

The timeless design classic

A perfect solution for all new buildings and renovation projects.
Top quality features, installation and user-friendliness.



OEM ALPHA direct: System

Simply well connected

→ www.moehlenhoff.de

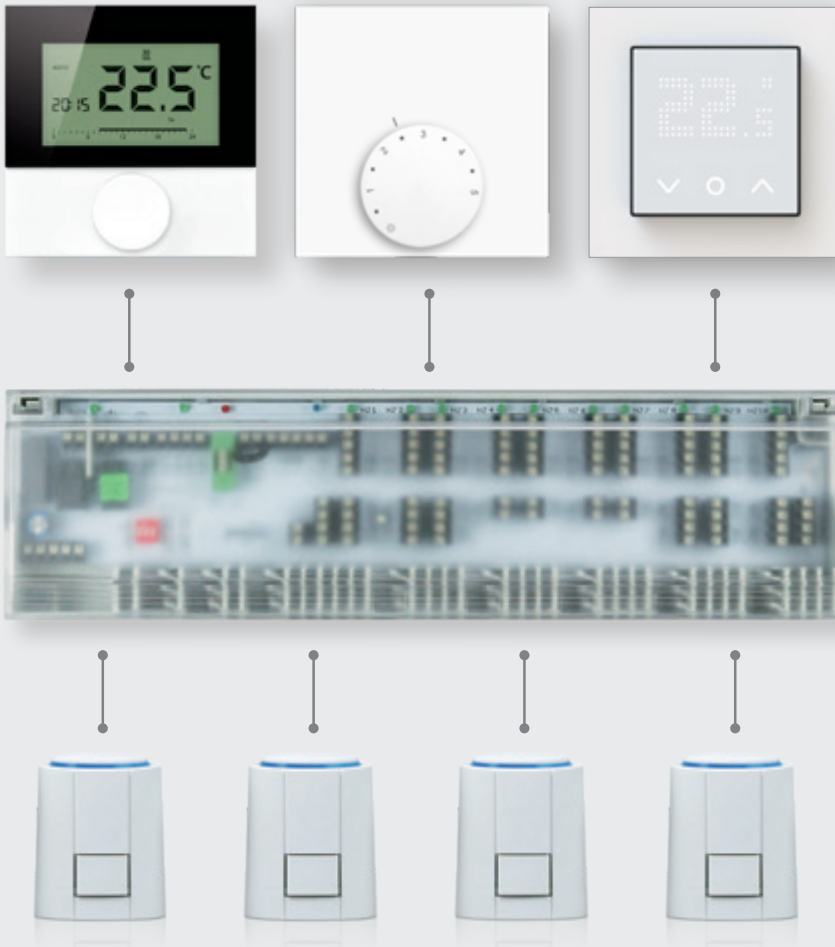
OEM Alpha direct: System

Classic single room temperature control that makes no compromises



A range of different factors influence people's feeling of well-being. Optimum distribution of heat plays a major role in making homes feel cosy. The majority of people like the radiant heat emitted by panel heating systems, which ensure perfect distribution of heat. For a panel heating system to function well, its single room temperature control needs to be highly precise and energy-efficient. It also has to offer control accuracy in order to adjust heating and cooling functions to people's needs as best as possible.

The OEM Alpha direct: System is a single room, wired temperature control system by Möhlenhoff with a modern design. All the components in this traditionally wired single room temperature control can be used independently or as part of a system. The control types and base station designs can be combined into one single room temperature control system. The result is a response to both simple and complex requirements for heating and cooling applications that ticks all the boxes.



OEM Alpha Room thermostat direct

- For heating and cooling applications
- A slender, high-quality design
- A broad range of devices for different applications
- User-friendly and intuitive to operate
- Easy to install

24 V / 230 V

OEM Alpha Base station direct

- 24 V and 230 V versions, optionally with 6 or 10 zones
- Pump relay/boiler relay directly on-board
- Suitable for heating and cooling
- Tried-and-tested, easy installation

OEM Actuator 5

- 24 V and 230 V, normally closed (NC) or normally open (NO)
- Power consumption just 1 watt
- 100% waterproof regardless of 360° assembly
- Established adaptor system for 99% of all valves

