

Hoval TopTronic® E

Control module / room control module



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TopTronic® E control module black

- Colour touchscreen 4.3 inch with black high-gloss trim
- Resolution: 480 x 320
- Connection to the Hoval bus system via RJ45 plug connection or plug terminals (max. 0.75 mm²)
- Flat design with flexible installation options
- Installation
 - in the control panel of the heat generator
 - in the Hoval wall casing
 - in the front of the control panel
 - on the wall with surface mounting frame (deep control module incl. frame approx. 25 mm)
 - on the wall using wall mounting plate with concealed sockets (deep control module incl. mounting plate approx. 12 mm)

Notice

Supplied accessories for installation of device in the front of the control panel. Take account of additional accessories for alternative installation!

- Commissioning wizard for simple configuration and parameter setting of the plant
- Operation of all controller modules connected to the bus system (basic, solar, buffer module, etc.)
- Emission measurement and manual mode
- LED for displaying the current system status
- Automatic dimming depending on the ambient light
- User-friendly user interface and menu system
- Activation of functions and display texts depending on the user level
- Plant-specific naming of heating and hot water circuits possible
- Display of all information in plain text and in different languages
- Display of detailed plant information
- Extensive fault message management by plain text and categories
- Service and maintenance function
- Operating mode selection incl. configurable week and day programs
- Operation of all heating and hot water circuits connected to the bus system
- Rights management for heating and hot water circuits incl. activation of the common operating mode
- Efficient control of the heating installation by simple working with day programs
- Analysis function (outside temperature, room temperature, solar yield curves, etc.)
- Customer-specifically configurable start screen for displaying
 - time and date
 - lunar phase
 - heat generator temperature
 - hot water temperature
 - active day and basic program incl. temperature profile
 - output and consumption of a heating/hot water circuit or of the heat generator (possible in combination with flow rate sensors)
 - collector temperature (in combination with solar module)
- Display of the current weather or weather forecast (only possible in combination with HovalConnect)

TopTronic® E control module



TopTronic® E room control modules



easy white



comfort white



comfort black

Delivery

- TopTronic® E control module black
- Clamping device control module
- Clamping device adapter control module
- CAN cable RJ45/RAST 5, L = 5 m

Delivery

- TopTronic® E room control module
- Surface-mounted assembly frame
- Design frame
- Wall mounting adapter
- Assembly material

TopTronic® E room control module

- Colour touchscreen 4.3 inch with high-gloss trim
 - Room control module easy white
 - Room control module comfort either white or black
- Resolution: 480 x 320
- Connection to the Hoval bus system via RJ45 plug connection or plug terminals (max. 0.75 mm²)
- Installation on the wall
 - with a surface mounting frame (deep room control module incl. frame approx. 25 mm)
 - with a wall mounting plate with concealed sockets (deep room control module incl. mounting plate approx. 12 mm)
- Optimum mounting height in the room: 1500-1600 mm
- LED for displaying the current system status
- Automatic dimming depending on the ambient light
- User-friendly user interface and menu system
- Plant-specific naming of heating and hot water circuits possible
- Display of all information in plain text and in different languages
- Display of detailed plant information
- Extensive fault message management by plain text and categories
- Service and maintenance function
- Operating mode selection incl. configurable week and day programs
- Room sensor installed

TopTronic® E room control module easy white

- Room control module can only be allocated to a heating circuit
- Software with reduced range of functions for simple operation of the room temperature and selection of the basic program without problems

TopTronic® E room control module white or black

- Operation of all heating and hot water circuits connected to the bus system
- Rights management for heating and hot water circuits incl. activation of the common operating mode
- Efficient control of the heating installation by simple working with day programs
- Analysis function (outside temperature, room temperature, solar yield curves, etc.)
- Selection between different start-up screens possible during commissioning
- Customer-specifically configurable start screen for displaying
 - time and date
 - lunar phase
 - heat generator temperature
 - hot water temperature
 - active day and basic program incl. temperature profile
 - output and consumption of a heating/hot water circuit or of the heat generator (possible in combination with flow rate sensors)
 - collector temperature (in combination with solar module)
- Display of the current weather or weather forecast (only possible in combination with HovalConnect)

Notice

The TopTronic® E room control module in white or black must be used to operate the Hoval HomeVent® comfort ventilation. For details, see "Comfort Ventilation".

TopTronic® E control module



TopTronic® E control module black with 4.3" colour touchscreen

For operation of all controller modules connected to the bus system (basic, solar, buffer modules etc.)

