

CARBON DIOXIDE (CO₂) TRANSMITTER / - CONTROLLER FOR DUCT

HDK and HDK-N transmitters are designed to detect carbon dioxide concentration and temperature inside the ventilation duct.

The CO₂ sensor will become self-calibrated regularly by using patented ABCLogic™ method. Outputs, linear 0-10V signals related to CO₂-concentration and temperature, can be used for demand controlled ventilation in buildings.

HDK transmitters can be installed in dry indoor environment.

HDK-N is like HDK, but with a display. As a factory setting the display is scanning between temperature and CO₂ every 2 seconds. By pressing the S1 button inside the desired display mode can be selected.

By changing the normal cover (and display) to the HDK-C option HDK (HDK-N) will become as a controller.

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 period (= 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.



Technical data:

Supply	24Vac (15...28V) / 1 VA 24Vdc (15...36V) / 1 W
Ranges	
CO ₂	0...2000ppm CO ₂
temperature	0...50°C
Outputs	0-10V < 2 mA
Accuracy	
CO ₂	± 40 ppm +3% from value (ABCLogic™)
temperature	+/- 0,5°C
Long term stability / year	< 2% FS (ABCLogic™)
Temperature dependence	0.2% FS / °C
Pressure dependence	0.17% from value /mbar
Operating temperature	0...+50 °C
Operating humidity	0...95 % RH (non cond.)
Time constant (t 63%)	< 1 min
Warm up time	< 10 min
Stem	ø 10 mm x 110 mm; duct isolation < 75 mm
Housing	IP54
Dimensions w x h x d	105 x 104 x 155 mm

Wiring:

1	24V	supply 24Vac/dc
2	0V	supply and outputs
3	CO2	output 0...10VDC (0...2000ppm CO ₂)
4	TE	output 0...10VDC (0...50°C)
5	AO3	controller output

Ordering guide:

Model	Product number	Description
HDK	1135050	CO ₂ duct transmitter
HDK-N	1135051	duct transmitter with display
HDK-C	1135052	calibration tool and controller option for HDK and HDU

Products fulfill 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).