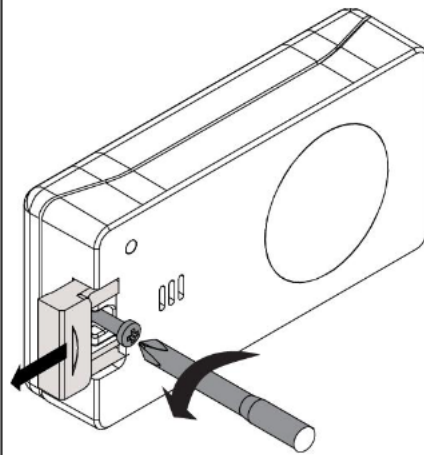
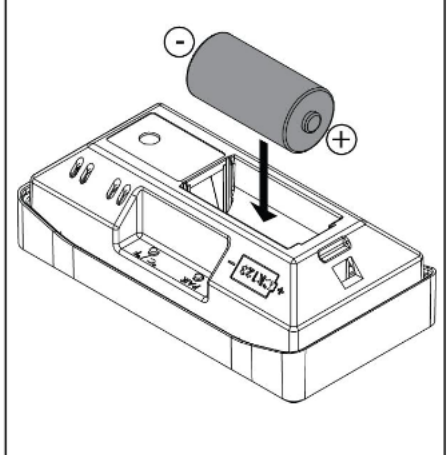


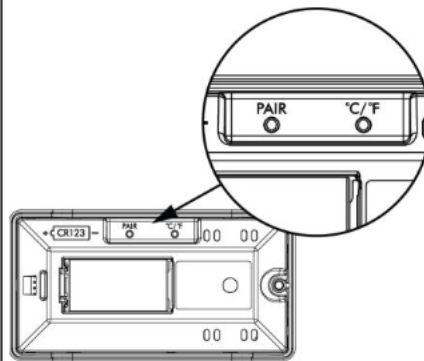
FIGURE 2 – BATTERY PLACEMENT



PAIRING PROCESS

1. Open the screw cover and unscrew the holding screw as shown in Figure 1.
2. Separate the device from the Bracket by tilting the front cover.
3. Place a battery as instructed in Figure 2 and wait until the Red LED stops blinking.
4. Initiate the Base Station pairing process.
5. Initiate the device pairing process by pressing the pairing button for 5 seconds – the pairing button is shown in Figure 3. The Green LED will constantly turn On. When the Green LED starts blinking release the pairing button.
6. The device should register to the Base.
7. When registration process is successfully completed the Green LED will constantly light On for 3 seconds and then turn off.
8. If registration process failed the Red LED will blink (remove the battery and run the pairing process again) – starting from stage 2 above.

FIGURE 3 – PAIRING & TEMPERATURE DEGREE TYPE BUTTONS



SELECT MOUNTING LOCATION

As the sensor is a wireless transceiver, and in order to take full advantage of it's sophisticated operation, do not install the detector in areas where large metal objects could interfere with the transmission of signals. Installation is not allowed on a ferromagnetic surface.

TRANSMISSION TESTS

Identification transmission test –

Use your Application / Base to send Identification Request to the sensor. The sensor will start blinking the Green & Red LEDs alternately – 5 times each LED starting with the Green LED.

MOUNTING THE DEVICE

1. Open the screw cover and unscrew the holding screw as shown in Figure 1.
2. Separate the device from the Bracket by tilting the front cover.
3. Mount the Bracket to the surface by using the 2 screws as shown in Figure 4.
4. Perform the Pairing process as described above in this document.
5. Select the Temperature degree format – Celsius to Fahrenheit by pressing the suitable button – as shown in Figure 3.
6. Place the device in the Bracket by inserting it back into its appropriate position – as shown in Figure 5. Place first the right side of the device and then tilt its left side.
7. After the sensor is properly placed in its location, fasten the holding screw and close the screw cover – as shown in Figure 5.

FIGURE 4 – MOUNTING THE BRACKET

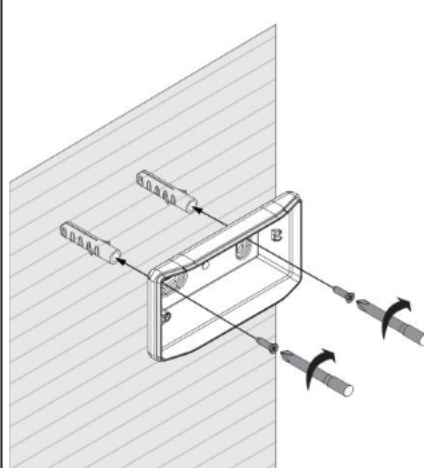
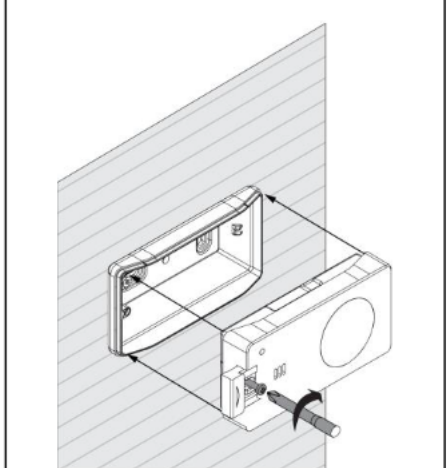


FIGURE 5 – MOUNTING THE DEVICE



BATTERY REPLACEMENT

1. Open the screw cover and unscrew the holding screw as shown in Figure 1.
2. Separate the device from the Bracket by tilting the front cover.
3. Remove the in used battery from the device.
4. Install the new battery in the correct polarity marking – as seen in Figure 2.
5. Wait until the Red LED stops blinking.
6. In case the device was paired to a Base the device should automatically register again to the same Base and the Green LED shall constantly light On for 3 seconds.
7. Place the device in the Bracket by inserting it back into its appropriate position – as shown in Figure 5. Place first the right side of the device and then tilt its left side.
8. Fasten the holding screw and close the screw cover.

