

HDH CARBON DIOXIDE (CO₂) TRANSMITTER / - CONTROLLER

HDH and HDH-N transmitters are designed to detect carbon dioxide concentration and temperature in the room space. HDH-RH and HDH-RH-N transmitters have also %rH output.

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

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

HDH-N is like HDH, but with a display. As a factory setting the display is scanning between temperature and CO₂ (and %rH) 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 HDH-C option HDH (HDH-N) will become as a controller.

By using the HDH-AL3 option (cover and printed circuit board) different CO₂ concentrations can be indicated by three LEDs as follows with the hysteresis of 50 ppm:

Green	=	< 750 ppm	(good)
Yellow	=	> 750 ... < 1250 ppm	(passable)
Red	=	> 1250 ppm	(poor)

Normal display is not available with the HDH-AL3 option.

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.

Wiring:

1	24 V ac/dc
2	0 V
3	0-10V = 0-2000ppm
4	0-10V = 0...+50°C
5	Option Out 0-10V HDH-RH = 0-100%RH HDH-C = AO3
S1	= Display mode Push mom. > Select scanning or current unit



Technical data:

Supply	24Vac (15...28V) / 1VA 24Vdc (15...36V) / 1 W
Ranges	
CO ₂	0...2000ppm CO ₂
temperature	0...50 °C
humidity	0 ...100 %rH
Accuracy, 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
Operating temperature	0...+50 °C
Outputs	0 -10V < 2 mA
Operating 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	1135040	room CO ₂ transmitter
HDH-N	1135041	room transmitter with display
HDH-RH	1135044	CO ₂ , °C and %rH transmitter
HDH-RH-N	1135045	room transmitter with display
HDH-C	1135042	calibration tool and controller option for HDH
HDH-AL3	1135048	alarm option, 3 LEDs, for HDH, containing cover and pcb

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).