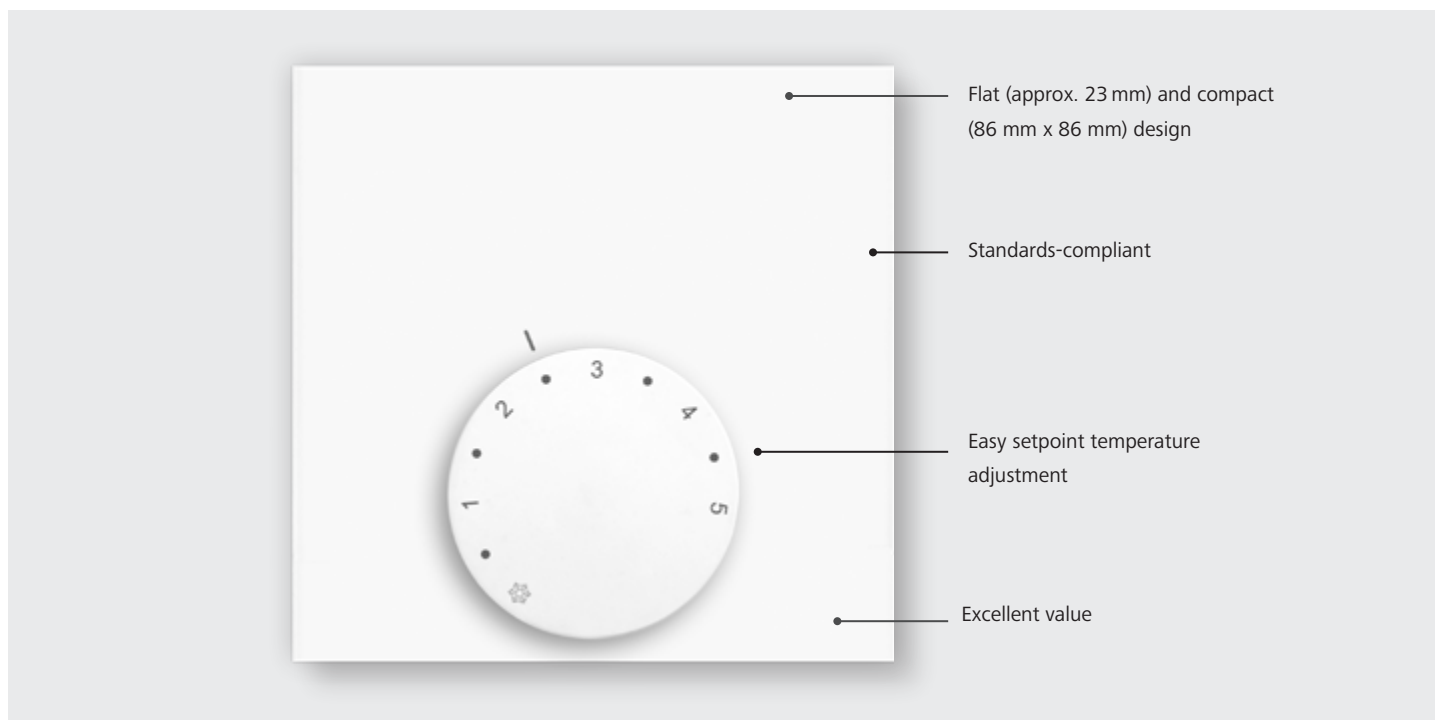
Key features at a glance



- 24 V or 230 V, 6 to 10 zones – to comply with your requirements and system
- A maximum of 21 connections for up to 18 valve actuators per base station or 5 per room thermostat
- Very good value
- Standardised, certified components
- As a system or stand-alone solution
- Intelligent and very precise control accuracy
- Smart Start/Smart Stop technology for even greater energy efficiency
- Intuitive and easy to install
- Out-of-the box functionality
- Easy to operate
- Standardised, modern design series with OEM Alpha Smart system

OEM Alpha Room thermostat direct Analog

Reduced to the max



OEM Alpha Room thermostat direct analog

In the heating and heating/cooling versions, the room-temperature control OEM Alpha Room thermostat direct Analog has been reduced to the max. This adds up to temperature control that's highly precise. The slim, modern design integrates

superbly with any interior. Due to its excellent value, the various versions of the OEM Alpha Room thermostat direct Analog round off any product range to perfection.

The setpoint temperature is adjusted by a

convenient rotatable setpoint adjuster with easy-to-read numbers. An actuator to calibrate the setpoint and an optional actuator to limit the setpoint are located below the setpoint adjuster. When the user is absent, the control temperature is cut by 2 K via the timer input.

As a stand-alone device, the OEM Alpha Room thermostat direct Analog can also control up to 5 valve actuators, or is used as part of a system with the OEM Alpha Base station direct.

Heating and cooling

The OEM Alpha Room thermostat direct analog HK is mainly used for heating and cooling panels. The change over input automatically switches the device between the two operating modes. If required, the cooling function on the device can be blocked in a particular room (e.g., a bathroom). In this version, the control has a frost and a valve protection function.

