

## » LP+ CO2

Room pendulum sensor for air quality

### Datasheet

Subject to technical alteration  
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### » APPLICATION

Room pendulum sensor for measuring the CO<sub>2</sub> content in large rooms (open-plan offices, production halls, etc.). For direct connection to a DDC or a monitoring system, an analog 0..10 V output is available.

### » TYPES AVAILABLE

Room pendulum sensor CO<sub>2</sub> – active 0..10 V

LP+ CO2 V

### » SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

### » NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

## » INFORMATION ABOUT INDOOR AIR QUALITY CO<sub>2</sub>

EN 13779 defines several classes for indoor air quality:

Category	CO <sub>2</sub> content above the content in outdoor air in ppm		Description
	Typical range	Standard value	
IDA1	<400 ppm	350 ppm	Good indoor air quality
IDA2	400.. 600 ppm	500 ppm	Standard indoor air quality
IDA3	600..1.000 ppm	800 ppm	Moderate indoor air quality
IDA4	>1.000 ppm	1.200 ppm	Poor indoor air quality

## » INFORMATION ABOUT SELF-CALIBRATION FEATURE CO<sub>2</sub>

Virtually all gas sensors are subject to some sort of drift. The degree of drift is partially dependent on the use of quality components and good design. But even with good components and excellent design, a small amount of drift can still occur in the sensor that may ultimately result in the need for a sensor to be recalibrated.

The natural drift of the sensor is caused by:

- Dust/dirt • Aggressive chemicals absorbed inside chamber / optical elements • Corrosion inside chamber (high rh, condensation) • Temperature cycles causing mechanical stress • Electron/hole migration in the photo detector's semiconductor • Drift of photo amplifiers • External mechanical stress on chamber • Light source wear-off

Most of the effects listed above will be compensated by the automatic self-calibration of the sensor's dual channel technology. In contrast to commonly used ABC-Logic self-calibrating sensors with dual channel technology are suitable for all applications including those operating 24 hours, 7 days a week, for example hospitals.

However some effects cannot be compensated automatically and may result in a very gradual natural drift of a few ppm per month. This natural drift is not covered by Thermokon's 5-year warranty.

## » TECHNICAL DATA

Measuring values	CO <sub>2</sub>
Output voltage	0..10 V or 0..5 V, configurable via jumper, min Last 10 kΩ
Power supply	15..35 V = or 19..29 V ~ SELV
Power consumption	max. 2,5 W (24 V =)   4,3 VA (24 V ~)
Measuring range CO <sub>2</sub>	0..2000 ppm
Accuracy CO <sub>2</sub>	±50 ppm+ 3 % of reading (typ. at 21 °C, 50% rH)
Calibration	self-calibration, Dual Channel
Sensor	NDIR (non-dispersiv, infrared), sensor wire 5 m, for other lengths please request
Enclosure	enclosure USE-L, PC, pure white
Protection	IP65 according to EN 60529
Cable entry	Flextherm M20, for wire Ø=4,5..9 mm, removable
Connection electrical	removable plug-in terminal, max. 2,5 mm <sup>2</sup>
Ambient condition	0..+50 °C, max. 85% rH short term condensation
Mounting	installation is also possible using mounting base

