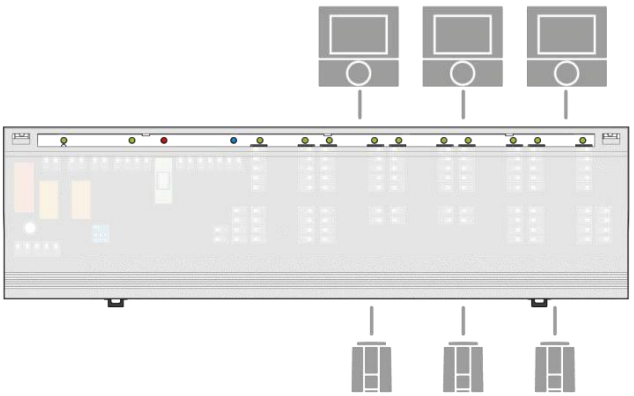
KM691 KELOX connection unit 230V

The **KM691 KELOX connection unit** is the central connection unit of an individual room control for surface temperature control of heating systems.

With minimal effort, the **KM691 KELOX connection unit** can be wired together with all system components, such as room thermostats and actuators. The system components are supplied directly via the power supply of the KM691 KELOX connection unit. All switch commands of the room thermostats are forwarded directly via the KM691 KELOX connection unit to the connected components.

This high-quality KM691 KELOX connection unit is available with 6 zones in 230 V. In order to satisfy the desired requirements, four versions are available to choose from. In the full equipment, the KM691 KELOX connection unit has comprehensive functions for energy-efficient and system-friendly comfort mode.

With numerous differentiation options, you will secure an optimum market position with the KM691 KELOX connection unit. It offers easy installation and maximum comfort for surface temperature control.



Performance features

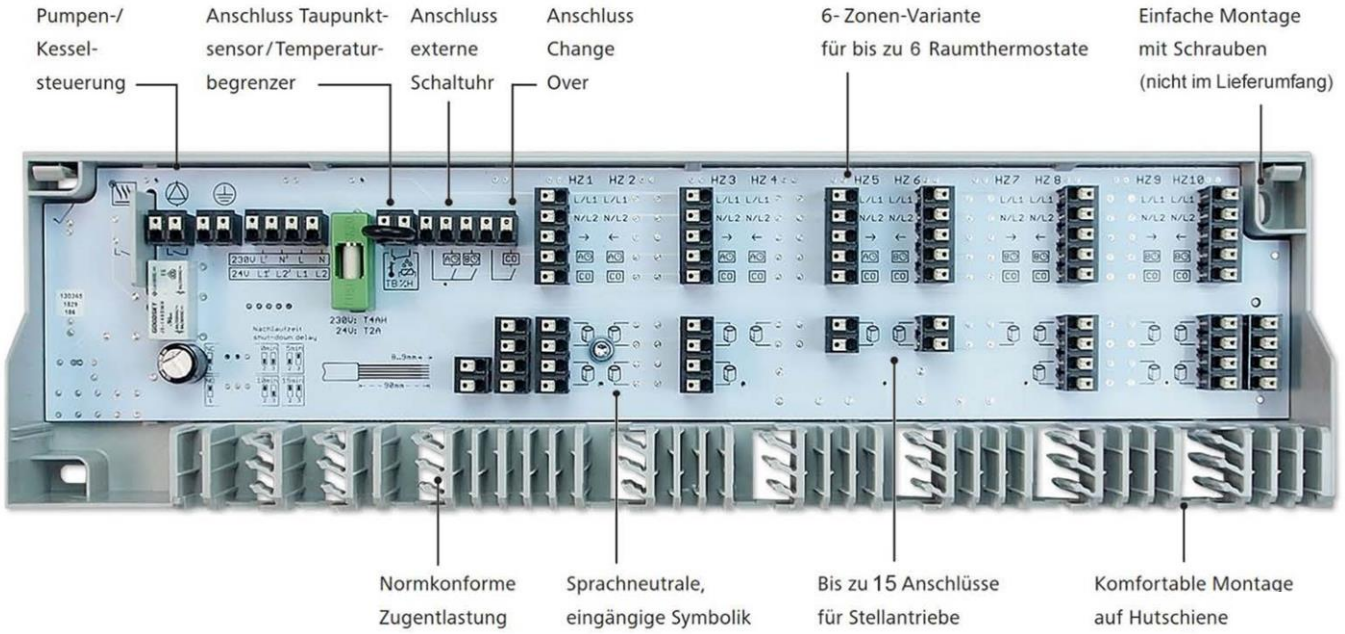
- 6 zones
- 230 V design
- Connection of the room thermostats using 5-pole cable
- Up to 15 actuators connectible
- Fittings for heating and/or cooling systems
- Easy, intuitive installation and operation
- Tried-and-tested cable feed and standard-compliant strain relief
- Screw-free clamp connection technology
- Clearly laid out terminal clamps
- Lowering channel for time-controlled lowering of the room temperature
- Pump/boiler controller
- Adjustable shut-off delay for the pump and boiler control
- Connection for a temperature-limiter/dew point sensor
- High functional stability
- Maintenance-free

