OEM Alpha Thermostat direct 55 Matrix

The OEM Alpha Thermostat direct 55 Matrix is a wired room thermostat for water-based and electric floor heating systems. The matrix display and touch button operation create a modern and appealing effect in the room. Thanks to its WiFi connectivity, the room thermostat can be integrated into the user's WiFi in just a few steps and operated via the Alpha Smart app.

The OEM Alpha Thermostat direct 55 Matrix is mounted in standard flush-mounted boxes and fits all common switch programs with 55 mm frames.
Inputs for external temperature sensors as well as an change over input for toggling between heating and cooling modes for water-based heating system complete this thermostat.

1.1 Features

- Modern LED matrix display with touch function
- Can be operated as a standalone device or via WiFi using an app
- For installation in switch programs with standard 55 mm frame (alternative mounting frame in matt white included in the scope of delivery)
- Control direction NC/NO selectable
- Suitable for water-based and electric floor heating systems
- Suitable for heating and cooling*
- Disable cooling Function for sensitive areas*
- CO input for automatic toggle between heating and cooling*
- Manual and automatic mode
- Weekly programs with up to 6 switching times per day
- Target temperature setting range 5 °C … 30 °C
- Operation lock
- Automatic toggle between summer and winter time
- Separately adjustable display brightness for menu navigation and operation
- Memory function in case of power failure
- Antifreeze function
- Safety shutdown in case of overheating
- Connections for floor temperature sensor and external temperature sensor
- Can be used in OEM Alpha Direct system*
- Cannot be combined with OEM Alpha Smartware Base
- TÜV certified

*water-based floor heating system

1.2 Variants

The OEM Alpha Thermostat direct 55 Matrix is supplied in the basic version as a neutral version without logo and a presetting for water-based floor heating systems.

Type	Model	WiFi connectivity	Operating voltage	Equipment	Scope of supply
RDWM 21061-N7	16 A	√	230 V	• Heating • Cooling • Change-over input • Frost protection function • For water-based and electric floor heating systems • WiFi-equipped	• OEM Alpha Thermostat direct 55 Matrix in matt white, RAL 9003 • Frame in matt white, RAL 9003 • Adapter frame for mounting in international flush-mounted boxes • M3.2x25 screws for mounting in flush-mounted boxes • Operating instructions in several languages • QR code for the claiming process in the app (as an insert / printed on)
RDWM 21051-N7	16 A	√	230 V	• Same as RDWM 21061-N7	• Same as RDWM 21061-N7 • External floor sensor, NTC 10 KΩ, cable length 3 m

The following extension possibilities resp. differentiations from the basic version are available optionally:

Packaging	Packaging can be manufactured and printed individually according to requirements.
Imprint on casing	Pad printing of the company logo (e. g. logo) and the individual type designation
Colour of the casing top	Colour customization
Frame design	Customization of frame design and colour
External temperature sensor	External temperature sensors with specific cable lengths available
Floor sensor	NTC 10 KΩ, cable length 3 m

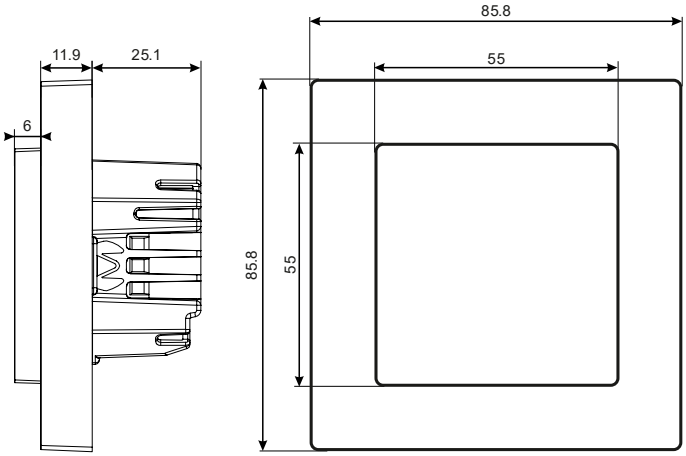
Please contact us if you have further wishes.

