

# DTTH(C)

Temperature, humidity and CO<sub>2</sub> transmitter for duct mounting



0...10 V duct transmitter for temperature, relative humidity and carbon dioxide measurements in air.

- ✓ Installation friendly design
- ✓ High sensor accuracy
- ✓ Very good protection against condensation and pollution
- ✓ Possible to use two cable glands

## Application

The measurements received from DTTH(C) can be used to control ventilation with high precision and improve the air quality in for example residential and office areas. By increasing the air exchange only when it is necessary, it is possible to minimise energy costs.

Exchanging the filter for a more resistant one (see *Accessories*) permits DTTH to be mounted in environments with a high degree of pollution, while maintaining the lifespan of the transmitter.

## Function

Two different models are available for an optimal adaptation to the application. Both transmitters combine temperature and humidity measurements and one of the models has an additional CO<sub>2</sub> sensor. The CO<sub>2</sub> sensor is long-term stable due to the dual beam technology.

## Installation

The transmitters have a smart design that makes installation very easy. Cables are simple to connect due to the spacious housing and the lid is mounted with a twist, thus no screws are required.

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DTTH(C)

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## Technical data

<b>Supply voltage</b>	24 V ~ (20...28 V ~ 50...60 Hz, 2 VA) / 15...35 V DC
<b>Power consumption</b>	< 1.5 W
<b>Load impedance, 0...10 V</b>	Min. 10 kΩ
<b>Protection class</b>	IP65 (housing)
<b>Ambient humidity</b>	0...90 % RH, non-condensing
<b>Ambient temperature</b>	-40...+60 °C (DTTH) / 0...+50 °C (DTTHC)
<b>Storage temperature</b>	-40...+80 °C
<b>Max overvoltage</b>	+10 V (referenced to GND)
<b>Mounting</b>	Duct
<b>Max air velocity</b>	20 m/s
<b>Insertion length</b>	37...195 mm
<b>Media</b>	Air, non-combustible and non-aggressive gases
<b>Measuring range, temperature</b>	-40...+60 °C
<b>Output signal, temperature</b>	0...10 V (0 V = -40 °C, 10 V = 60 °C)
<b>Accuracy, temperature</b>	±0.2 K at 0...60 °C
<b>Measuring range, humidity</b>	0...100 % RH
<b>Output signal, humidity</b>	0...10 V (0 V = 0 % RH, 10 V = 100 % RH)
<b>Accuracy, humidity</b>	±2 % RH at 25 °C, 10...90 % RH
<b>Measuring range, CO<sub>2</sub></b>	0...2000 ppm
<b>Output signal, CO<sub>2</sub></b>	0...10 V (0 V = 0 ppm, 10 V = 2000 ppm)
<b>Accuracy, CO<sub>2</sub></b>	±(50 ppm + 3 % of the measured value) at 25 °C
<b>Temperature dependency, CO<sub>2</sub></b>	2.5 ppm/K at 0...50 °C
<b>Cable gland</b>	2 x M16
<b>Cable connection</b>	Screw terminals max. 1.5 mm <sup>2</sup> (AWG 16)
<b>Warmup time</b>	4 min
<b>Diameter, probe</b>	12 mm
<b>Dimensions, external (WxHxD)</b>	104 x 211/212.5 x 79 mm
<b>Weight (incl. packaging)</b>	0.23 kg (DTTH) / 0.25 kg (DTTHC)

Table 1 Response times

Article	Response time, temperature	Response time, humidity	Response time, CO <sub>2</sub>
DTTH	<50 s <sup>1</sup>	<50 s <sup>1</sup>	-
DTTHC	<50 s <sup>1</sup>	<50 s <sup>1</sup>	<100 s <sup>1</sup>

1. At 3 m/s air speed



This product carries the CE-mark. More information is available at [www.regincontrols.com](http://www.regincontrols.com).

## Material

<b>Material, housing</b>	Polycarbonate (PC)
<b>Material, base</b>	Polycarbonate (PC)
<b>Material, probe</b>	ABS

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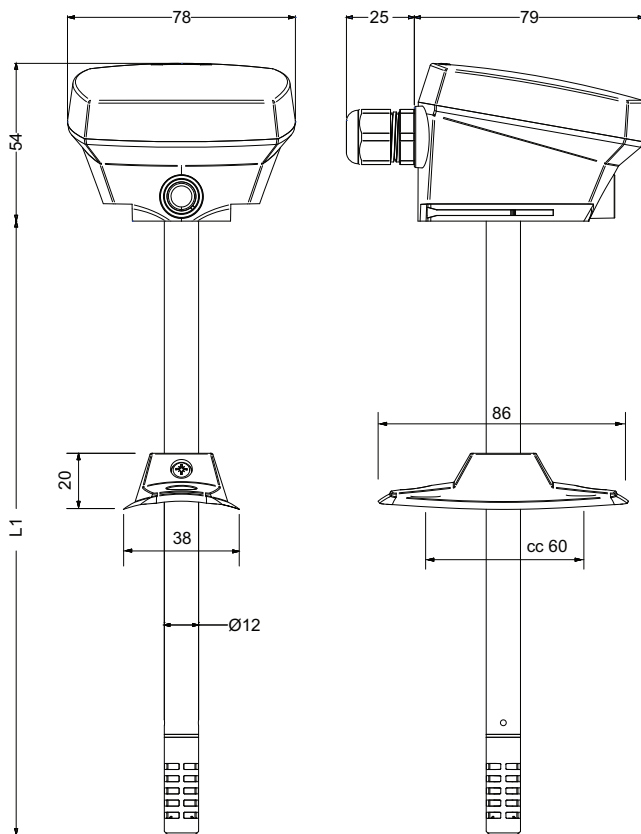
## Models

Article	CO <sub>2</sub> measurement	Sensor element protection	Total number of I/Os	AOa
DTTH	No	Membrane filter, exchangeable	2	2
DTTHC	Yes	Membrane filter, unexchangeable	3	3

## Accessories

Article	Description
DT-FILTER	Replacement filter, polytetrafluoroethylene (PTFE)
HA010102	Replacement filter, sintered brass
HA010103	Replacement filter, sintered stainless steel
HA010105	Replacement filter, teflon
HA010106	Replacement filter, metal

## Dimensions



[mm]

Article	L1 (mm)
DTTH	211
DTTHC	212.5

## Documentation

All documentation can be downloaded from [www.regincontrols.com](http://www.regincontrols.com).