Connection to the Hoval bus system via RJ45 plug connection or via plug terminals (max. 0.75 mm²), flat design with flexible installation option

Installation:

- in control panel of the heat generator
- in the Hoval wall casing
- in the control panel front, black high-gloss cover, customer-specific configurable start screen,

Display of current weather or weather forecast (only possible in combination with HovalConnect)

Notice

Take account of additional accessories for alternative installation!

Consisting of:

- TopTronic® E control module black
- Clamping device set control module
- RJ45-RAST 5 CAN cable, L = 500

6043 844

TopTronic® E room control modules



TopTronic® E room control module easy white with 4.3" colour touchscreen

Room control module for one heating circuit

Software with reduced function range for simple operation of the room temperature and trouble-free choice of basic programme

Optimum mounting height: 1500-1600 mm

For installation on the wall

- with a surface-mounted assembly frame (depth room control module incl. frame approx. 25 mm)
- with a wall mounting plate for concealed sockets

(depth room control module incl. mounting plate approx. 12 mm),

Connection to the Hoval bus system via RJ45 plug connection or via plug terminals (max. 0.75 mm²), white high-gloss cover

Consisting of:

- TopTronic® E room control module white
- Surface-mounted assembly frame white
- Designer frame white
- Wall mounting adapter
- Fitting accessories

Notice

Take account of additional accessories for alternative installation!

6037 071

Part No.


**TopTronic® E room control module
comfort white with 4.3\"**

touchscreen
Operation of all heating and hot water
circuits connected to the bus system,
Customer-specific configurable
start screen,

Display of current weather or
weather forecast (only possible in
combination with HovalConnect),
Efficient control of the heating system
by simple working with day programmes,
Analysis function (outdoor temperature,
room temperature, solar yield curves
etc.)

Optimum mounting height: 1500-1600 mm

For installation on the wall

- with a surface-mounted assembly
frame (depth room control module
incl. frame approx. 25 mm)

- with a wall mounting plate for
concealed sockets

(depth room control module incl.
mounting plate approx. 12 mm),

Connection to the Hoval bus system

via RJ45 plug connection or via
plug terminals (max. 0.75 mm²),

white high-gloss cover

Consisting of:

- TopTronic® E room control module white
- Surface-mounted assembly frame white
- Designer frame white
- Wall mounting adapter
- Fitting accessories

Notice

Take account of additional accessories
for alternative installation!


**TopTronic® E room control module
comfort black with 4.3\"**

touchscreen
Operation of all heating and hot water
circuits connected to the bus system,
Customer-specific configurable
start screen,

Display of current weather or
weather forecast (only possible in
combination with HovalConnect),
Efficient control of the heating system
by simple working with day programmes,
Analysis function (outdoor temperature,
room temperature, solar yield curves
etc.)

Optimum mounting height: 1500-1600 mm

For installation on the wall

- with a surface-mounted assembly
frame (depth room control module
incl. frame approx. 25 mm)

- with a wall mounting plate for
concealed sockets

(depth room control module incl.
mounting plate approx. 12 mm),

Connection to the Hoval bus system

via RJ45 plug connection or via
plug terminals (max. 0.75 mm²),

black high-gloss cover

Consisting of:

- TopTronic® E room control module black
- Surface-mounted assembly frame white
- Designer frame black
- Wall mounting adapter
- Fitting accessories

Notice

Take account of additional accessories
for alternative installation!

6037 069

6037 070

Accessories

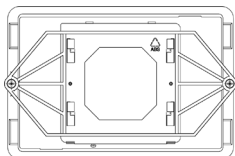


Expanded language package TopTronic® E

One SD card is necessary per control module

Consisting of the following languages:
HU, CS, SL, RO, PL, TR, ES, HR, SR,
JA, DA, NL

6039 253



Clamping device set for control module

Can be used for mounting the control module

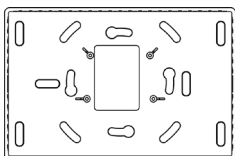
- in the Hoval wall casing
- in front of the control panel, cut-out 136 x 88 mm with a material thickness of 0.5-6 mm, connection to the Hoval bus system either via RJ45 plug connection or via plug-in terminals (max. 0.75 mm²)

Consisting of:

- clamping device
- clamping device adapter for 138 x 92 mm (wall casing) material thickness (0.5–3 mm)

6041 812

Included in the scope of delivery for the TopTronic® E control module



On-wall mounted installation frame black

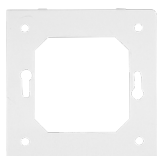
Can be used for on-wall mounting of the control module/room control module black, depth of control module incl. on-wall mounted installation frame approx. 25 mm, colour matt black, connection to the Hoval bus system by RJ45 plug connection or plug-in terminals (max. 0.75 mm²)

Consisting of:

- On-wall mounting frame black
- fixing accessories incl. screws for locking the control module