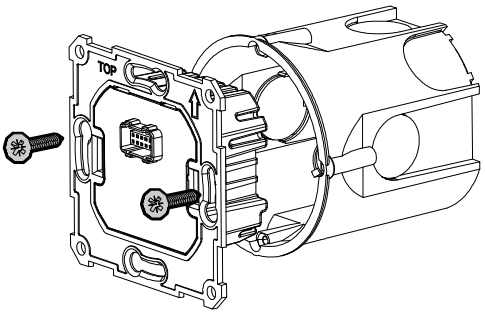
2 Technical data

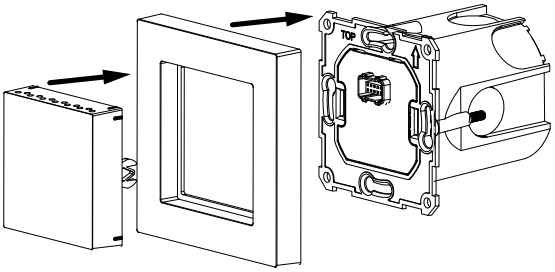
Voltage supply	230 V a.c. / ±10 % / 50 … 60 Hz
Max. switched current	16 A
Permanent load*	1150 W (5 A)
Switching element	Relay
Power consumption in standby mode (P_{sm})	1,04 W
Power consumption in networked standby mode (P_{nsm})	1,11 W
Transmission standard	WiFi IEEE 802-11 b/g/n
Transmission frequency	2.4 GHz
Max. radiated power	50 mW
Control direction of actuators	NC / NO
Max. connectible actuators	10 (max. 3 W / actuator)
Target temperature setting range	5 °C … 30 °C
Target temperature resolution	0.5 °C
Protection class	II
Protection type	IP20
Permitted storage temperature	-30 °C … 70 °C
Permitted ambient temperature	-10 °C … 45 °C
Permitted ambient humidity	80 %, not condensing
Dimensions incl. frame (L × W × H)	85.8 mm × 85.8 mm × 17.9 mm / 43 mm
Dimensions without frame (L × W × H)	55 mm × 55 mm × 17.9 mm / 43 mm
Display dimensions (W × H)	38 mm × 20 mm
Weight	123 g
Control function according to the Ecodesign Directive	TW2348

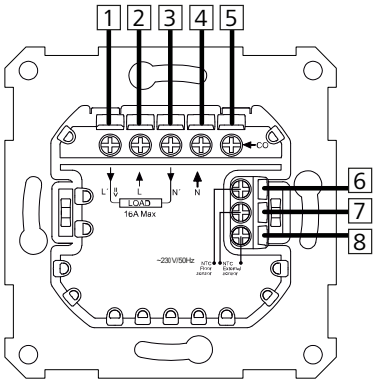
* When using an external room sensor, a permanent load of 12 A is possible.

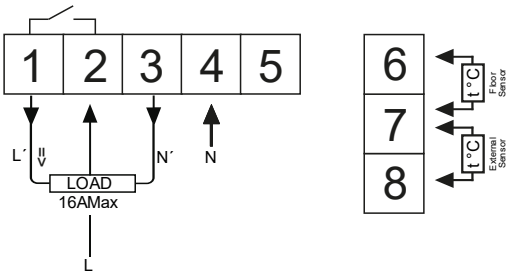
2.1 Installation notes

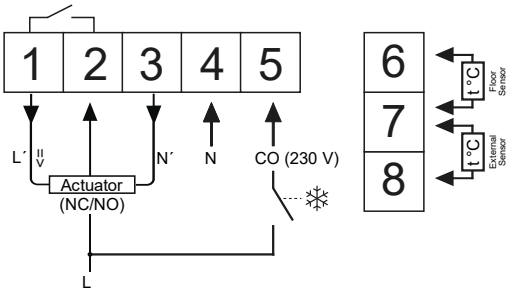












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