PRODUAL
measure - be sure.

CARBON DIOXIDE TRANSMITTER/CONTROLLER HDH-M

HDH-M transmitters are designed for detecting and controlling carbon dioxide concentration, temperature and humidity in room spaces. The transmitter information can be used for demand based ventilation control, for example.

The transmitter can be connected to any system that supports Modbus RTU protocol by using the RS-485 connection. ML-SER tool is needed in commissioning for making the Modbus settings.

The measurement values scroll on the N model display. The wanted value can be locked to view continuously.

ABCLogic™ self-calibration method eliminates the possible long term drift. The ABCLogic™ function can be turned off by using the ML-SER tool.

The control output (0…10 V or 2…10 V) can be controlled either according to a one measurement value or according to the maximum selection of all values. The controller settings can be changed by using the ML-SER tool.

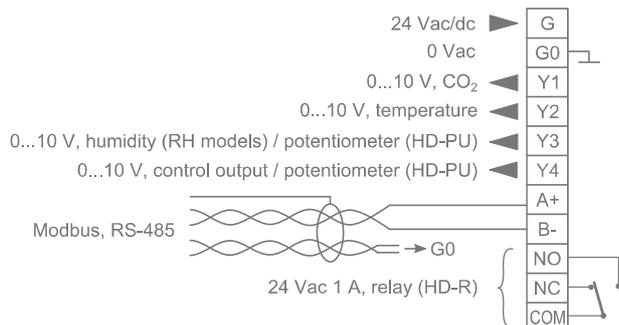The transmitter can be equipped with following options:

- HD-AL3 (not available for N models): Carbon dioxide level indicator lights (3 pcs). As a factory setting, the lights are illuminated as follows:
  - Green: 0…750 ppm
  - Yellow: 751…1250 ppm
  - Red: 1251…2000 ppm

  The indicator light limits can be changed by using the ML-SER tool.

- HD-PU: Active 0…10 V potentiometer. The potentiometer information can be directed to output (Y3 or Y4) or used to adjust the internal controller set point.

- HD-R: Relay (24 Vac, 1 A) that switches according to the one measurement value or according to the all values. The relay switching point can be adjusted by using ML-SER tool.

See more information about options from the HDH order form.

Wiring:

24 Vac/dc ▶	G
0 Vac	G0
0...10 V, CO_2 ◀	Y1
0...10 V, temperature ◀	Y2
0...10 V, humidity (RH models) / potentiometer (HD-PU) ◀	Y3
0...10 V, control output / potentiometer (HD-PU) ◀	Y4
Modbus, RS-485	A+
	B-
▶ G0	
24 Vac 1 A, relay (HD-R)	NO
	NC
	COM

Technical data

Supply	24 Vac/dc (22…28 V), < 2 W
Carbon dioxide measurement	
Range	0…2000 ppm
Accuracy (25 ℃)	typ. ±40 ppm +3 % from reading (ABCLogic™)
Long term stability / year	< 2 % FS (ABCLogic™)
Time constant	< 2 min
Temperature measurement	
Range	0...50 ℃
Accuracy (25 ℃)	±0.5 ℃
Humidity measurement (RH models)	
Range	0…100 %rH
Accuracy (25 ℃)	±2 %rH
Outputs	0…10 V < 2 mA
Operating conditions	
Temperature	0...+50 ℃
Humidity	0...85 % RH (non cond.)
Housing	IP20, ABS plastic
Mounting	on the wall surface or on the standard flush mounting box (60 mm hole distance)
Dimensions (w x h x d)	87 x 86 x 30 mm

Ordering guide:

Model	Product number	Description
HDH-M	1135100	CO_2 and ℃ Modbus room transmitter
HDH-M-N	1135101	Modbus room transmitter with display
HDH-M-RH	1135102	CO_2, ℃ and %rH Modbus room transmitter
HDH-M-RH-N	1135103	Modbus room transmitter with display
HD-PU	1135002	option, 0…10 V potentiometer
HD-R	1135003	option, relay 24 Vac 1 A
HD-AL3	1135048	option, indicator lights, 3 pcs
ML-SER	1139010	transmitter commissioning tool

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