6035 797

Included in the scope of delivery for the TopTronic® E control module



Wall installation adapter

Can be used for wall installation of the control module/room control module black or white, very flat design possible depth of control module incl. on-wall mounted installation frame is only 13 mm, use requires an existing in-wall socket or connection to the Hoval bus system is by plug-in terminals (max. 0.75 mm²)

2053 488

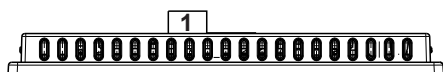
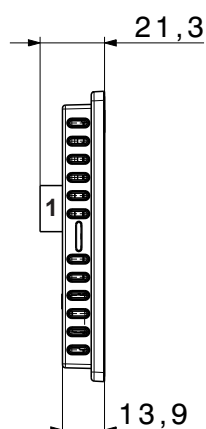
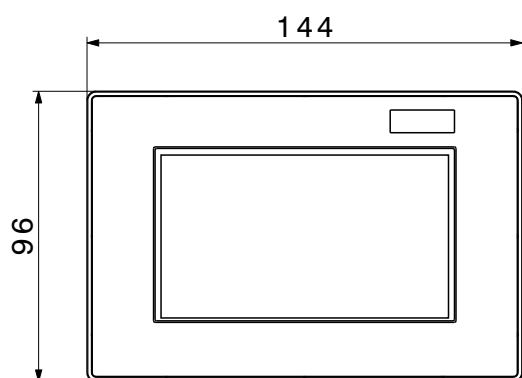
Included in the scope of delivery for the TopTronic® E control module

TopTronic® E control module / room control module

- Connection to the Hoval bus system via RJ45 plug connection or plug terminals (max. 0.75 mm²)
- Resolution: 480 x 320
- Voltage: 12 V DC 100 mA
- Humidity (in operation): 20-80 % RH, non-condensing

■ Dimensions

TopTronic® E control module / room control module (Dimensions in mm)



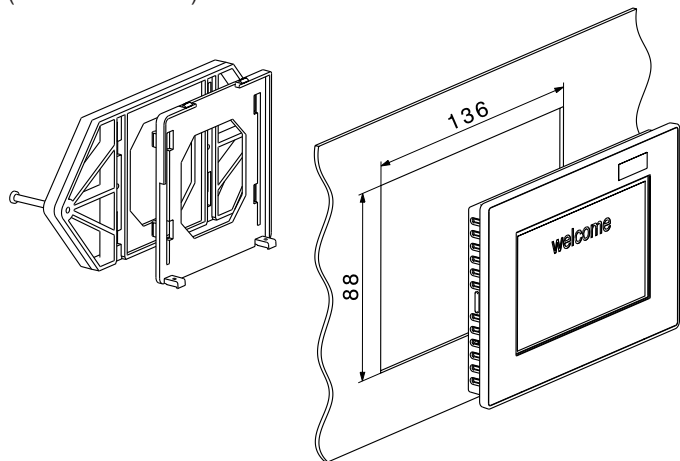
- 1 Removable RJ45 plug connection
Alternative: plug terminal (max. 0.75 mm²)

TopTronic® E control module / room control module

Installation

Installation in control panel

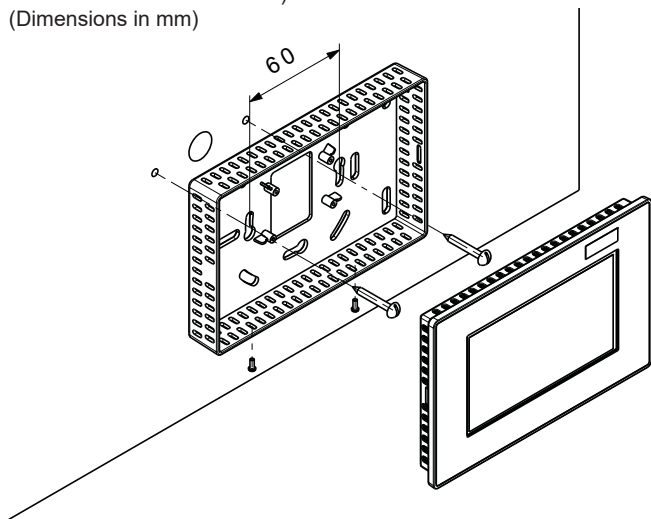
(Clamping device is included in the scope of delivery for the control module)
(Dimensions in mm)



- Cut-out: 136 x 88 mm
- Material thickness: 0.5-6 mm
- Connection to the Hoval bus system either via RJ45 plug connection or plug terminals (max. 0.75 mm²)