	Analog	Analog HK	Room sensor	Room sensor HK
24V / 230V				
Heating	●	●	●	●
Cooling	–	●	–	●
Heating/cooling (change over)	–	●	–	●
Fixed setback temperature	●	●	●	●
Timer input	●	●	●	●
Setpoint calibration/ setpoint limiter*	●	●	–	–
Valve protection function	–	●	–	●
Frost protection function	●	●	●	●

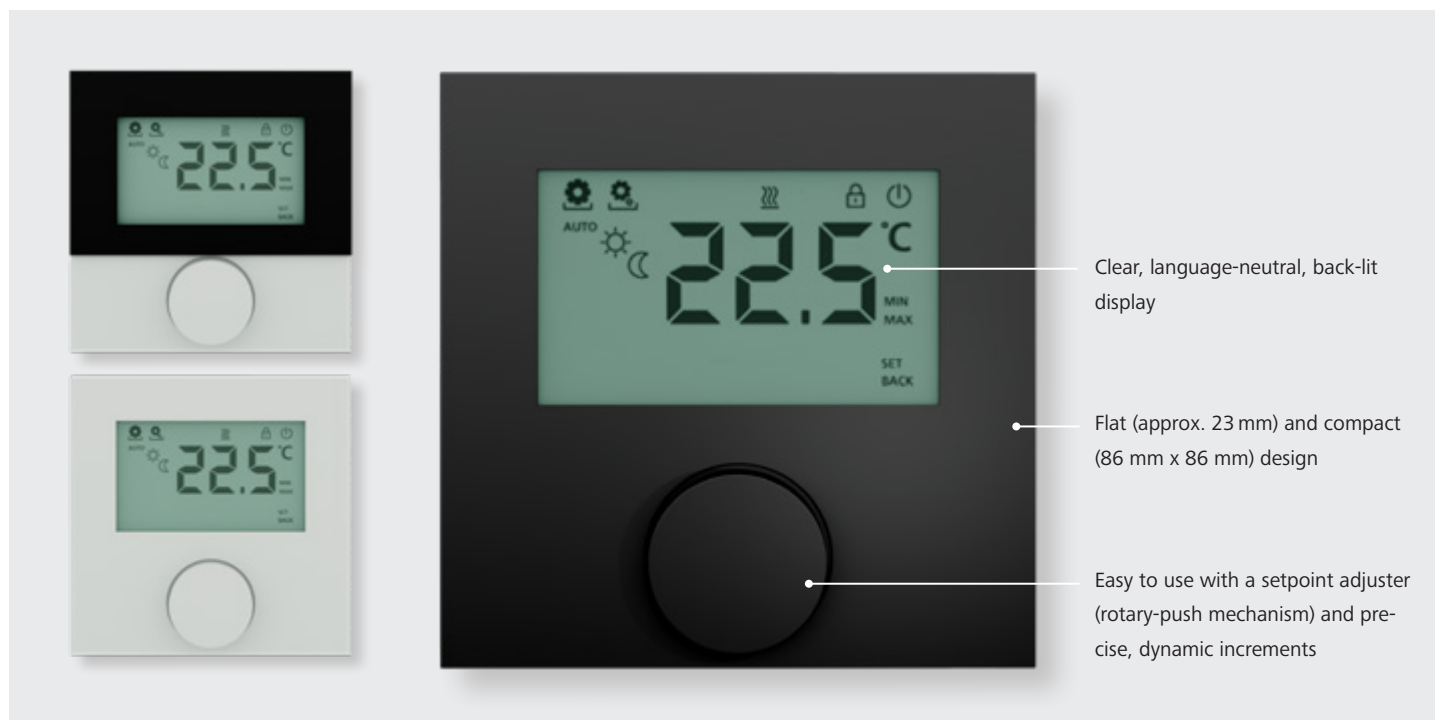
* on request

Highlights at a glance

- Control behaviour: PI
- Compliant with DIN EN 60730-1
- Block cooling
- Setpoint temperature finely adjustable by ¼ degrees
- Setpoint calibration
- Frost and valve protection function
- Easy, intuitive installation
- Wall mounted/fitted on a flush-mounted box
- Optimum value

OEM Alpha Room thermostat direct Display

High control accuracy in a modern design



OEM Alpha Room thermostat direct Display

The OEM Alpha Room thermostat direct Display is Möhlenhoff's new generation of high-quality room thermostats with displays. The thermostat looks impressive, with its restrained, timeless design, as well as its generous, language-neutral LC display and practical setpoint adjuster with precise dynamic increments. The intuitive concept takes the user through the menu structure and allows easy navigation with a rotary-push mechanism. This allows direct access to functions like operating mode and holiday. The integrated weekly time switch allows the user to program

customised temperature profiles, ensuring user comfort every day and providing energy-efficient heating and cooling.

Smart Start/Smart Stop

Smart Start/Smart Stop technology is another highlight. Based on each room's ambient conditions, it recognises when it's time to start heating or cooling and adjusts itself exactly to the required temperature at the right time. And, during the process, it only uses as much energy as is necessary.

A versatile device

The thermostat is designed to handle any situation – as a stand-alone thermostat with up to 5 valve actuators connected, or in a system with the OEM Alpha Base station direct. It comes in various designs.

