

## HDK 10K-M - DUCT CARBON DIOXIDE TRANSMITTER/CONTROLLER

HDK 10K-M transmitters are designed for detecting and controlling carbon dioxide concentration, temperature and humidity inside ventilation ducts. 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.

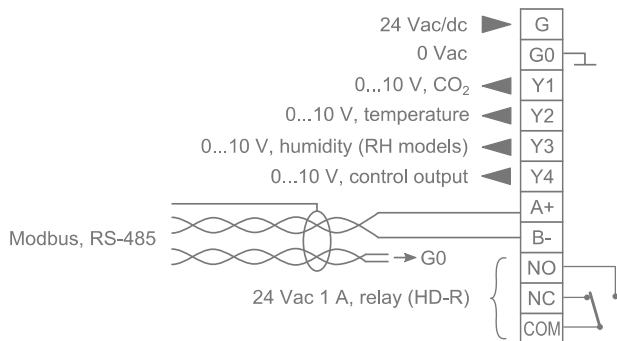
The measurement values scroll on the N model display. The wanted value can be locked to view continuously.

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 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 a HD-R relay (24 Vac, 1 A). The relay output can be controlled either according to a one measurement value or according to the all measured values. The relay switching point can be adjusted by using ML-SER tool.

### Wiring:



### Technical data

Supply	24 Vac/dc (22...28 V) < 2 W
Carbon dioxide measurement	
range	0...10000 ppm
accuracy (25 °C)	typ. ±200 ppm +3 % from reading (ABCLogic™)
long term stability/year	< 2 % FS (ABCLogic™)
time constant	< 2 min
Temperature measurement	
range	0...50 °C
accuracy (25 °C)	±0.5 °C
Humidity measurement (RH models)	
range	0...100 %rH
accuracy (25 °C)	±2 %rH
Measuring probe	Ø 10 mm x 110 mm; duct insulation < 75 mm
Outputs	0...10 V < 2 mA
Communication	Modbus RTU
Operating temperature	0...+50 °C
Ambient humidity	0...85 % RH (non cond.)
Housing	IP54
Dimensions (w x h x d)	105 x 104 x 155 mm

### Ordering guide:

Model	Product number	Description
HDK 10K-M	1135140	Modbus CO <sub>2</sub> and °C duct transmitter, range 0...10000 ppm
HDK 10K-M-N	1135141	duct transmitter with display, range 0...10000 ppm
HDK 10K-M-RH	1135142	Modbus CO <sub>2</sub> , °C and %rH duct transmitter, range 0...10000 ppm
HDK 10K-M-RH-N	1135143	Modbus duct transmitter with display, range 0...10000 ppm
HD-R	1135003	option, relay 24 Vac 1 A
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).