Wall mounting with surface-mounting frame

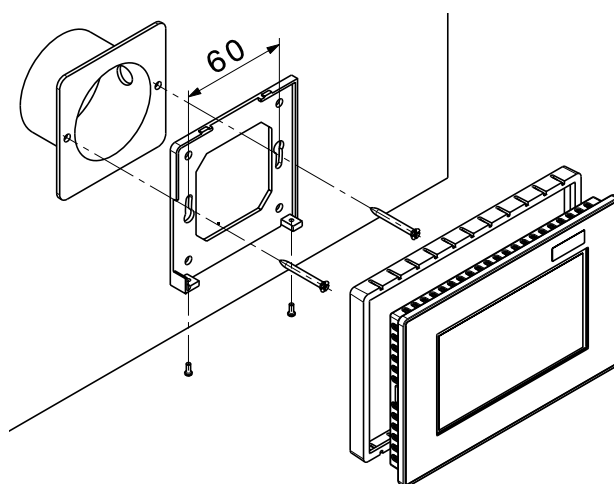
(Surface-mounting frame is included in the scope of delivery for the room control modules)
(Dimensions in mm)



Wall mounting with wall mounting plate with concealed sockets

(Wall mounting plate is included in the scope of delivery for the room control modules)

- Connection to the Hoval bus system via RJ45 plug connection or plug terminals (max. 0.75 mm²)
- (Dimensions in mm)



TopTronic® E

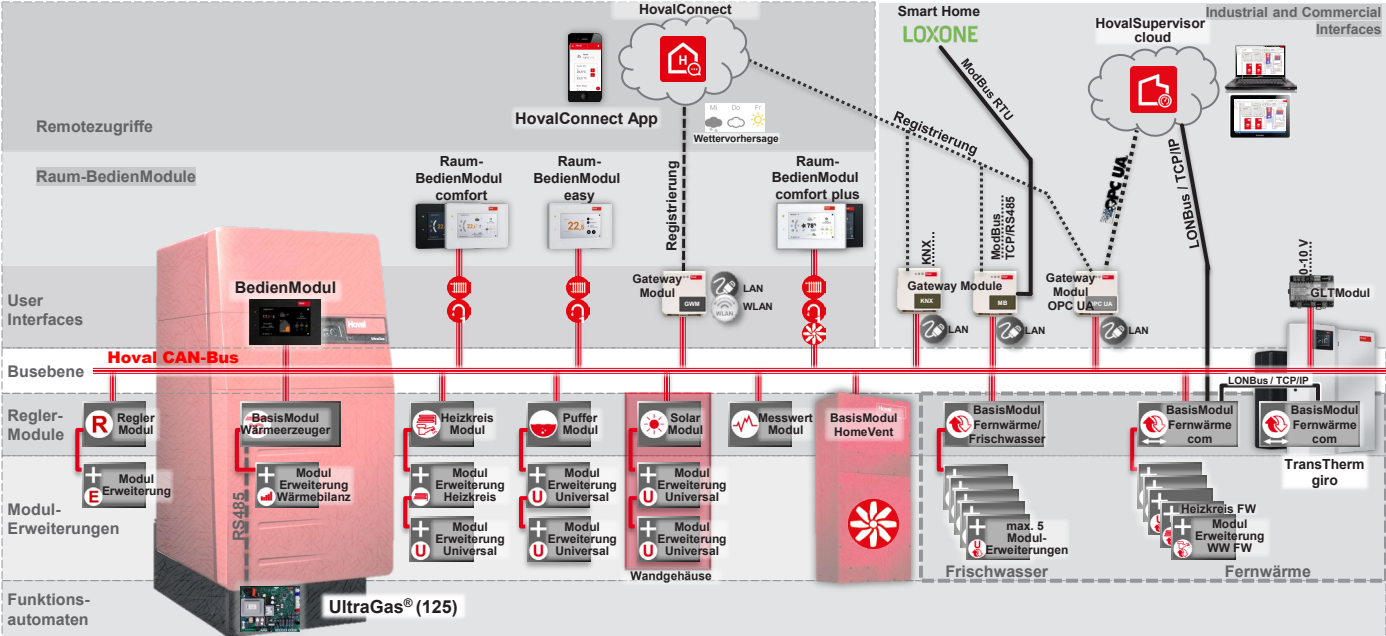
The TopTronic® E controller system is based on independent controller units (modules) that are connected together via the Hoval CAN bus. The individual modules are set using a central operating unit (master operation).

Max. 16 controller modules can be connected. Of these, max. 8 modules can be equipped as basic module heat generators (TTE H-Gen).

Max. 2 module expansions can be connected to the controller modules.

Notice

Max. 1 module expansion can be connected to the basic module heat generator (TTE-WEZ)!