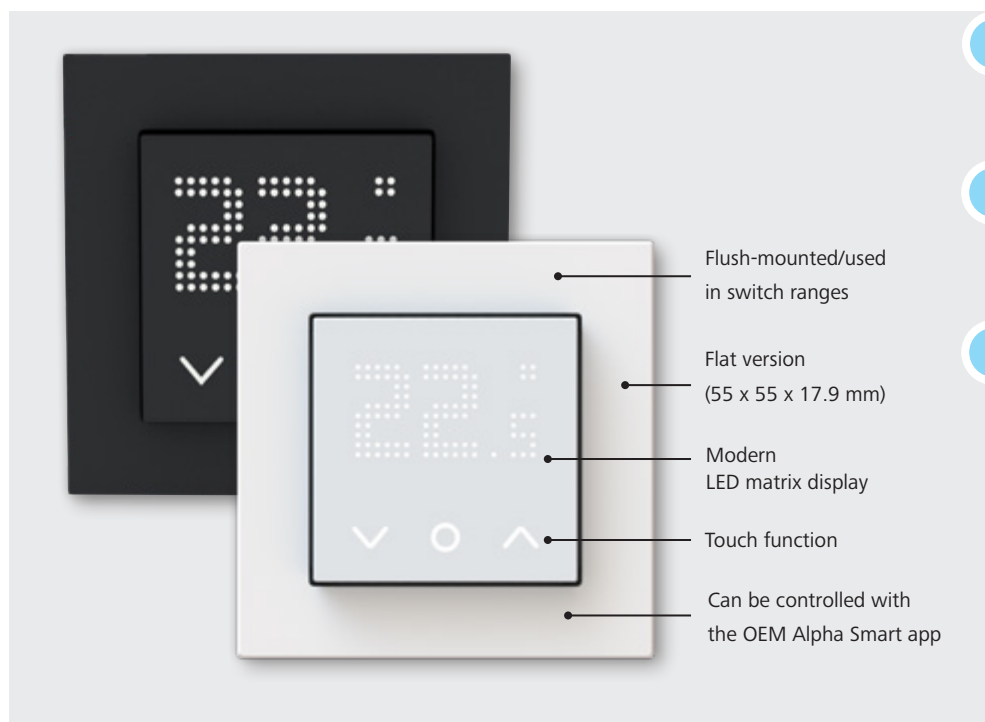
Highlights at a glance

- Control behaviour: PI
- Compliant with DIN EN 60730-1
- Smart Start/Smart Stop function
- Control algorithm to match heating system can be selected
- Adjustment of setpoint/actual value
- Block cooling
- Target temperature adjustable in 0.5 K increments
- Temperature range 5 to 30°C
- Frost and valve protection function
- Wall mounted/fitted on a flush-mounted box
- Easy, intuitive installation
- Intuitive user navigation and operation
- Can be used as a stand-alone or system solution
- Heating and cooling program settings exact to the day
- Also available in deep black RAL 9005

	Standard	Comfort	Control
24 V / 230 V			
Switching output display	•	•	•
Setpoint limiter	•	•	•
Internal weekly time switch	–	–	•
Adjustable setback temperature	–	•	•
Heating/cooling (change over)	–	•	•
Variant – NC / NO selectable	–	•	•
Smart Start/Smart Stop	–	–	•
Timer output	–	–	•

OEM Alpha Room thermostat direct 55 Matrix

For hydronic and electrical panel heating



! Can also be operated via the OEM Alpha Smart app – the easy way to get started with your smart home.

! 55 mm frame – compatible with standard switch ranges and can be seamlessly integrated into any home.

! With 16 A relay – ideal for controlling electrical panel heating systems.

Two applications in one

Möhlenhoff's OEM Alpha Room thermostat direct 55 Matrix gives you a simple solution for two applications: This thermostat enables single room temperature control for hydronic and electrical panel heating systems. The modern design LED matrix display allows intuitive operation of the device via a touch screen. Connected to the WiFi in just a few steps, the OEM Alpha Room thermostat direct 55 Matrix is also easy to operate via the OEM Alpha Smart app.

Versatile integration

The OEM Alpha Room thermostat direct 55 Matrix is all about versatility. It can be fitted to all international flush-mounted boxes and be used in all standard switch ranges with 55 mm frames. If you don't want to fit the thermostat to the range of frames, the scope of delivery includes a replaceable frame if the thermostat is to be used on its own.