FCC & IC STATEMENT

Contain FCC ID: NFC-CRDU

Contain IC ID: 8164A- CRDU

This device complies with FCC Rules Part 15 and with Industry Canada license-exempt RSS standard(s). Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada: Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. This device complies with Industry Canada licence-exempt RSS standard(s).

REGULATORY APPROVALS

This DECT ULE HUM detector conforms to the essential requirements set out by:

- RTTE directive: 1999/5/EC
- EMC directive: 2004/108/EC
- Low Voltage directive: 2006/95/EC
- RoHS directive: 2011/65/EU

Harmonized Standards applicable to this products are:

- EN50581, • EN61000-6-1,
- EN60950-1, • EN61000-6-3.
- EN301406,
- EN301489-1, • UL2017,
- EN301489-6, • C22.2 No.205-12.



CROW ELECTRONIC ENGINEERING LTD. ("Crow") - WARRANTY POLICY CERTIFICATE

This Warranty Certificate is given in favor of the purchaser (hereunder the "Purchaser") purchasing the products directly from Crow or from its authorized distributor.

Crow warrants these products to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the last day of the week and year whose numbers are printed on the printed circuit board inside these products (hereunder the "Warranty Period"). Subject to the provisions of this Warranty Certificate, during the Warranty Period, Crow undertakes, at its sole discretion and subject to Crow's procedures, as such procedures are from time to time, to repair or replace, free of charge for materials and/or labor, products proved to be defective in materials or workmanship under normal use and service. Repaired products shall be warranted for the remainder of the original Warranty Period. All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to Crow for repair or replacement shall be borne solely by the Purchaser.

Crow's warranty under this Warranty Certificate does not cover products that are defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than Crow; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which Crow did not provide; (d) failure caused by software or hardware which Crow did not provide; (e) use or storage other than in accordance with Crow's specified operating and storage instructions.

There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof.

This limited Warranty Certificate is the Purchaser's sole and exclusive remedy against Crow and Crow's sole and exclusive liability toward the Purchaser in connection with the products, including without limitation - for defects or malfunctions of the products. This Warranty Certificate replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise.

In no case shall Crow be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the Crow or any third party on its behalf for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Crow does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection.

Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result.

Consequently, Crow shall have no liability for any personal injury; property damage or any other loss based on claim that these products failed to give any warning.

If Crow is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against Crow.

HUMIDITY SENSOR DISPLAY

The Humidity sensor display includes Battery Level icon, as well as 3 lines of digits and units icons of the measured values:

The Digits Lines:

There are 3 lines of digits:

1. Upper line – displays the measured Temperature value – units and tens of units. On the right there are the degrees icons – Celsius and Fahrenheit. Only one of them is displayed according to the selected one.
2. Middle line – displays the measured Humidity value - units and tens of units. On the right there is the %RH icon.
3. Lower line – displays the measured Air Pressure value – units and on the right there is the hPa icon.

FCC & IC STATEMENT (Continue)

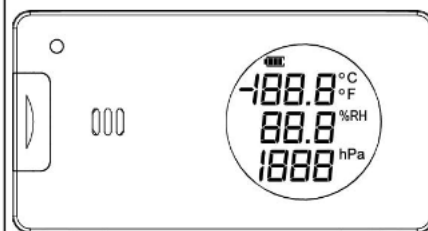
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

TECHNICAL SPECIFICATIONS

RF Protocol	DECT ULE Standard
Modulation Type	GFSK
Frequency	1880–1900 MHz - Europe 1920–1930 MHz - USA/Canada
Event Transmission	Keep Alive, Battery status, and Measured data.
Range in open space	>500m
Battery	Lithium 3V Type: CR123A Size: 2/3A >T.B.D years
Battery life	
Current Consumptions:	
Standby	T.B.D
Average	T.B.D
Maximum (TX)	T.B.D
Low Battery	2.5VDC
Cut Off Battery	2.3VDC
Transmit Power (Typ.):	23dBm (EURO), 20dBm (USA)
Operating temperature	-10°C to +55°C
Dimensions	95mm x 50mm x 35mm
Weight	95 gr.
Weight (inc. battery)	110 gr.

FIGURE 6 - HUMIDITY SENSOR DISPLAY



FCC & IC STATEMENT (Continue)

Note: The digital circuit of this device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION !!!

RISK OF EXPLOSION IF BATTERY IS REPLACED BY DIFFERENT TYPE / MODEL. DISPOSE USED BATTERIES ACCORDING TO ITS INSTRUCTIONS

ATTENTION !!!

RISQUE D'EXPLOSION SI LA PILE EST REMPLACÉE PAR UN TYPE INCORRECT.

The battery must be replaced by 3V Lithium battery Size 2/3A Models such as:

1. VARTA CR123A
2. GP CR123A

WARNING!!!

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Crow Electronic Engineering Ltd.) could void the user's authority to operate the equipment.

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