Number of TopTronic® E modules that can be installed in the heat generator:

Heat generator \ TopTronic® E	Basic module heat generator (TTE-WEZ)	Heating circuit/hot water module (TTE-HK/WW) or buffer module (TTE-PS) or solar module (TTE-SOL) or module expansion (TTE-FE)*	Heating circuit/hot water module (TTE-HK/WW) or buffer module (TTE-PS) or solar module (TTE-SOL) or module expansion (TTE-FE)*	Heating circuit/hot water module (TTE-HK/WW) or buffer module (TTE-PS) or solar module (TTE-SOL) or module expansion (TTE-FE)*	Heating circuit/hot water module (TTE-HK/WW) or buffer module (TTE-PS) or solar module (TTE-SOL) or module expansion (TTE-FE)*
UltraSource® B	installed	•	•		
Belaria® comfort ICM	installed	•	•		
Belaria® pro	installed	•	•		
Belaria® twin I/IR	installed	•	•		
UltraSource® T	installed	•	•		
Thermalia® comfort	installed	•	•		
Thermalia® twin	installed	•	•		
Thermalia® dual	installed	•	•		
BioLyt (13-43)	installed	•	•		
TopGas® combi	no modules can be installed				
TopGas® classic (12-30)	no modules can be installed				
TopGas® classic (35-80)	(can be installed)				
TopGas® classic (100,120)	(can be installed)				
UltraGas® (15-100)	installed	•	•		
UltraGas® 2 (125-230)	installed	•	•		
UltraGas® 2 (300-500)	installed	•	•	•	
UltraGas® 2 (530-1550)	installed	•	•	•	•
UltraGas® 2 D (250-460) (per boiler)	installed	•	•		
UltraGas® 2 D (600-1000) (per boiler)	installed	•	•	•	
UltraGas® 2 D (1060-3100) (per boiler)	installed	•	•	•	•
UltraOil® (16-80)	installed	•	•		
UltraOil® (110-300)	installed	•	•	•	
UltraOil® (320D-600D) (per boiler)	installed	•	•	•	
Max-3 (420-2700)	installed	•	•	•	

Notice

Alternatively, there is room for other TopTronic® E modules which have dimensions that are the same as or smaller than the modules mentioned above.

* Max. 2 module expansions can be connected to the controller modules.

Exception:

Max. 1 module expansion can be connected to the basic module heat generator!

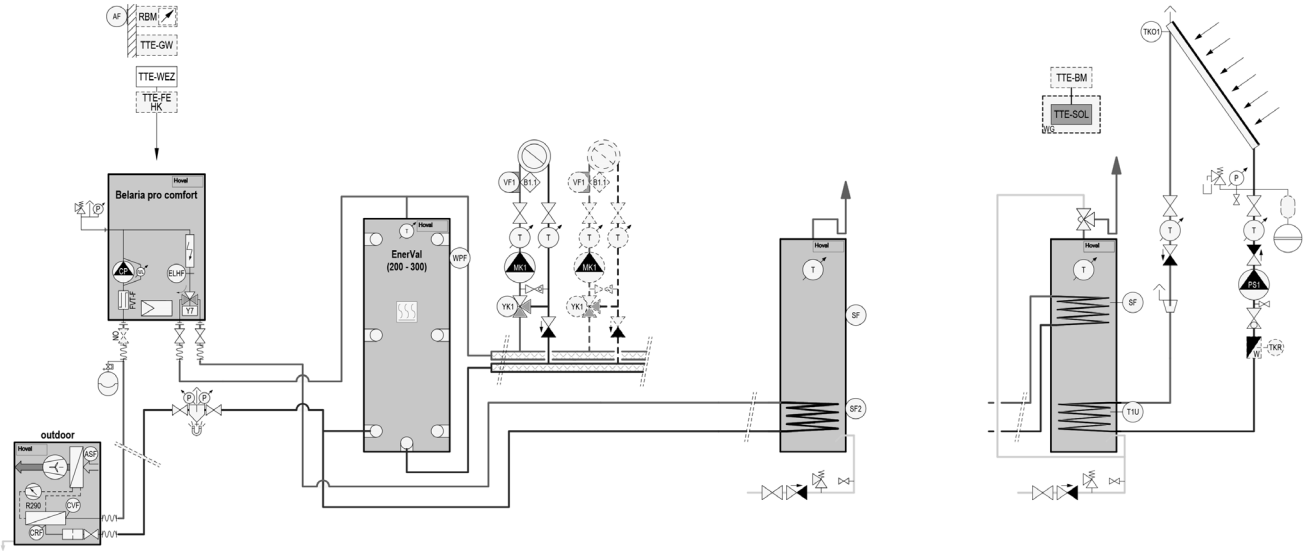
Heat generator \ TopTronic® E	Basic module district heating com (TTE-FW com)	Module expansion district heating (TTE-FE FW)	Module expansion district heating (TTE-FE FW)	Module expansion district heating (TTE-FE FW)	Module expansion district heating (TTE-FE FW)	Module expansion district heating (TTE-FE FW)	Ethernet connection
TransTherm® giro	installed	•	•				•
TransTherm® giro plus	installed						•
TransTherm® pro S/RS	installed	•	•	•	•	•	•