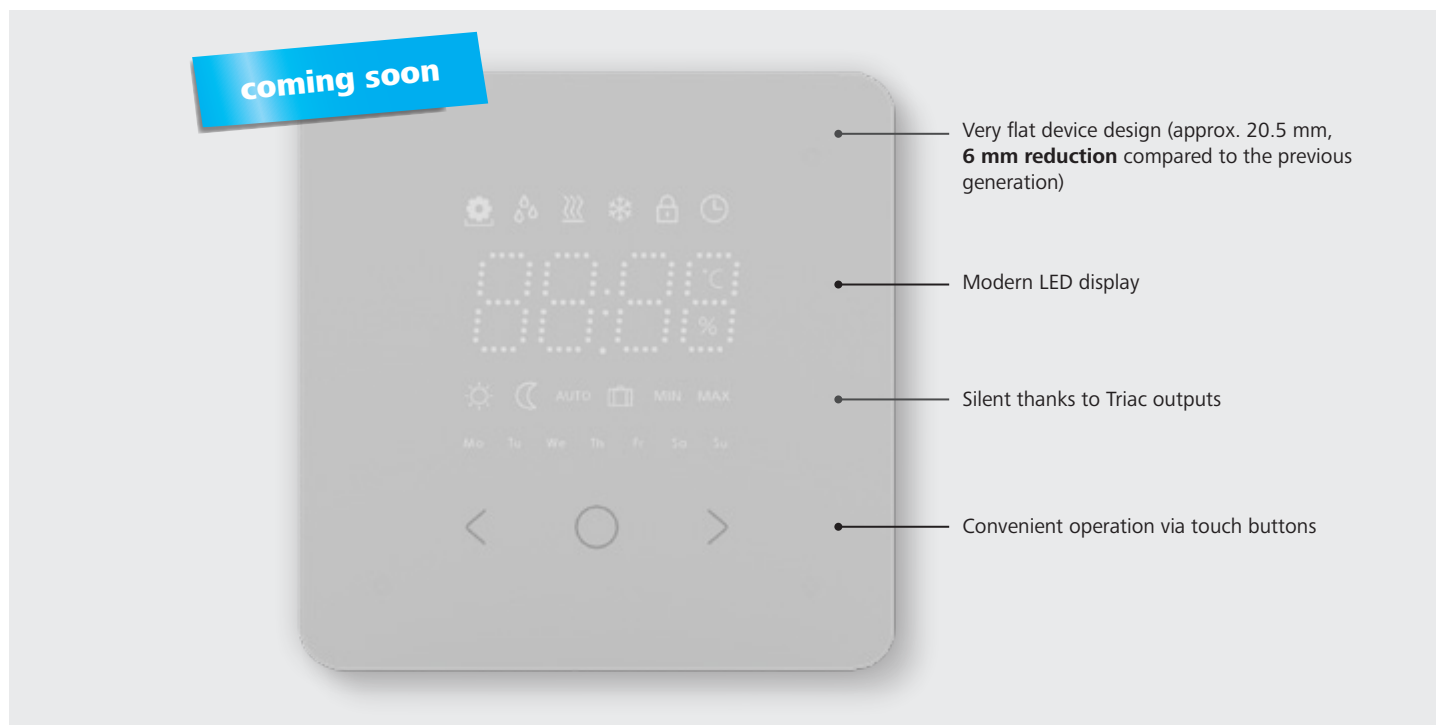
Highlights at a glance

- For hydronic and electrical panel heating
- Modern design with an LED matrix display and touch screen
- WiFi functionality allows fast connection to the smart home
- Can be operated via the OEM Alpha Smart app
- Can be used on its own or in a switch range
- Weekly programmes with up to 6 switching times per day
- Setpoint temperature range: 5 to 30°C
- Heats and cools when used in hydronic systems (connection for change over)
- Cooling mode can be deactivated for sensitive areas
- Connections for a floor temperature sensor and an external temperature sensor
- Excellent value
- Can be used in the OEM Alpha direct: System
- Cannot be combined with the OEM Alpha Smartware base stations

	Hydronic system	Electric heating
230 V		
Heating	•	•
Cooling	•	–
Variant – NC / NO selectable	•	–
Setpoint calibration/ setpoint limiter	•	•
Internal daily/weekly programmes	•	•
Holiday function	•	•
Automatic winter/summer time switchover (if connected with app)	•	•
Connection for a floor sensor/ external sensor	•	•

OEM Alpha Room thermostat direct LED

Precise room temperature. Intuitively controlled.



OEM Alpha Room thermostat direct LED

The OEM Alpha Room thermostat direct LED represents the latest development of a proven standard. Building on the OEM Alpha Room thermostat direct Display, the new generation combines precise control technology, a modern LED display and a particularly flat design to create a future-proof solution for demanding OEM applications. The thermostat enables precise measurement and control of the room temperature and is optimally suited to the requirements of modern panel heating systems.

The language-neutral LED segment display clearly and concisely shows all relevant operating states and symbols, making them intuitively understandable at a glance.

Technically sophisticated and perfectly coordinated.

As part of the OEM Alpha direct: series, the OEM Alpha Room thermostat direct LED fits seamlessly into an optimally coordinated overall system. The voltage is supplied conveniently via the connection unit of the OEM Alpha direct: series or,

alternatively, via a separate power source, for maximum flexibility in system design. The flexible control algorithm permits use as a 2-point control system or with PWM, depending on what is required. The Triac switching output ensures completely silent operation – a clear advantage in sensitive residential and commercial applications.

