HDH-M CO_2 -TRANSMITTER WITH A MODBUS COMMUNICATION

HDH-M and HDH-M-N transmitters are designed to detect carbon dioxide concentration and temperature in the climate zone. HDH-M-RH and HDH-M-RH-N transmitters have also %rH outputs.

The CO_2 sensor will be self-calibrated regularly by using the patented ABCLogic™ function. Outputs via Modbus or as linear 0-10V signals related to CO_2-concentration, temperature and humidity can be used for a demand controlled ventilation in buildings.

AO3 output (terminal 5) can also be configured to work as a controller output (= P-controller), and then the transmitter is working also as a carbon dioxide -, humidity - or temperature controller. AO3 output can also be controlled directly via Modbus.

HDH transmitters can be installed on the wall surface or on the junction box in dry indoor environment.

HDH-M-N is like HDH-M, but with a display. According to the factory setting the display is scanning between temperature and CO_2 (and %rH) every 2 seconds. By pressing the S1 button inside the desired display mode can be selected.

For commissioning, the HDH-C tool is needed for making the Modbus and possible controller settings. After completed commissioning the tool can be removed.

ABCLogic™ & Calibration
ABCLogic™ is a patented self-calibration technique, that is designed to be used in applications where concentrations will drop to outside conditions (appr. 400 ppm) at least twice in a week (= an unoccupied building). For applications that do not see periodic ambient conditions, ABCLogic™ can be turned off, but a regular single point calibration of the sensor in 6 -12 months is necessary. Checking and calibration is recommended every 5th year even if ABCLogic™ is on.

Wiring:

1	24 V ac/dc
2	0 V
3	0-10V = 0-2000ppm
4	0-10V = 0...+50°C
5	AO3 output 0-10V, humidity, controller or via Modbus controlled
6	S+ ModBus
7	S- **S2**
8	0 V =Terminate
S1 = Display mode Push mom. > Select scanning or current unit	

Technical data:

Supply		24Vac (15…28V) / 1VA 24Vdc (15…36V) / 1 W
Range	CO_2	0…2000ppm CO_2
	temperature	0…50 °C
	humidity	0 … 100 %rH
Outputs		0 -10V < 2 mA
Communication		Modbus RTU
Accuracy at 25°C, CO_2		± 40 ppm +3% from value (ABCLogic™)
	temperature	± 0,5°C
	humidity	± 2 %rH
Long term stability / year		< 2% FS (ABCLogic™)
Temperature dependence		0.2% FS / °C
Pressure dependence		0.17% from value /mbar
Ambient	temperature	0...+50 °C
	humidity	0...95 % RH (non cond.)
Time constant (t 63%)		< 1,5 min
Warm up time		< 10 min
Housing		ABS-plastics, IP20
Dimensions w x h x d		87 x 86 x 30 mm

Ordering guide:

Model	Product number	Description
HDH-M	1135100	CO2 & °C Modbus transmitter
HDH-M-N	1135101	CO2 & °C Modbus transmitter with display
HDH-M-RH	1135102	CO2, °C and %rH Modbus transmitter
HDH-M-RH-N	1135103	CO2, °C and %rH Modbus transmitter with display
HDH-C	1135042	tool for Modbus and controller settings and for calibration

Products fulfil the requirements of directive 2004/108/EY and are in accordance with the standards EN61000-6-3: 2001 (Emission) and EN61000-6-2: 2001 (Immunity).