Calorifier charging module \ TopTronic® E	Basic module district heating/ fresh water (TTE-FW)	Module expansion district heating (TTE-FE FW)	Module expansion district heating (TTE-FE FW)	Module expansion district heating (TTE-FE FW)
TransTherm® aqua L	installed	no further modules can be installed		
TransTherm® aqua L-FW				
TransTherm® aqua F/FS	installed	no further modules can be installed		

Sample order
TopTronic® E components

System	Belaria® pro comfort	Hot water Design/type Free-standing tank	Heating circuit assembly Connection type Calorifier before distributor 1 MC + 1-...MC
BBALE030			

System	Solar collectors	Hot water Design/type Free-standing tank (2 coils)
BAAE020		



Designation	Part No.	Functions
TTE-WEZ TopTronic® E basic module heat generator	installed	
TTE-SOL TopTronic® E solar module	6037 058	- Controller module with integrated regulating functions for: - one/two circuit solar energy plants - integrated heat balancing - various additional functions
<i>Optional</i>		
RBM TopTronic® E room control module		Operation of the Hoval heating system from the living area
TopTronic® E room control module easy white	6037 071	
TopTronic® E room control module comfort white	6037 069	
TopTronic® E room control module comfort black	6037 070	
TTE-GW TopTronic® Gateway		App or browser access permits access to the TopTronic® E system
HovalConnect LAN	6049 496	
HovalConnect WLAN	6049 498	
TTE-FE HK TopTronic® E module expansion heating circuit	6034 576	- Expansion to the inputs and outputs of the basic module heat generator or the heating circuit/domestic hot water module for implementing the following functions: - 1 heating/cooling circuit w/o mixer or - 1 heating/cooling circuit with mixer

Further information
see separate chapter in the “Controls” chapter

Safety measures for EMC-compliant installation

- Cables carrying mains voltage must be routed separately from sensor or data bus cables. A minimum distance of 2 cm between the cables must be observed. Cable crossovers are permitted.

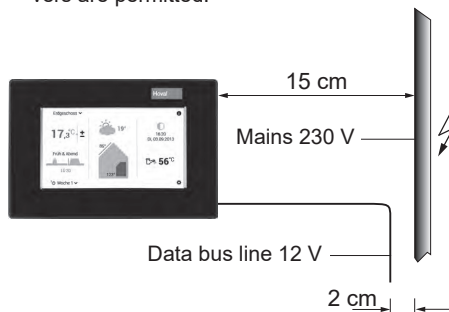


Fig. 1: Minimum distances for electrical installation

- In the case of controller modules with their own mains supply, it is imperative that cables carrying mains voltage are routed separately from sensor or data bus cables. If cable ducts are used, these must be provided with separator strips.
- When installing controller modules or room control modules, maintain a minimum clearance of 40 cm from other electrical devices with electromagnetic emissions, such as power contactors, motors, transformers, dimmers, microwave ovens and TV sets, loudspeakers, computers, mobile phones, etc.

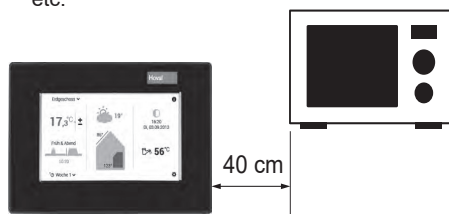
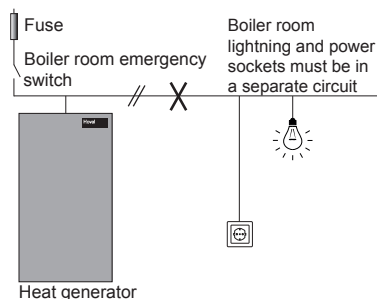


Fig. 2: Minimum distance from other electrical units

- Avoid unnecessary cable lengths, including in spare cables
- Coils of relays, contactors and other inductors in the panel, and possibly in the vicinity, must be connected. The connection can be made with RC elements, for example.
- Measures must be taken in the building and on electrical equipment to protect the devices against overvoltage caused by lightning strikes
- The mains connection for the heating system must be designed as an independent electrical circuit. Neither fluorescent lamps nor other sources of interference for the relevant machinery may be connected or capable of connection.



