

RTX-...

Room transmitter intended for temperature, CO₂ level, humidity level and air quality control



The RTX-... is a range of room transmitters designed for environmental control, including temperature regulation, via a controller running an application. They can also be used together with Regin's system controllers. The RTX-... units can be connected to several different products and could, for example, be used to control an air handling unit running a ventilation application.

The RTX-... room transmitters can be configured via the Regin:GO app.

- ✓ Elegant and slim design, which provides the ability to seamlessly install in design-critical environments
- ✓ Display showing relevant information which enables visibility on a distance. Easy to keep clean
- ✓ Built-in sensors, which measure all relevant data in the same casing. Such as, temperature, humidity, CO₂, VOC
- ✓ Easy configuration, with Bluetooth® communication using the Regin:GO app
- ✓ Relay function, RTX-TC-R model
- ✓ Removable terminal, which simplifies troubleshooting
- ✓ Scaling sensors on output (P-controller, 0-10 V models)
- ✓ Combining sensors to AO output

Application

The RTX transmitters have a discrete design and are easy to use with an intuitive graphical LED matrix front. They are suitable in buildings where you want optimal comfort

and low energy consumption, for example offices, schools, shopping centres, airports, hotels and hospitals.

Function

In a room, the RTX transmitter can measure and detect the following, depending on model:

- ✓ Temperature
- ✓ CO₂ level
- ✓ Relative humidity level
- ✓ Air quality (VOC)

Models with and without display

For models with a display, the user interface features a dynamic LED matrix (25 x 5 pixels) with running presentation, in a plastic casing where the display can be seen through the plastic material.



Note! LED display is not available on all models. For more information, see section *Models*.

The display can be configured to shut off.

The RTX room transmitter user interfaces are shown in *Fig. 1 RTX room transmitter with display / RTX room transmitter without display*.

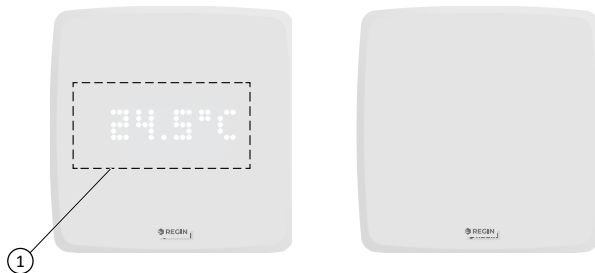


Fig. 1 RTX room transmitter with display / RTX room transmitter without display

① LED matrix, running display board

Relay

The RTX-TC-R model have a relay function, which enables to set the temperature or the CO₂ level for activating and deactivating the relay.

Configuration - Bluetooth®

The room transmitters can be configured for a particular application using the Regin:GO app via Bluetooth®.

The Regin:GO app can be downloaded from *App store* (iPhone and iPad) or *Google play* (Android).

Installation

The transmitter should be mounted in a location with good air circulation where it can be expected to give a representative reading. It can be mounted on a appliance box or directly on the wall.

The modular design with a separate backplate assembly for wiring makes the whole RTX series easy to install and commission. The transmitters are mounted directly on the wall or in a wall box.

The room transmitters consist of the following parts:

- ✓ Front and PCB assembly
- ✓ Backplate assembly (including terminal)



Note! Backplate assemblies are sold separately.

- ✓ Low (for mounting over appliance box), RCX-BL
- ✓ Mid (for on-wall mounting), RCX-BM

The RTX transmitter consists of the main part (article number RTX-T[H,C,V,P]-[D,R]) and the backplate assembly, with terminal. The standard backplate RCX-BL is used when mounted over an appliance box, meaning less space for cables needed. The backplate can be changed using the mid-size backplate RCX-BM, to be ordered separately. The medium-sized backplate RCX-BM is selected when more room for cables is needed mounting the device directly on the wall.

For detailed installation instructions, see the RTX-... Instruction and the Regio RTX series manual, to be found at www.regincontrols.com.

