LSCONTROL

Sensor Modbus M26 / ES 1099

Description

Combination sensor Modbus is a sensor for users who want a discreet sensor without display or LED indicators for data which is easily accessible via an app/PC.

The combination sensor is maintenance free and is supplied in a white design for wall mounting.

Sensor Modbus / ES 1099 is available in a model for measuring temperature and humidity (RH), item 48402 Humidity Sensor Modbus M25 / ES 1099, and in a model measuring CO_2, temperature and humidity (RH), item 48401 CO2-Humidity Sensor Modbus M25 / ES 1099. Model is stated on the product label.

Note, if model 48402 without CO_2 measurement is chosen, the Modbus Register 3000 (CO_2Level) value is 0.

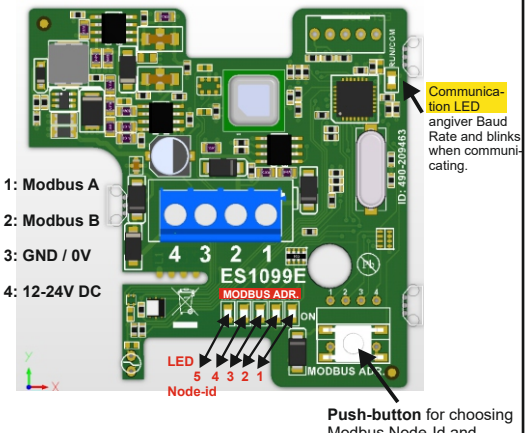
Warning

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.

Connections



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 LEDs lit under ›MODBUS ADR‹ on the PCB. 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	LED glowing
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	Formattering
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)	

Calibrating 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 Voltage:	12-24V DC
Current draw / consumption:	45mA@12Vdc - 25mA@24Vdc
Enclosure:	IP 30
Dimension (HxWxD):	70x70x30mm
Operating Temperature:	15-35ºC non-condensing
Humidity:	0-80%RH non-condensing
Communication Protocol:	ModBus, Baud rate 9600 / 19200

Measurement Area and Precision

Temperature: 0-60ºC, ±0.2ºC typically / ±0.5ºC max.
RH: 0-100% RH, ±2%
CO_2: 400-2000ppm, ±40ppm

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

QR-code for download of this product sheet

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