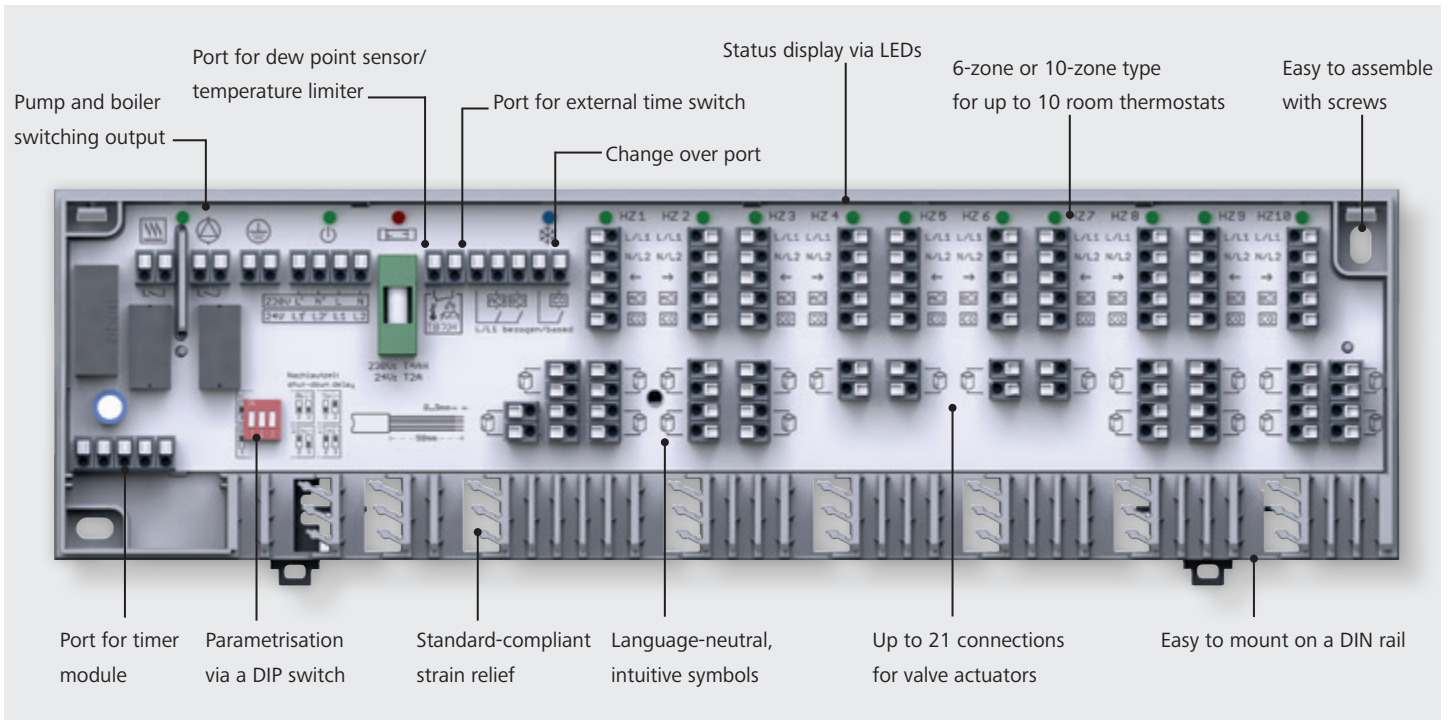
	Standard	Comfort	Control
<div style="border: 1px solid black; padding: 5px; display: inline-block;">24 V</div> / <div style="border: 1px solid black; padding: 5px; display: inline-block;">230 V</div>			
Switching output display	●	●	●
Setpoint limiter	●	●	●
Variant – NC / NO selectable	●	●	●
Adjustable setback temperature	●	●	●
Heating/cooling (change over)	–	●	●
Internal weekly time switch	–	–	●
Smart Start/Smart Stop	–	–	●
Timer output	–	–	●

Highlights at a glance

- Modern LED display
- Very flat design (approx. 20.5 mm)
- Convenient operation via touch buttons
- Heating/cooling function (change over)
- NC / NO selectable
- Setpoint limiter can be set
- Smart Start / Stop function
- Weekly timer (depending on the model)
- 24 V or 230 V version available

OEM Alpha Base station direct

Optimum connections



Perfectly in tune

OEM Alpha Base station direct is the central connection unit and provides a voltage supply for all OEM Alpha System: direct components. In a clear layout, valve actuators and controls are easily and conveniently connected with one another. The tried-and-tested wire management system and standard-compliant strain relief, as well as the plug-in / clamp connection method guarantee reliable and fast wiring.

The OEM Alpha Base station direct is optionally available in a 6 or 10 heating-cooling-zone design. A maximum of 10 room thermostats and 18 valve actuators (21 connections) are supplied with voltage. In the Comfort version the device has ports to connect a pump and a boiler, or another electrical device.

Inputs for external time switches which feature timer signals on room thermostats and (in the

maximum configuration) a timer module in the lid of the housing allow time-controlled reduction of the room temperature. A dip switch adapts the device to NC or NO systems and adjusts the pump's pre-run and follow-up times. The CO input makes this control system suitable for heating and cooling.

