

OEM Alpha Basis direct switch

The OEM Alpha Basis direct switch is the central connection unit of a room-by-room temperature control system for surface temperature control of heating and cooling systems.

The OEM Alpha Basis direct is available with 8 zones in 230 V. With minimum expense, the OEM Alpha Basis direct switch can be wired to all system components as e. g. thermostats and actuators. The system components are supplied directly with the voltage supply of the OEM Alpha Basis direct switch. All switching commands for the thermostats are forwarded directly to the connected system components via the OEM Alpha Basis direct switch.

In order to meet the desired installation requirements, the switch version has rotary switches for the flexible assignment of thermostats to actuators.

With the OEM Alpha Basis direct switch and its numerous differentiation possibilities you can ensure an optimum market position. It lets you offer easy installation and maximum surface temperature adjustment comfort to your customers.



1.1 Features

- Design with 8 zones
- Connection of up to 16 actuators
- Equipment for heating and/or cooling systems
- Simple, intuitive installation and operation
- Assignment of the thermostats to the actuators via rotary switch
- Status signalling by LEDs
- Proven cable guide and standard-complying strain relief
- Screwless terminal connection technique
- Clearly structured connection terminals
- Reduction channel for time-controlled reduction of the room temperature
- Pump control
- Connection for a temperature limiter or dew point sensor
- Heating/cooling function
- High functional security
- Maintenance-free

The Möhlenhoff OEM product quality ensures easy, intuitive installation, operation and maintenance of the entire system.

1.2 Variants

In the basic version, the OEM Alpha Basis direct switch is delivered as neutral device without logo and in grey, with transparent cover. Operation with connected pump is only possible in the operating mode "normally closed". The following list shows the available versions.

Type	Version	Operating voltage	Zones	Equipment	Scope of supply
B 21702-08N2	Switch	230 V	8	Heating/cooling, pump control	<ul style="list-style-type: none"> • OEM Alpha Basis direct switch in individual packaging • Instructions in 2 languages

1.3 Equipment

The OEM Alpha Basis direct switch is offered with 8 zones in 230 V.

1.3.1 Equipment overview

	Switch		
Protective conductor intermediate connection	✓	1 reduction channel – connection for an external system clock	-
Mains through clamp for pump connection	✓	1 internal reduction channel – connection for room thermostat (e. g. timer function Alpha direct Control)	✓
Mains through clamp for dew point sensor	-	Change-over connection Signal for heating/cooling	✓
Extended pump/boiler control – follow-up time configurable	-	Timer module – casing cover with integrated system clock	-
Simple pump control	✓	Control direction normally closed (NC)/normally open (NO)	NC ¹
Signal input for temperature limiter or dew point sensor	✓	Function signalling by LEDs	✓

¹ Without pump control also NO

1.4 Possible extensions and differentiations to the basic version**Extensions**

Type	Article description
ALE 20001-00N3	Connection cable with Euro plug
HUS 326	DIN rail 326 mm, neutral, for installation in the heating circuit distributor

Differentiations

Packaging	Packaging can be manufactured and printed individually according to requirements.
Casing	Bottom – adaptation of colour, Casing cover – completely overlapping casing cover, individual colour, transparency and shape
Imprint on casing	Marking of the company logo and the individual type designation and the device designation
Please contact us if you have further wishes.	

2 Technical data

The listed technical data relate to the maximum functional equipment of the OEM Alpha Basis direct switch. Individual positions may be omitted depending on the variant.