- Equipotential bonding must be established between the individual control components, control panels and the heating system
- Shielded cables must be used for the data cables.
Recommended versions:
J-Y(ST)Y 2 x 2 x 0.8 mm
- Shields of data cables, analog signal cables and power cables must be connected to earth over a large area with a highly conductive connection. The cable shields must be connected to a shield bar directly after the entry of the cable into the panel.
- Multiple earthing of a cable is not permitted (ripple pickup)

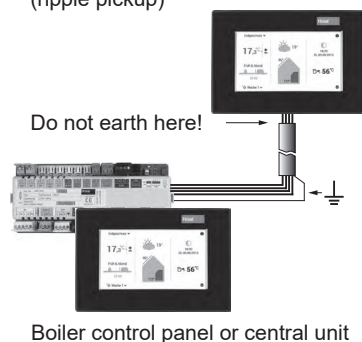


Fig. 4: One-sided earthing of the shielding

In the case of star-shaped data bus networks, double earthing is not permitted. The earthing must be effected one-sided at the star point!

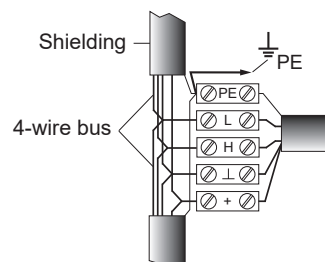


Fig. 5: Earthing for star-shaped data bus

- The outdoor sensor must not be fitted in the vicinity of transmitters and receivers (on garage walls near receivers for garage door openers, amateur radio antennae, radio alarm installations or in the immediate vicinity of large transmitters etc.).

Maximum permitted cable lengths for cables carrying sensor and low voltage (without PWM):

- Min. 0.5 mm² (e.g. J-Y(ST)Y 2 x 2 x 0.8 mm)
- Max. permitted cable length: 50 m
- Max. PWM cable length according to pump specification

Longer connecting cables should be avoided because of the danger of radiated interference!

Inter-building installations

- Inter-building installations and laying the bus line underground are not permitted without prior engineering and additional measures (see notice below).
- Where possible, avoid routing low-voltage and safety extra-low voltage cables (CAN bus line) in parallel in adjacent buildings (overbuildings) or through underground car parks. If this cannot be avoided, one or more of the following options should be selected to improve the decoupling:
 - Increase the spacing distance
 - Route cables in a metal cable tray or metal cable duct that is enclosed on all sides, and must be well earthed
 - Use high-quality twisted-pair cables
- Potential differences between CAN_H, CAN_L and ground must be kept low
- If there are higher potential differences, the frequency of errors will increase until the point when bus traffic is completely blocked

Dangers with installation across buildings without engineering

- Increased susceptibility to interference, communication problems
- Voltage surge damage

Notice

Engineering and additional measures for the Hoval CAN bus are mandatory for the following conditions:

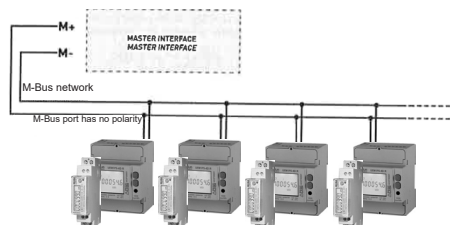
- solutions involving inter-building installations
- cable lengths > 100 m in the building
- stub lines/star cabling > 15 m
- complex CAN bus topologies

These measures must be planned in advance by professional Hoval project support and include additional components such as CAN bus repeaters or CAN fibre optic converters.

To ensure correct electrical installation of unit connection and equipotential bonding (energy supply company and building installation), all applicable laws, regulations and standards must be complied with; in particular, the regulations of the responsible energy supply company. Common equipotential bonding must be carried out in accordance with the regulations and standards. The cable shield is not allowed to be used for equipotential bonding. The work is only allowed to be carried out by qualified specialist personnel. It is the responsibility of the electrician to ensure appropriate EMC installation.

M-Bus interface

The connection of the stations to the M-Bus is possible in line or star topology. The wiring among the stations should be carried out with a cable with a cross-section not less than 0.5 mm². The use of a type J-Y(ST)Y n x 2 x 0.8 mm cable is recommended. The M-Bus cable is protected against reverse polarity, i.e. the wires can be swapped over.



