AL-435-00-868 EnoSense® Temp/RH, CE

Sensor for measuring temperature and relative humidity
Art. no. 12391

Interfaces:
Sensor for measuring temperature and relative humidity,
EnOcean unidirectional (internal antenna), supply: CR2032 / +3 V DC,
81 x 41 x 9 mm

The **EnoSense® Temp/RH** offers a simple way of measuring temperature and relative humidity and transmitting the values wirelessly in accordance with the **EnOcean** radio standard.

It is powered by an internal CR2032 battery. The lifetime is at least 5 years until the battery has to be replaced.

It can be mounted either using the enclosed double-sided adhesive tape or by screwing it to the wall.

The EEP (EnOcean Equipment Profile) **A5-04-03** is used.

No configuration is required.

Paffrather Str. 140, 51465 Bergisch Gladbach
Hauptstraße 76, 32479 Hille
info@deuta-controls.de; www.deuta-controls.net
Tel: +49 5734 51466 - 0
Fax:+49 5734 51466 - 28

Technical data

Interfaces

Type	EnOcean
Quantity	1
Transmit/receive center frequency	868.3 MHz / ASK
Frequency range used	868.0 - 868.6 MHz
Maximum transmission power	Type. 6 dBm @ 868.300 MHz

Sensor: Temperature

Measuring range	0 °C .. 60 °C (32 °F .. 140 °F)
Accuracy	± 0,3 °C
Repeatability	0.04 - 0.1 °C
Long-term drift	Type. < 0.03 °C/a
Response time	Type. 2 s

Sensor: rel. humidity

Measuring range	0 % - 95 % (non-condensing)
Accuracy	± 3 %
Repeatability	0,1 %
Response time	Type. 4 s

User interfaces

Service button	Yes, front side
Service LED	Yes, back

Housing

Housing	Plastic, PC, white

Power supply

Supply voltage	CR2032, +3 V DC
Power consumption	Type. 1 µA

Environmental conditions

Operating temperature	0 °C ... +60 °C
Storage temperature	-20 °C ... +70 °C
Air humidity	0..95% relative humidity, non-condensing
Protection class	IP20

Dimensions and weight

Weight	15 g
Dimensions	81 x 41 x 9 mm

Tests / approvals

CE	2014/53/EU RED Directive 2011/65/EU + Annex 2015/863/EU RoHS-3 Directive

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Table of supported EEP (EnOcean Equipment Profile)

Transmit / TX

No.	EEP	Description	Tx-ID
1	A5-04-03	Sensor for temperature and humidity	BASE ID

Receive / RX

No. No.	EEP	Description
-	-	-

Device description

Power supply

The **EnoSense® Temp/RH** is powered by the CR2032 battery included in the scope of delivery. The current consumption is typically 1 µA.

EnOcean

The integrated EnOcean transceiver enables unidirectional communication with actuators or a higher-level control system.

Service LED

The EnoSense® Temp/RH has a green LED on the back for the status display.

Service button

If the service button is pressed briefly (< 1 s), the **EnoSense Temp/RH** sends a learning telegram and exits flight mode if it was previously active.

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How the EnoSense® Temp/RH works

Temperature measurement

The **EnoSense® Temp/RH** measures the temperature every 60 seconds and transmits the value with a resolution of
80 °C / 1024 = 0.078 °C according to the EEP.

The transmission interval of the measured value is as follows:

- Every 60 seconds if the measured value has changed compared to the last transmitted value.
- Every 15 minutes if the measured value has not changed.

Relative humidity measurement

The **EnoSense® Temp/RH** measures the relative humidity every 60 seconds and transmits the measured value with a resolution of
100 % / 256 = 0.39 % according to the EEP.

As with the temperature measurement, the transmission interval of the measured value is as follows:

- Every 60 seconds if the measured value has changed compared to the last transmitted value.
- Every 15 minutes if the measured value has not changed.

Battery status

After every tenth data telegram, the **EnoSense® Temp/RH** also sends a so-called SIG telegram (0x06 : Energy status of the device) with the current battery voltage.

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Sending EnOcean radio telegrams

The measured values are continuously transmitted from the sensor as described above when it is not in flight mode.

Sending the learning telegram

The **EnoSense® Temp/RH** has a service button in the device. This is located on the front and can be pressed with a paper clip, for example.

If the button is pressed once briefly for less than one second, a learning telegram for the EEP A5-04-02 is sent.

Flight mode

Entering flight mode

If the service button is pressed and held, the LED starts flashing after approx. 4 seconds. If the button is released again as soon as the LED stops flashing, the sensor switches to flight mode. The LED flashes again briefly as confirmation.

In addition, the EnoSense Temp/RH transmits a SIG telegram 0x0E (TX MODE OFF) for confirmation.

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Exit flight mode

If the service button is pressed once briefly when a sensor is in flight mode, the LED flashes once briefly to confirm that flight mode has been exited.
The **EnoSense® Temp/RH** also sends a learn telegram.

Order information

Article name	Item no.	Article description
AL-435-00-868 EnoSense Temp/RH white / CE	12391	EnOcean "EnoSense Temp/RH" sensor, for mounting on walls and surfaces; Measuring ranges: Temperature 0°..+60 °C; Humidity 0..95 % r.h.; Ambient temperature: 0 °C ..+60 °C / 0 ... 95% r.H.; Dimensions: 81 x 41 x 9 mm; EEP: A5-04-03, battery CR1632, included; EnOcean 868.3 MHz, CE, housing: PC, color: signal white (RAL 9003)

Note according to FuAG §20 para. 4:

This device is only approved for operation within the member states of the European Union.

EU Declaration of Conformity

Hereby, DEUTA Controls GmbH declares that the radio equipment type **AL-435-00-868 EnoSense Temp/RH white / CE is in** compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following Internet address: www.deuta-controls.de in the Service/Downloads section (Doc. EUDC2024_108).

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