		230 V
		8 zones
Version	Switch	B 21702-08N2
Operating voltage		230 V ±10 %, 50 - 60 Hz
Voltage supply		Euro connector (accessory) / external voltage source
Power consumption in idle operation ²		<1 W
max. power consumption (without pump/boiler consumer)		max. 50 VA
Fuse		T4AH
Heating zones		8
max. number of thermostats		8
max. number of connection terminals for actuators		16
max. connectible actuators	A5	16
	Third-party brand	Depending on the connected assigned thermostats
max. nominal load of all actuators		-
Pump circuit ³		Make contact (monopolar switching) / direct connection possible via L'/N'
Boiler circuit ³		Closing contact (monopolar switching)
Pump control	Switching power	2 A, 200 VA inductive
	Switching element	Relay
Control direction normally closed (NC)/normally open (NO)		NC/NO (Alpha direct switch without connected pump) NC (Alpha direct switch with connected pump)
Change-over input		switchable via potential-free contact
Temperature limiter or dew point monitor		potential-free break contact, switchable, 230 V, 8 A
Heating programs (option)		1 via external signal
Admissible ambient temperature		0 to +50 °C
Admissible storage temperature		-20 to +70 °C
Admissible ambient humidity		80%, not condensing
Contamination degree		2
Rated surge voltage		1500 V
Connection terminals		screw-less terminals for 0.2 to 1.5 mm ² , vertical cable entry
Connection line	massive	NYM-J/NYM-O (max. 5 x 1.5 mm ²)
	flexible	H03VVH2-F / H05VVH2-F
Strain relief		integrated
ERP class acc. to EU 811/2013		1=1 %
Protection class		II
Protection type		IP 20
Function		Type 1 C
Material	Cover	ABS
	Casing	ABS
Colour	Cover	Transparent, in the area of the LEDs not transparent
	Casing	light grey (RAL7035)
Weight	Switch	500 g (650g completely packed including installation instructions)
Dimensions (H x L x D)		90 x 326.5 x 52 mm
Type of installation		Wall installation/DIN rail (TS35/35 x 7.5 mm)
Indicators (LED)	Heating zone active	green (one LED per HZ)
	Mains voltage on	green

² Without connected components

³ Only pump switching or only boiler switching possible

2.1 Approvals & certificates

All Möhlenhoff products are extensively tested through functional and quality tests.



With the CE marking, the manufacturer declares that the product complies with the applicable requirements laid down in the European Union legislation for affixing it.

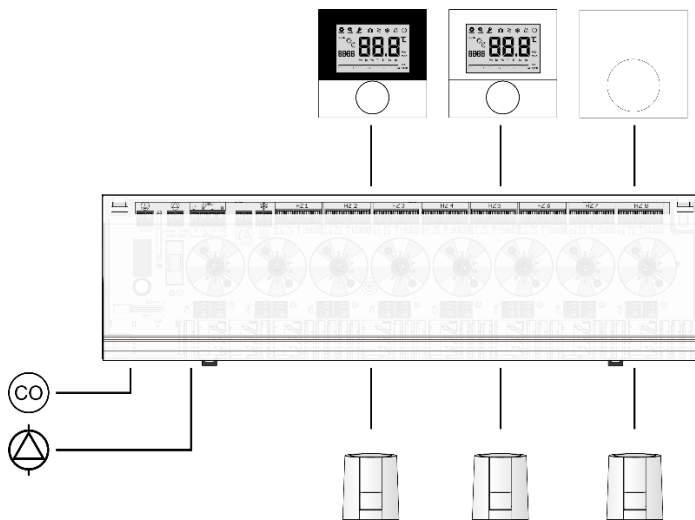
2014/35/EU - Low-Voltage Directive
2014/30/EU - EMC Directive
2011/65/EU - RoHS Directive

3 System visualisations

A system configuration for setting up a room-by-room temperature control system is shown below. A room-by-room temperature control system can be realised with the OEM Alpha Basis direct switch and corresponding components. An individualization of the room-by-room temperature control system can be achieved by adding compatible components to the system, such as e. g.

- the OEM Alpha Thermostat direct Analog HK,
- the OEM Alpha Thermostat direct Display Comfort / Control and
- thermal actuators of type A 20x05 (230 V)

3.1 OEM Alpha Basis direct switch - 230 V



Characteristic

Heating	✓
Cooling	✓
Simple pump control	✓
Internal timer of an OEM Alpha Thermostat direct Display	✓
Temperature limiter or dew point sensor	✓
OEM Alpha Thermostat direct Analogue	✓ ⁴
OEM Alpha Thermostat direct Analogue HK	✓
OEM Alpha Thermostat direct Standard	✓ ⁴
OEM Alpha Thermostat direct Comfort	✓
OEM Alpha Thermostat direct Control	✓

⁴ not applicable in combination with cooling