



149-DCV-CO₂ is a room transmitter for measuring carbon dioxide levels in air with an output signal 0...10V DC

- Power supply 24V AC or DC
- CO₂ level 0...2000ppm
- Temperature 0...50°C
- Excellent long term stability
- Snap-in cover

Function

149-DCV-CO₂ with patented auto calibration process set new standards in CO₂ measuring for HVAC applications.

The sensor is mounted in the cover-part of the casing. The cover is easy to detach from the back by means of snap-in grips and detachable terminals. This makes mounting easier. Furthermore, no cables have to be disconnected, which simplifies service and replacement.

Measuring principle

The CO₂ -concentration is measured by means of infrared light, a technique that measures the absorption in gases. It has a reference measuring system that compensates values in relation to changes in light intensity.

The method gives several advantages:

- Very high accuracy
- Exact identification of detected gas
- Low risk for contamination
- Short response time
- High long term stability
- Long calibration interval (>5 years)

Applications

The CO₂ level gives a direct indication of the indoor air quality. With this basic information, the ventilation can be controlled with high precision and the air quality improved. At the same time, the supply air will only be increased when necessary and the energy costs will thereby be reduced.

149-DCV-CO₂ is suitable in environments such as cinemas, schools, conference rooms, assembly halls etc.

Models

149-DCV-CO2 Measuring range 0...2000 ppm

Technical data

Supply Voltage	24V AC +/- 15%, 50...60 Hz or 15...35 V DC
Power consumption	3W
Ambient temperature	-5...+55°C
Ambient humidity	0...90% RH, not condensating
Temperature dependance	typ. 5 ppm CO ₂ /°C
Storage temperature	-40...70°C
Long term stability	typ. 20 ppm / year
Response time	<90s
Warm-up time	<5 min
Protection class	IP30
Measuring principle	NDIR (Non-Dispersive Infrared Technology)

CE This product conforms with the requirements of European EMC standards CENELEC EN 61000-6-1 and EN 61000-6-3 and carries the CE mark.

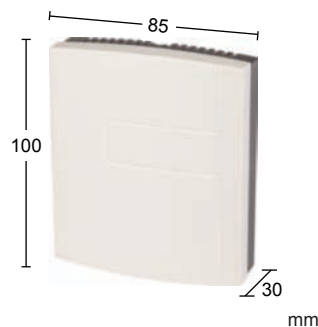
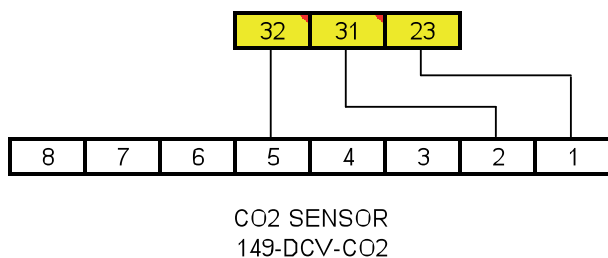
Working range	
CO ₂	0...2000 ppm
Accuracy	
CO ₂	<± (50 ppm +2% of measuring value)
Outputs	
Output signal	CO ₂ 0... V DC referring to 0...2000 ppm
Calibration	
Calibration interval	More than five years. No calibration necessary at installation
Calibration	The transmitter is calibrated by Elta Fans

Installation

149-DCV-CO2 should be mounted in a location with good air circulation and one that can be expected to give representative readings.

149-DCV-CO2 may be mounted either on a wall-box or straight on the wall. To remove the front cover, use a 3mm flat-blade screwdriver to depress the locking tongue in the lower part of the casing (see arrow figure). Press and twist the screwdriver and at the same time pull the bottom part of the front outwards. When the bottom end of the front is free from the casing bottom part, slide the cover towards the top of the casing to free the hooks holding the upper edge of the front cover.

Wiring and dimensions



N.B. System neutral and signal neutral should be separately wired, because of current peaks in the supply wires. Screw terminal: Max. 1.5mm²

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