Weather sensor

- Install $\frac{2}{3}$ of the way up the facade, not above windows or under porch roofs
- Place on the side of the building where the rooms important for measuring the temperature are located, as follows:

Main rooms distributed

- Install the sensor on the north wall or the north-west corner

South-facing main rooms

- Install the sensor on the west wall if there are thermal radiator valves, otherwise on the south wall

East-facing main rooms

- Protect the sensor against the morning sunlight
- If the weather sensor is exposed to full sunlight for more than 2 hours, we recommend the sensor should be covered

Room air sensor

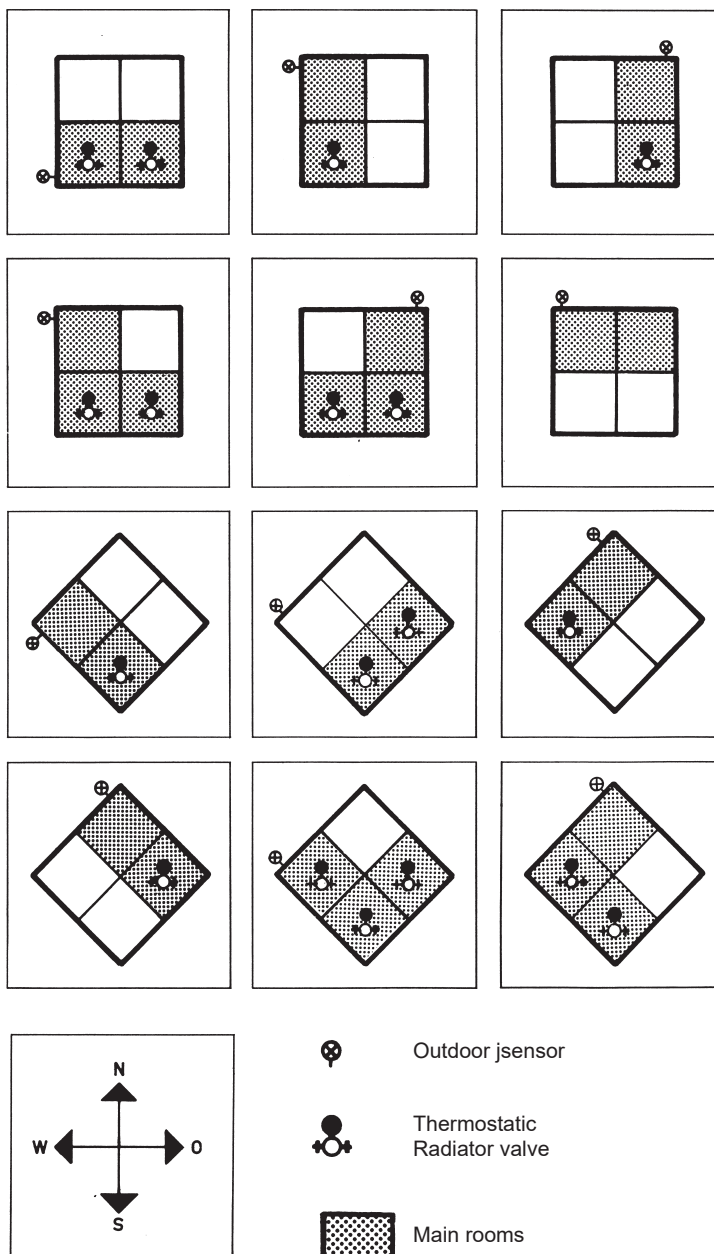
- Place on an interior wall in the main occupied room. Do not expose to sunlight or effects of other heat sources (chimney wall, proximity to radiators, draughts, TV set, light source)
- Do not cover by furniture or curtains
- Approx. 1.6 m above the floor
- Seal the installation pipe to prevent draughts
- No thermostatic valves are allowed to be used in the same room

Flow temperature sensor

- Mount on the heating flow. If the pump is in the flow, mount it immediately after the pump. If the pump is in the return, mount approx. 1.5 m after the mixing point.
- Mount the contact sensor on the bare metal flow pipe
- Attach the immersion sensor in a pipe bend so the immersion sleeve is pointing opposite to the flow

Return temperature sensor

- Mount directly before the boiler return connection
- Mount the contact sensor on the bare metal pipe
- Attach the immersion sensor in a pipe bend so the immersion sleeve is pointing opposite to the flow







Hoval quality.
You can count on us.

Hoval

Hoval is one of the leading international companies for heating and indoor climate solutions. Drawing on more than 80 years of experience and benefiting from a close-knit team culture, the Hoval Group delivers exciting solutions and develops technically superior products. This leadership role requires a sense of responsibility for energy and the environment, which is expressed in an intelligent combination of different heating technologies and customised indoor climate solutions.

Hoval also provides personal consultations and comprehensive customer service. With around 2500 employees in 15 companies around the world, Hoval sees itself not as a conglomerate, but as a large family that thinks and acts globally.

Hoval heating and indoor climate solutions are currently exported to more than 50 countries.

Responsibility for energy and environment

Your Hoval partner

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