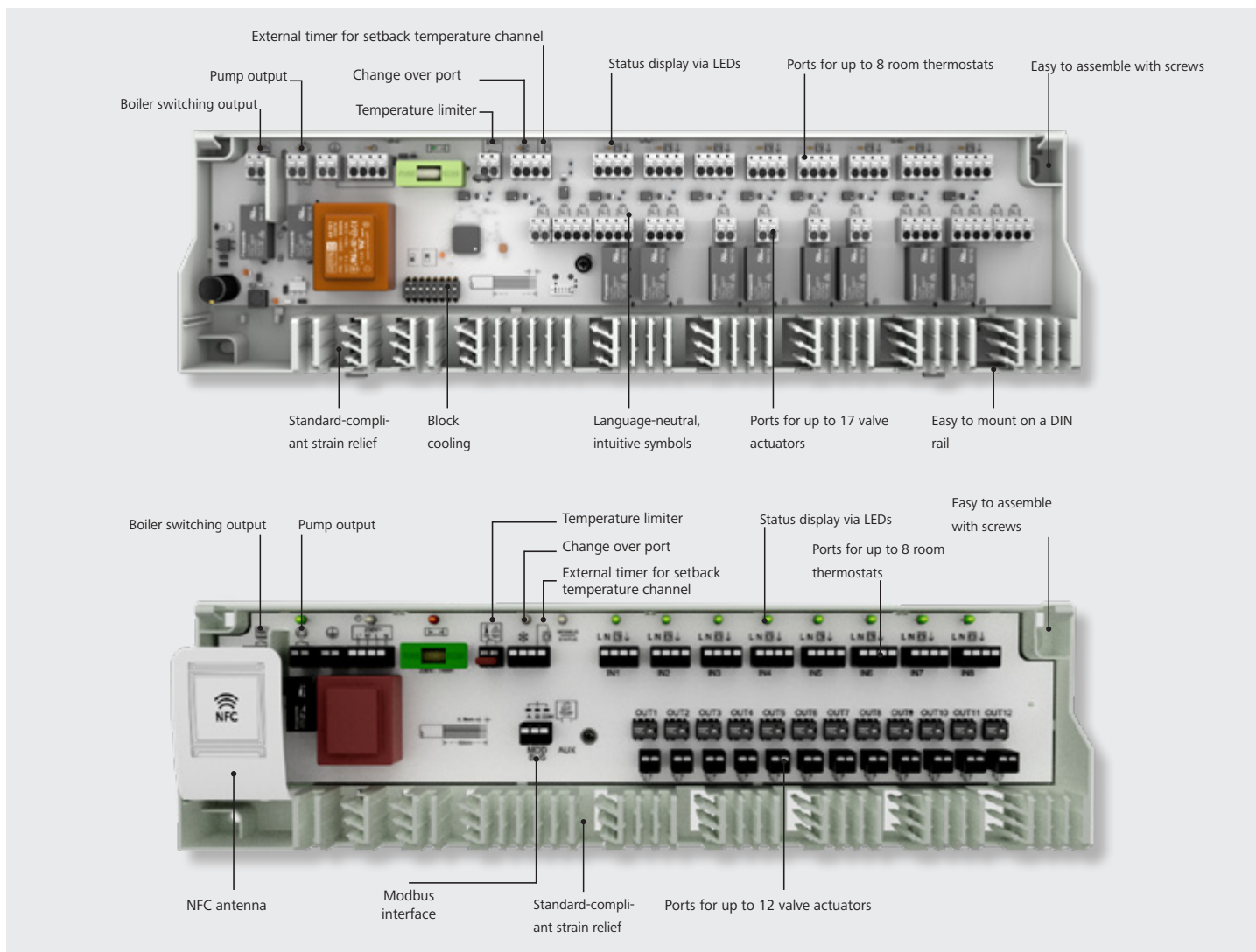
Key features at a glance



- Up to 5 connections for valve actuators/zones
- Change over input for heating/cooling
- Wall-mounted or on a DIN rail
- Easy, intuitive installation with a plug-in / clamp connection method
- Connections clearly laid out
- Automatic temperature setback for 2 heating programmes is possible via an external digital time switch
- Standard transformer (optional), standby < 0.3 watts
- Standard-compliant strain relief integrated as per DIN EN 60730-1

OEM Alpha Base station direct Balance

The intelligent base station for convenient single room temperature control



Intelligent control for comfort and efficiency

The OEM Alpha direct Balance base station is the intelligent single room temperature control for the future, ensuring maximum comfort and energy efficiency for panel heating systems. It combines the advantages of the OEM Alpha direct base stations and adds additional features, such as automatic hydraulic balancing. The OEM Alpha direct Balance base stations supply up to 8 room thermostats and a maximum of 12 or 17 valve actuators. The base stations are designed for NC systems and can also cool without a heating/cooling controller by inverting the controller signals. In the Switch and Switch Modbus version, the valve actuators can be freely assigned to the various heating zones, which can be named. In addition to the option of parametrising pre-run and follow-up times, and pump and valve protection functions, it is also possible to parametrise and execute special functions such as ManualOpen and FirstOpen.

