

## HDU CO<sub>2</sub> Transmitters for Cold Spaces

HDU and HDU-N transmitters are designed to detect carbon dioxide concentration and temperature inside the unheated spaces like parking halls.

The CO<sub>2</sub> sensor will become self-calibrated regularly by using patented ABCLogic™ method. Outputs, linear 0-10V signals related to CO<sub>2</sub>-concentration and temperature, can be used for demand controlled ventilation in buildings.

HDU-N is like HDU, but with a display. As a factory setting the display is scanning between temperature and CO<sub>2</sub> 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 HDU (HDU-N) will become as a controller.



Model Type	Model	Description
	<b>HDU</b>	HDU CO <sub>2</sub> Transmitter for Cold Spaces
	<b>HDU-N</b>	HDU CO <sub>2</sub> Transmitter for Cold Spaces with Display
	<b>HDK-C</b>	Calibration Tool and Controller Option for the HDU and HDK
<b>Technical Data</b>	Power supply	24Vac (15...28V) / 2VA 24Vdc (15...36V) / 2W
	Ranges	Carbon Dioxide: 0...2000ppm CO <sub>2</sub> Temperature: -50..+50°C
	Accuracy <sub>2</sub>	CO <sub>2</sub> : ± 40ppm + 3% of the reading @ 25°C (ABCLogic™) Temperature: ± 0.8°C
	Longterm Stability / Year	<2% FS (ABCLogic™)
	Temperature dependence	0.2% FS / °C
	Pressure dependence	0.17% from value/mbar
	Operating temperature	-30°C...+50°C
	Ambient humidity	0...95%rh (non-cond.)
	Time Constant t63	<6min
	Warm-up time	<10 min
	Outputs	0..10V = 0..2000 ppm CO <sub>2</sub> , < 2mA 0..10V = -50..+50°C, < 2mA
	Housing	PC-plastic, IP 54
	Cable Connection	M16
	Dimensions	W105 x H110 x D46mm

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<b>Wiring Terminals</b>	1 - 24V	24Vac/dc power supply
	2 - 0V	0V common (supply and outputs)
	3 - CO2	CO2 output: 0..10Vdc = 0..2000ppm CO <sub>2</sub>
	4 - °C	Temperature Output 0..10Vdc = -50..+50°C
	4 - AO3	Controller output 0..10Vdc (HDK-C 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.