Technical data

Supply voltage	24 V AC (50...60 Hz) or DC (tolerance: 18...28 VAC, 18..30 VDC)
Display	25 x 5 pixels
Power consumption	< 2.5 VA
Ambient temperature	0...50 °C
Ambient humidity	Max. 90 % RH
Storage temperature	-20...+70 °C
Terminal blocks	Pluggable screw terminal, for cable cross-section ≤ 2.1 mm ²
Protection class	IP30
Material casing	Polycarbonate (PC)
Colour	Cover: RAL9003 (signal white) Backplate: RAL9003 (signal white)
Measuring range, temperature	0...50 °C
Temperature accuracy	±0.5°C at 15...30°C
Humidity sensor accuracy	2,5 %RH @ 25°C full range
CO₂ sensor	0...40000 ppm Update frequency: 5 s
CO₂ sensor accuracy	±50 ppm + 5 % (measured value,MV) @400...2000 ppm
VOC sensor	AQI; range 0...500 (Air Quality Index)
Mounting	Room/Wall
Weight	115 g
Dimensions	with backplate assembly (RCX-BL): 94.6 x 94.6 x 21 mm

Communication

Bluetooth® Low Energy	Bluetooth® communication.
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Conformity

Hereby, Regin declares that the radio equipment type Regio RTX series is in compliance with Directive 2014/53/EU.

Regio RTX series complies with EN IEC 60730-1 as a class A control.

This radio equipment device is approved for use in all countries within the European union.



This product carries the CE-mark. More information is available at www.regincontrols.com.

Models

Table 1 Room transmitter models (without communication)

Article	Display	Temperature sensor	Humidity sensor	CO ₂ sensor	VOC sensor	Relay
RTX-TH	✓	✓	✓			
RTX-TH-D	✓	✓	✓			
RTX-TC		✓		✓		
RTX-TC-R		✓		✓		✓
RTX-THC		✓	✓	✓		
RTX-THCV		✓	✓	✓	✓	
RTX-TV		✓			✓	
RTX-TC-D	✓	✓		✓		

