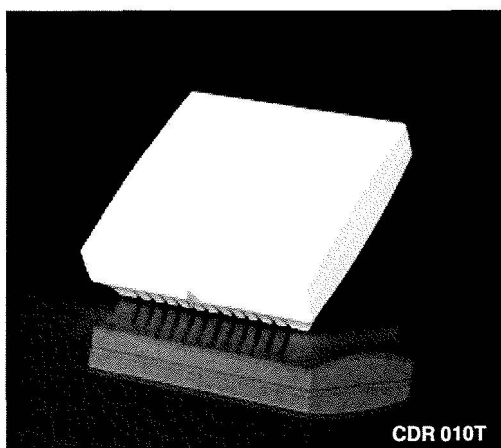


COMBINED Carbon Dioxide (CO₂) + Temperature Room Sensor



Technical data

Power supply	24 Vac/dc
Warm up-time	approx. 1 hour
Enclosure material	ABS Plastic or on request Stainless steel
Protection type	IP30
Protection class	III (according to EN 60 730)
Standards	CE-conformity, electro compatibility according to EN- 61 326 + A1 + A2. EMC directive 2004 / 108 / EC. low-voltage directive 73/ 23 / EEC

Carbon Dioxide (CO₂)

CO₂ sensor	Optical dual beam sensor NDIR Non-Dispersive Infra Red Technology. Dual beam measuring method.
CO₂ measuring range	0-2000 ppm
CO₂ output	0-10 Vdc
CO₂ accuracy	+/- 70 ppm plus 5% of measured value
Pressure dependence	+/- 1.6% kPa (referred to standard pressure)
Long-term stability	+/-1% of final value per year
Service life	> 12 years
Gas exchange	by diffusion

Temperature

Temperature measuring range	0 to +50°C
Temperature output	0-10 Vdc
Deviation, temperature	+/- 0.8 K at 20°C

Features

- CO₂ measuring range 0-2.000 ppm
- CO₂ output 0-10 Vdc
- Temperature measuring range 0 to +50°C
- Temperature output 0-10 Vdc
- Enclosure material ABS Plastic
On request: Stainless steel

Description

The Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T is a self-calibrating microprocessor-controlled unit.

The Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T using an Optical sensor - Non-Dispersive Infrared Detector (NDIR).

Carbon Dioxide (CO₂) measuring range for the Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T is 0-2000 ppm converted into signal 0-10 Vdc.

Temperature measuring range for the Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T is 0 to +50°C converted into signal 0-10 Vdc.

The Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T have an elegant enclosure made of plastic, with snap-on lid, base with 4-hole attachment for installation on vertically or horizontally installed in-wall flush boxes, with predetermined breaking point for on-wall cable entry.

As option the Carbon Dioxide (CO₂) + Temperature transmitter can be supplied in enclosures made of stainless steel (CDR 010T SS), top and bottom part are of stainless steel, the lid is screwed on, vandalism-secure version e.g. for schools, military barracks, and public buildings.

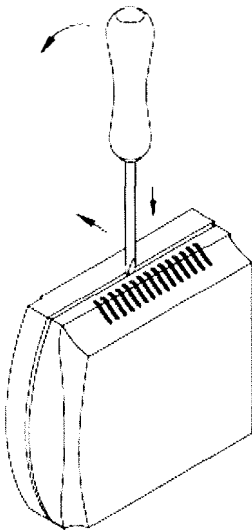
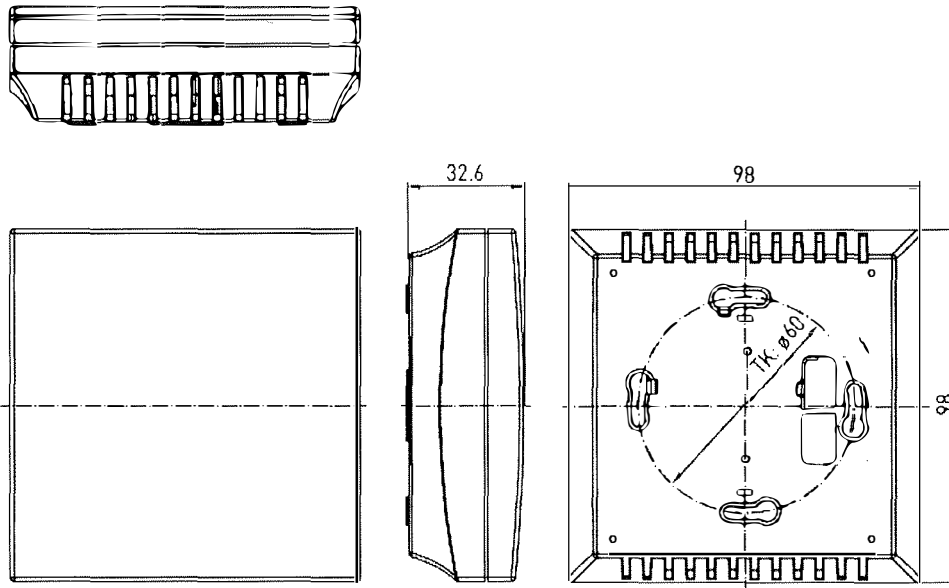
The detection range of the Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T is calibrated for standard applications such as monitoring of residential rooms or conference rooms.

Room ventilation on an as-needed basis, improvement of well-being and customer benefit, increased comfort as well as a reduction of operating costs by energy conservation are only some of the beneficial results of employing Carbon Dioxide (CO₂) + Temperature transmitter CDR 010T transmitters.

Ordering

Type no.	CO ₂ measurement	CO ₂ output	Temp. measurement	Temp. output
CDR 010T	0-2000 ppm	0-10 Vdc	0 to +50°C	0-10 Vdc

Dimensions in mm for ABS plastic housing



To open the enclosure,
set a screwdriver (2.0) in
the groove at centre,
press down, and lift up the
bottom frame slightly.
Pull top cover forward and hold it.

Electrical connection

CDR 010T

- 1 UB + 24 Vac/dc
- 2 UB - 24 Vac/dc
- 3 Free
- 4 Free
- 5 GND
- 6 Free
- 7 Free
- 8 Output CO2 content in ppm 0-10 Vdc
- 9 Output in temperature in °C 0-10 Vdc

CDR 010T

Supply Voltage

For operating voltage reverse polarity protection, a one-way rectifier or reverse polarity protection diode is integrated in this device variant. This internal one-way rectifier also allows operating 0-10 Vdc devices on AC supply voltage.

The output signal is to be tapped by a measuring instrument. Output voltage is measured here against zero potential (0 V) of the input voltage!

When this device is operated on **DC supply voltage**, the operating voltage input UB+ is to be used for 15 to 36 V DC supply and UB- or GND for ground wire!

When several devices are supplied by one 24 V **AC voltage supply**, it is to be ensured that all "positive" operating voltage input terminals (+) of the field devices are connected with each other and all "negative" operating voltage input terminals (-) (= reference potential) are connected together (in-phase connection of field devices). All outputs of field devices must be referenced to the same potential!

In case of reversed polarity at one field device, a supply voltage short-circuit would be caused by that device. The consequential short-circuit current flowing through this field device may cause damage to it.