Parametrisation is carried out via the NFC app or, in the case of the Modbus version, also via the Modbus interface on a higher-level building management system.

Highlights at a glance

Balance





- Automatic hydraulic balancing
- Up to 5 connections for valve actuators/zones
- Change over input for heating/cooling
- Wall-mounted or on a DIN rail
- Easy, intuitive installation with a plug-in / clamp connection method
- Connections clearly laid out
- Standard-compliant strain relief integrated as per DIN EN 60730-1


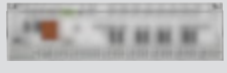

Balance Switch (Modbus)

- Automatic hydraulic balancing
- NFC app and optional Modbus interface
- Free assignment of actuators to the zones
- Change over input for heating/cooling
- Wall-mounted or on a DIN rail
- Easy, intuitive installation with a plug-in / clamp connection method
- Connections clearly laid out
- Standard-compliant strain relief integrated as per DIN EN 60730-1
- Clock cooling can be activated individually for each output

OEM Alpha Base station direct

Overview of functions

	Standard	Standard Plus	Comfort
			
Setback temperature channel	●	●	●
Heating	●	●	●
Cooling	–	●	●
Input for temperature limiter/dew point sensor	–	●	●
Variant – NC / NO	NC/NO	NC**	selectable
Pump/boiler switching output	–/–	●/–	●/●
LED status displays	●***	–	●
Hydraulic balancing	–	–	–
NFC app	–	–	–
Modbus	–	–	–

	Balance	Balance Switch	Balance Switch Modbus
			
Setback temperature channel	●	●	●
Heating	●	●	●
Cooling	●	●	●
Input for temperature limiter/dew point sensor	●	●	●
Variant – NC / NO	NC	NC	NC
Pump/boiler switching output	●/●	●/●	●/●
LED status displays	●	●	●
Hydraulic balancing	●	●	●
NFC app	–	●	●
Modbus	–	–	●

**without pump control also NO

*** only for type B 20322

Advantages at a glance

For OEM partners



High-tech from a specialist

- Reliable technology with a good track record, developed and tested by Möhlenhoff
- Quality products compliant with standards



Best OEM service

- Distinctive thanks to a range of different types/functions
- A consistent market presence



A coherent and compatible system

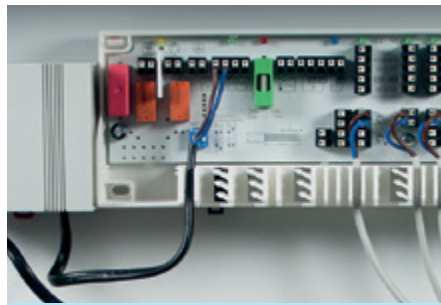
- A perfectly coordinated product range
- Future-proof
- Standardised design

For technicians



Ideal in new builds

- Excellent for new builds and refurbishment projects
- Easy to plan
- The right solution for any requirements



Easy to install

- Simple and convenient to install in just a few steps
- Safe to set up and operate



Expertise

- High-quality product
- Top support
- Satisfied customers from day one

For consumers



Energy and cost savings

- Saves up to 20% on heating energy
- Can be controlled to match personal levels of comfort and lifestyles



An attractive design

- Integrates well with today's and tomorrow's interiors
- Timeless, restrained design that pledges quality



Reliable and extremely easy to operate

- Reliable technology
- Convenient and intuitive to operate
- Safe to use

The outlook for OEM partners



Range of products and services

As part of the services we deliver to our OEM customers, we provide application-driven advice and technical support for our products and systems. We also offer in-depth product information, such as data sheets, manuals, product photos and various print documents for customised technical literature and advertising materials.

Guarantee of quality

Möhlenhoff has recognised testing, inspection and simulation facilities that make our high level of quality and innovation possible. This high standard is underpinned by a modern integrated management system. We also ensure that our staff are quality-driven and have a strong environmental awareness.

Tailored system modifications

We can offer different logos, casing designs, packaging or additional functions. Möhlenhoff's OEM solutions enable you to present a customised image to the market. As a result, you can create a distinctive product portfolio, adapted exactly to your customers' wishes. Contact us for advice on how to make your products stand apart.



Your OEM partner

Möhlenhoff GmbH has been an established player on the international market for more than four decades. Our reliability, expertise and high quality, combined with innovative ideas and partnership, have made us a highly successful player worldwide for many years. As an OEM, Möhlenhoff GmbH supplies products and complete systems for heating, ventilation and air-conditioning equipment. As a specialist in control components and systems, the company offers its expertise to manufacturers worldwide. Möhlenhoff GmbH is a global market leader in thermal valve actuators.



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