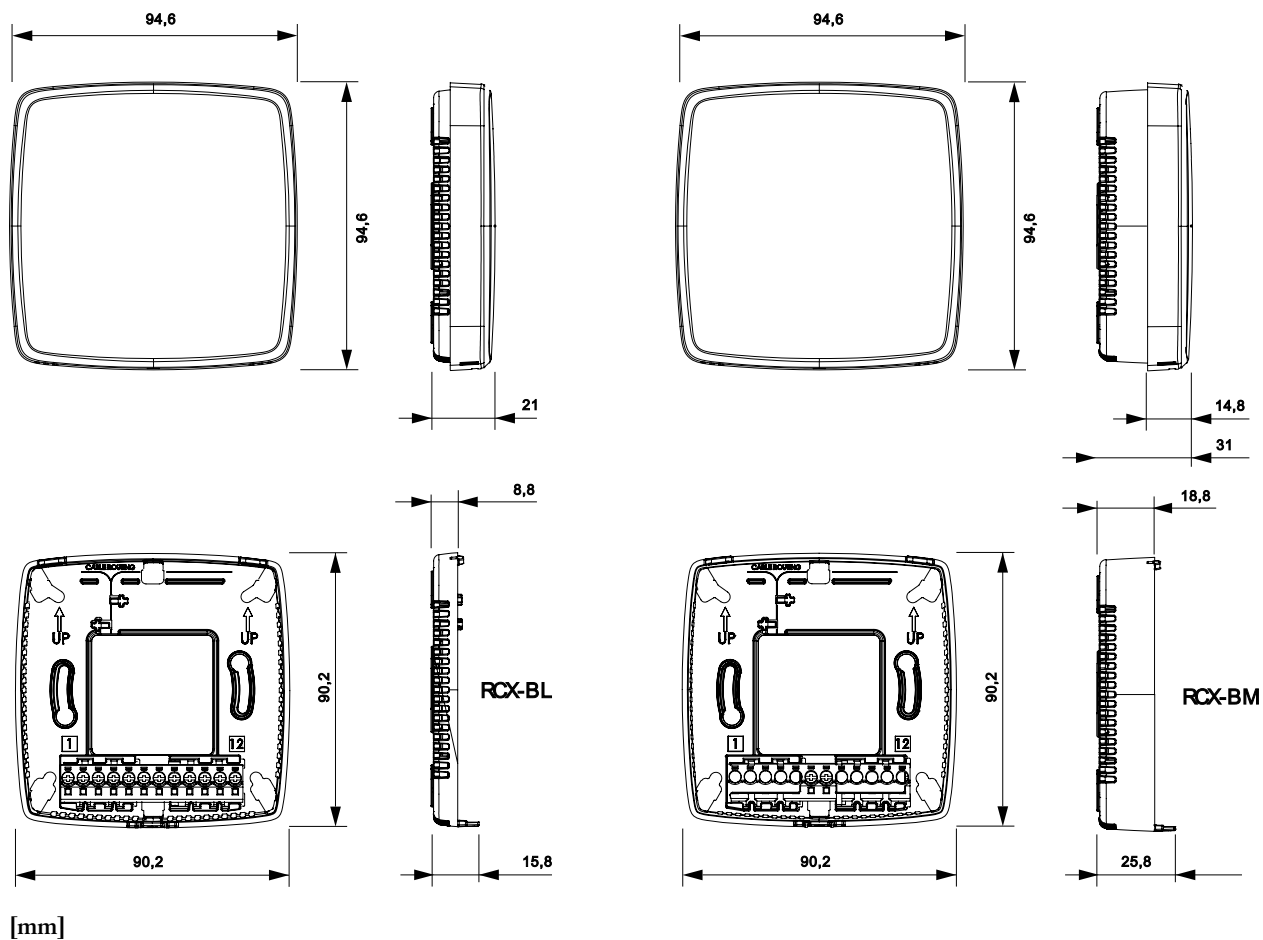
Table 2 Backplate assembly models

Article	Description
RCX-BL	Backplate Low (signal white)
RCX-BM	Backplate Medium (signal white)



Note! The backplate assemblies are sold separately.

Dimensions



Wiring

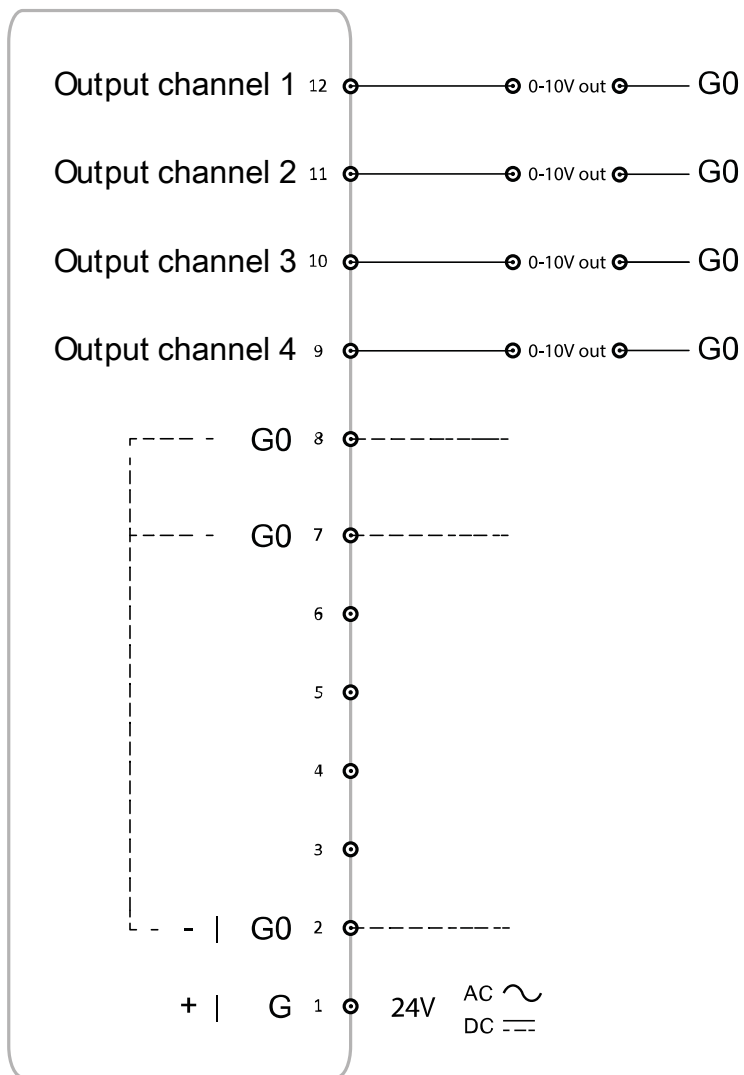


Fig. 2 General wiring example

Documentation

All documentation can be downloaded from www.regincontrols.com.