ModBus Sensor M26/ ES 1299

Description

ModBus Sensor ES 1299 is a very slim sensor for users who do not want displays or LEDs on the wall showing data they can easily access on an app or a PC.

ModBus Sensor / ES 1299 is a maintenance free sensor in a discreet white design almost so flat it becomes invisible on the wall. Only 10 mm deep, it can be mounted in a standard wall box or with a wall bracket.

The ModBus Sensor / ES 1299 can be supplied in a model measuring temperature and humidity (RH) (item number 48412 ModBus Sensor T-H / ES 1299), and in a model measuring temperature, humidity (RH) and CO_2 (item number 48411 ModBus Sensor CO2-T-H / ES 1299). Refer to label for model.

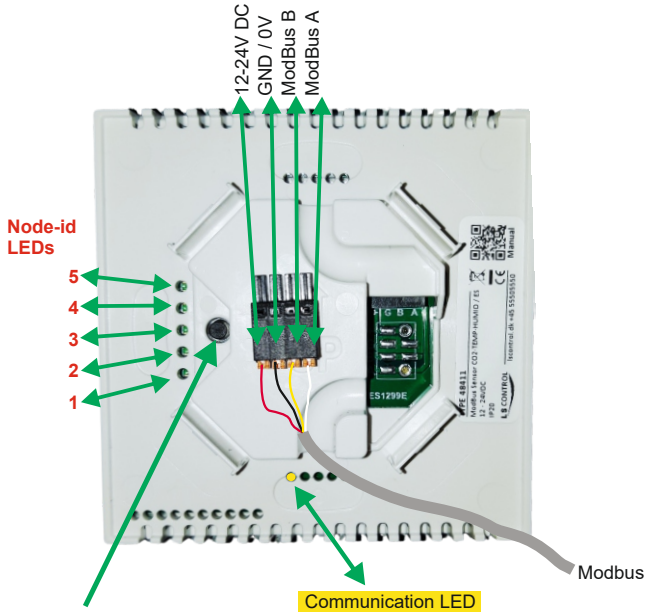
Warning

ESD-Sensitive when lid is removed. Be certain to be ESD-discharged before touching push-button, so product isn't harmed.

Mounting

Must be wall mounted on a level, stable non-moving nor vibrating surface in a non-condensating environment. Avoid direct sunlight and thermal stress.

Connection



It is possible to change the baud rate and set the node ID for the sensor. Read the sensor's current setting with a short press of the push button. If the communication LED is on, the baud rate is set to 19200. If the communication LED is off, the baud rate is set to 9600. Also read the number of **Node-id LEDs**. The node ID corresponds to the number of lit LEDs.

To change the baud rate and/or node ID, press and hold the push button for 4–5 seconds.
When the push button is released, the LEDs for the current node ID will flash. Press the button the number of times corresponding to the desired node ID. To change the baud rate, first press until all LEDs are lit, then press once more to turn the communication LED on or off. Once the communication LED has changed, continue pressing until the desired node ID is reached. To check the setting, briefly press the push button and read the number of lit LEDs, including the communication LED.

Note: To change the baud rate, you must press through all node IDs. It is therefore important to ensure that the correct node ID is selected after choosing the baud rate.

ModBus Interface

ModBus interface:
Baud Rate: 9600 / 19200
Mode: RTU
Data Bits: 8
Parity: Even
Stop Bit(s): 1

ModBus Node-Id

Node-Id	LEDS lit
102	No. 1
103	No. 1 and 2
104	No. 1, 2 and 3
105	No. 1, 2, 3 and 4
106	No. 1, 2, 3, 4 and 5

ModBus Register

Input Register	Description	Formatting
0	CO2 level (0-2000ppm)	0=0ppm, 2000=2000ppm
1	Temperature (0.0 - 60.0ºC)	0=0,0ºC, 500=50,0ºC
2	RH (0-100%)	0=0%, 100=100%
3	Internal temperature (0.0 - 60.0ºC, step 1ºC)	0=0,0ºC, 500=50,0ºC
4	Firmware Version (000.0)	

Calibration of CO_2 sensor

The CO_2 sensor uses the widely used ABC algorithm, which ensures long life without calibration. Only the room cannot be used constantly, but must regularly get sufficient airflow to lower the CO_2 to fresh air level.

Technical Specifications

Supply:	12-24V DC
Current draw / consumption:	45mA@12Vdc - 25mA@24Vdc
Enclosure:	IP 20
Dimension (HxWxD):	80x80x10mm
Operating Temperature:	15-35ºC non-condensing
Humidity:	0-80%RH non-condensing
Communication Protocol:	ModBus, Baud rate 9600 / 19200

Measurement Areas and Accuracy

Temperature: 0-60ºC, ±0.2ºC typically / ±0.5ºC max
Humidity (RH): 0-100% RH, ±2%
Co_2: 400-2000ppm, ±40ppm

CE

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Manufactured by: **LS Control A/S,** Industrivej 12, DK-4160 Herlufmagle

QR-code for download of this product sheet.

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