## » PRODUCT TESTING AND CERTIFICATION

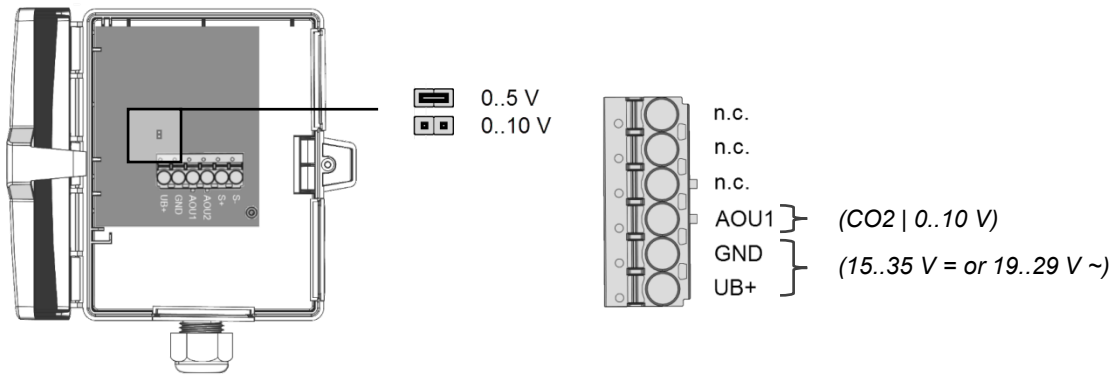


### Declaration of conformity

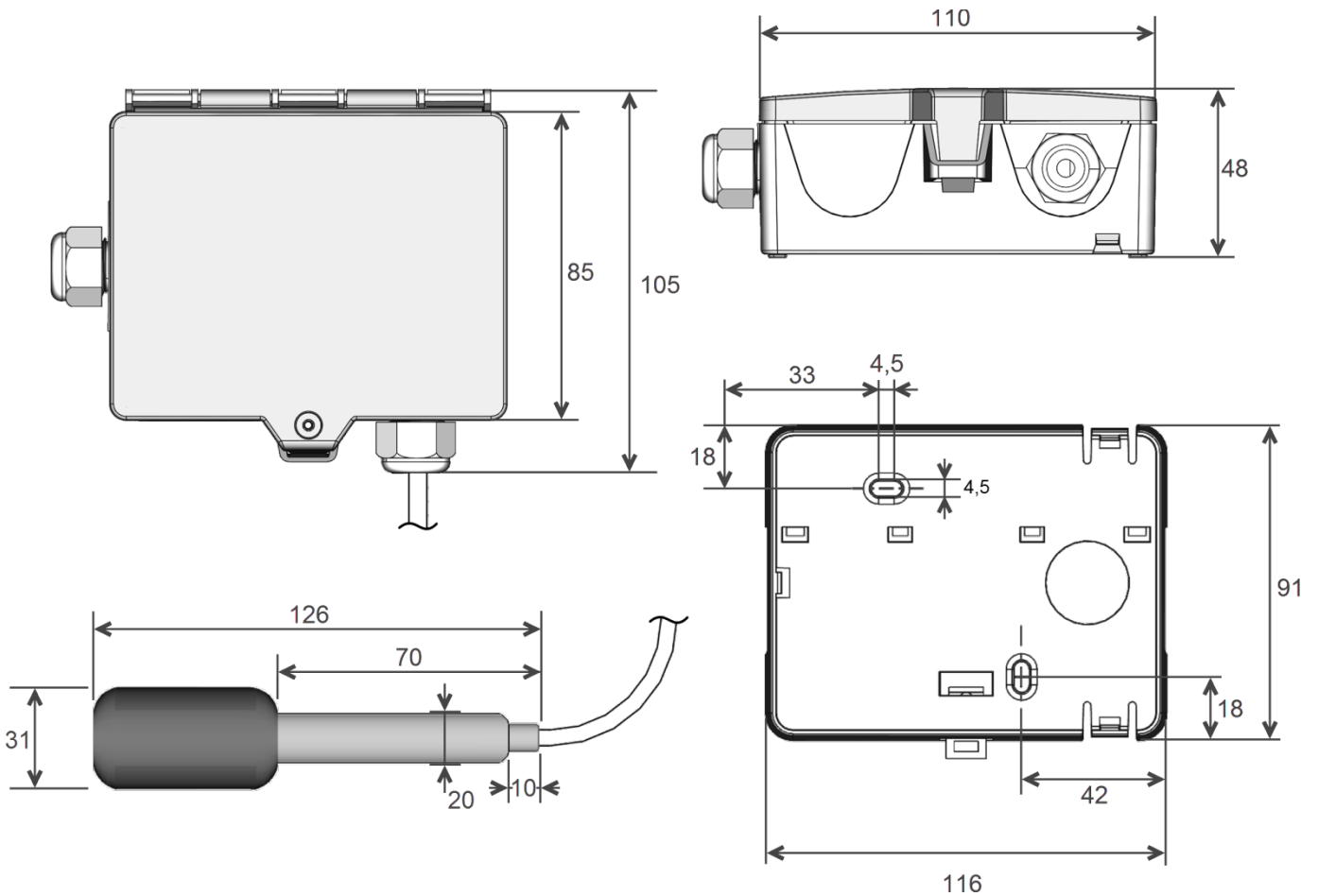
The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>.

» **CONNECTION PLAN**

LP+ CO2 V



» **DIMENSIONS (MM)**



» **ACCESSORIES (INCLUDED IN DELIVERY)**

- Mounting base
- Mounting kit universal
- Cover screw + screw cover • 2 Rawlplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

Item No. 631228  
Item No. 698511