

Cala Touch TWIN

Room Controller with Touch-Display

Technical specifications and installation instructions

Item numbers

66331 Cala Touch TWIN T

66351 Cala Touch TWIN AQS/TH

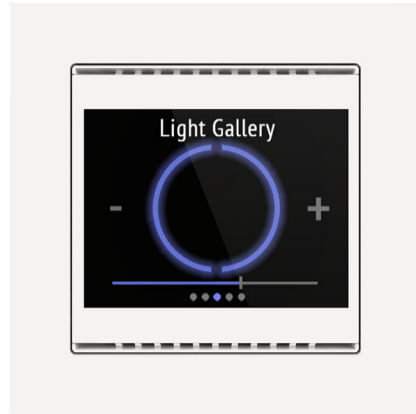


Illustration with frame (not included in the deliverables)



This document describes the functions for ALL device models.

Please check the information at the beginning of the chapter and in the text which describes the functions available for the respective individual models.

1. Description

The **Room Controller Cala Touch TWIN** for the TWIN bus system measures various ambient climate.

Cala Touch TWIN features a touch display that shows various display and control pages depending on the individual configuration. There is one page available that shows the current measured values and pages with touch control elements for internal temperature control, for light (manual switching or dimming), for shades or windows (manual operation).

Cala Touch TWIN is supplemented with a frame of the switch series used in buildings, and thus fits seamlessly into the interior fittings.

Common features in all models:

- **Colour touch display** with display and operating pages for
 - 1x display of current measured values
 - 1x temperature control (incl. mode change, indication whether heating/cooling active)
 - 1x drive operation (shading) with buttons, slider, position display
 - 1x switching or dimming of light (with percentage display)
 - 1x light colour temperature setting
- **Screen saver** (clock) may be switched on or off
- Key tone may be switched on or off
- **4 inputs** for binary contacts

Cala Touch TWIN AQS/TH functions (no. 66351):

- Measuring the **CO₂-concentration** of the air, the **temperature** and **air humidity** (relative, absolute)

Cala Touch TWIN T functions (no. 66331):

- Measuring the **temperature**

1.0.1. Deliverables

- Housing with display
- Base plate
- Digital supply line

Additionally required (not included in the deliverables):

- Junction box Ø 60 mm, 42 mm deep
- Frame (for insert 55 x 55 mm), compatible to the switch scheme used in the building

1.1. Technical specifications

Material	Real glass, plastic
Display	Visible diagonal: 2.3 inches (59 mm) Resolution: 320 x 240 pixels
Colour	white glass, white housing (pure white RAL 9010)
Assembly	Flush mounting (Wall mounting in junction box Ø 60 mm, 42 mm deep)
Protection category	IP 20
Dimensions	approx. 55 x 55 x 35 (W x H x D, mm), mounting depth approx. 7 mm
Total weight	approx. 90 g (incl. supply line, base plate)
Ambient temperature	Operation -20...+70°C, storage -30...+70°C
Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	TWIN bus voltage
Bus current	max. 18 mA
Data output	TWIN +/- bus connector terminal (blue/white)
BCU type	Integrated microcontroller
Inputs	4x digital, max. cable length 10 m.

CO ₂ -sensor (for Cala Touch TWIN AQS/TH):	
CO ₂ -measuring range	300...5000 ppm
CO ₂ resolution	1 ppm
CO ₂ accuracy	± 50 ppm ± 3% of the measured value
Temperature sensor (for Cala Touch TWIN AQS/TH, Cala Touch TWIN T):	
Temperature measuring range	-20...+70°C
Temperature resolution	0.1°C
Temperature accuracy*	± 0.8°C at -25...-10°C ± 0.5°C at -10...+65°C ± 0.6°C at +65...+70°C
Humidity sensor (for Cala Touch TWIN AQS/TH):	
Humidity measuring range	0% HR ... 100% HR
Humidity resolution	0.1%
Humidity accuracy	±7.5% HR at 0...10% HR ±4.5% HR at 10...90% HR ±7.5% HR at 90...100% HR
Humidity drift	± 0.5% RH per year in normal atmosphere

* Please note the information in chapter *Measuring accuracy*.

The product is compliant with the provisions of EC guidelines.

1.1.1. Measuring accuracy

Measurement deviations due to sources of interference (see chapter *Installation location*) must be corrected in the MultiController TWIN application in order to achieve the specified accuracy of the sensor (offset).

2. Installation and commissioning

2.1. Installation notes



Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.



CAUTION! Live voltage!

There are unprotected live components inside the device.

- National legal regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

function Technology AS is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

2.2. Installation location

The sensor is installed in a flush-mounted box (Ø 60 mm, 42 mm deep).



The sensor may only be installed and used in dry interior spaces. Avoid condensation.

When selecting an installation location, please ensure that the measurement results are affected as little as possible by external influences. Possible sources of interference include:

- Direct sunlight
- Draughts from windows and doors
- Draughts from ducts which lead to the junction box in which the sensor is mounted from other rooms.
- Warming or cooling of the building structure on which the sensor is mounted, e.g. due to sunlight, heating or cold water pipes
- Connection lines, which lead from warmer or colder areas to the sensor

Measurement variations from such sources of interference must be corrected in the application program for the MultiController in order to ensure the specified accuracy of the sensor (offset).

2.3. Device design

View with frame and base plate.

Fig. 1a

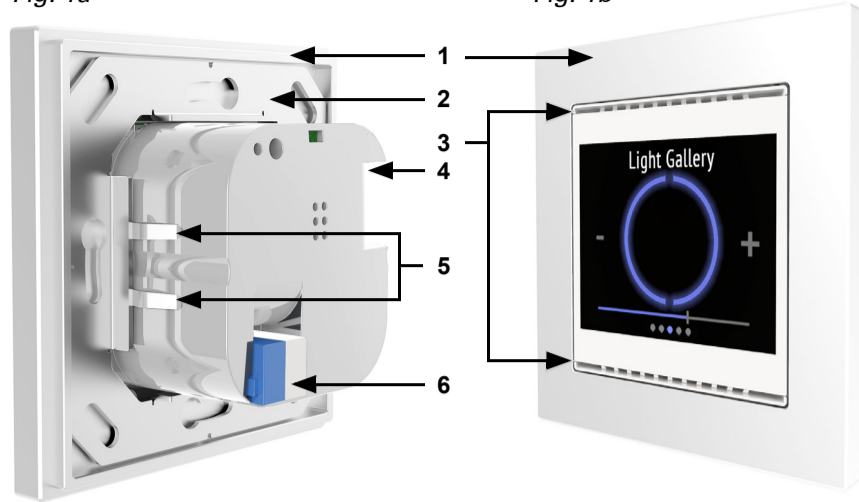
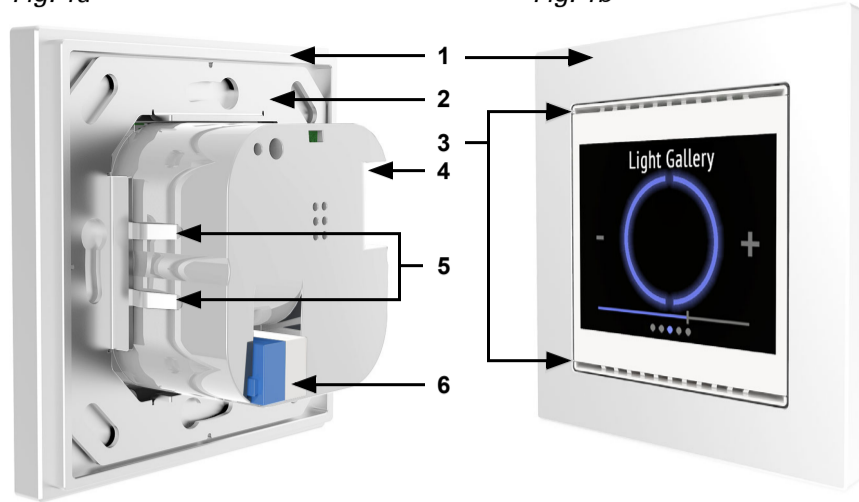


Fig. 1b



- | | |
|--|---------------------------|
| 1 Frame (not included in the deliverables) | 4 Slot supply line inputs |
| 2 Base plate | 5 Catches |
| 3 Openings for air circulation | 6 TWIN terminal BUS +/- |

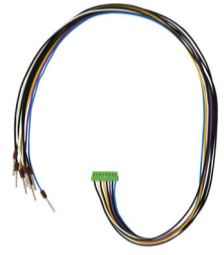


Fig. 2
Analogue/digital supply line inputs:
Input 1: white / black (GND)
Input 2: yellow / black (GND)
Input 3: purple / black (GND)
Input 4: blue / black (GND)

2.4. Sensor assembly

First, place the wind-proof box with the supply connection. Seal the inlet tubes as well, in order to prevent drafts.

Then screw the base plate onto the socket and position the frame of the switch range on top of this. Connect the bus lines +/- to the blue/white TWIN plug and plug the TWIN plug into the intended slot (no. 8). If required, connect the analogue/digital inputs via the breakout cable that is included in the delivery.

Insert the housing firmly onto the metal frame using the catches so that sensor and frame are fixed together.

2.5. Notes on mounting and commissioning

Never expose the device to water (e.g. rain) or dust. This can damage the electronics. You must not exceed a relative humidity of 95%. Avoid condensation.

After the bus voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received or sent via the bus.

3. Maintenance and care

Fingerprints on the display and the housing are best removed with a cloth moistened with water or a microfibre cloth. Do not use an abrasive cleaning agent or aggressive cleansing agents.