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

Fittings

- Mains feed-through terminal/boiler switch
- Easy pump control
- Signal input for a temperature-limiter/dew point sensor
- Lowering channel - connection for an external system clock
- Change-over heating/cooling signal
- Assembly possible on top-hat rail
- Direction of operation currentless closed (NC)
- Connection option for an external time switch (e.g.: KM690U)

Device overview



1	**Boiler/pump control unit**	▪ Pump switching via a potential-free contact ▪ Pre-defined switch-on and switch-off delay of 2 minutes ▪ Pump protective circuit ▪ Cyclical sequencing of the pumps every 14 days for 1 minute after the last sequencing
2	**Protective earth conductor intermediate connector**	▪ Terminal for intermediate connection of the protective earth conductor of an electrical consumer such as a boiler or pump
3	**Power supply / mains feed-through terminal**	▪ Mains connection of KM691 KELOX connection unit ▪ Mains feed-through terminal for connecting an electrical consumer, such as a pump or boiler
4	**Temperature limiter / dew point monitor**	▪ The temperature limiter prevents flow temperatures in the underfloor heating which are too high, using a potential-free contact ▪ The dew point monitor monitors the system in the cooling mode and switches off if condensation is detected
5	**Lowering channel - connection for an external system clock**	▪ Transmission of up to two timer signals for the time-controlled lowering or raising of the room temperature to connected room thermostat via a potential-free contact ▪ An external system clock may be used as a signal source (e.g.: KM690U
6	**Change-over heating/cooling**	▪ Switch-over of the entire individual room control between heating and cooling ▪ Supply of an external signal via potential-free contact ▪ Forwarding of the switch-over signal to connected room thermostat
7	**Connection for room thermostats**	▪ Fast connection of up to 6 room thermostats ▪ Power supply for connected room thermostats
8	**Cable feed and strain relief**	▪ Well-proven, intelligent cable routing and strain relief in accordance with DIN EN 60730-1
9	**Connection for actuators**	▪ Power supply for connected actuators ▪ Valve protection function in all outlets ▪ Cyclical sequencing of the actuators every 14 days for 10 minute after the last sequencing ▪ Prevents valves from jamming in time periods without temperature control

Technical data

Number of maximum heating zones		6
Article number		5881160
Operating voltage		230 V ±10 % 50 Hz
max. power consumption (without consumer pump/boiler)		50 VA
Fuse protection		T4AH
Number of heating zones		6
max. number of room thermostats		6
max. number of terminal clamps for actuators		15
max. number of connectible actuators â 1Q		15
max. nominal load of all actuators		24 W
Pump switch		Closer contact (single-pole switching) / direct connection possible via L'/N'
Boiler switch		Closer contact (single-pole switching)
Pump control and boiler control	Switching capacity	2 A, 200 VA inductive
	Switching element	Relay
	Switch-on delay[3]	2 min
	Shut-off delay[4]	2 min
Valve protection function[4]		14 days/10 min
Pump protection function		14 days/1 min
Changeover input		switchable via potential-free contact
Temperature limiter/monitor		potential-free opener contact, switchable, 24 V/230 V, 8 A
Cover lock		double locking of the lick on the housing - cannot be opened without tools
Permitted ambient temperature		0 to +50 °C
Permitted storage temperature		-20 to +70 °C
Permitted ambient humidity		80 % non-condensing
Terminal clamps		screw-free terminal technology for 0.2 bis 1.5 mm², vertical wire insertion
Connection wire	solid	NYM-J/NYM-O (max. 5 x 1.5 mm²)
	flexible	H03V2V2H2-F / H05V2V2H2-F
Strain relief		integrated
Standards and regulations		EN 60730-1, EN 60730-2-9
Protection class		II
Protection type		IP 20
Material	Cover	ABS
	Housing	ABS
Colour	Cover	Transparent, polished in the vicinity of the LEDs
	Housing	light grey (RAL7035)
Weight	Standard Plus	394 g
Dimensions (H x L x D)		90 x 326.5 x 52 mm
Assembly type		Wall assembly / DIN rail (TS35 / 35 x 7.5mm) (not in scope of supply)

3 switch-on impulses under 2 min. are suppressed
4 only JM690U

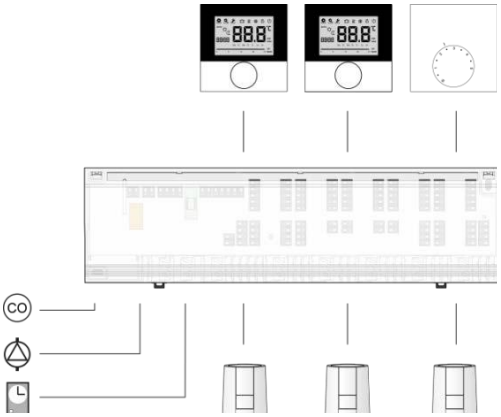
Dimensions Connection unit

All details in mm

System diagrams

A possible system version is shown below for the setup of an individual room control. An individual room control is realisable with a KM691 KM691 KELOX connection unit and corresponding components. Individualisation of the individual room control can take place by adding compatible components to the system, such as

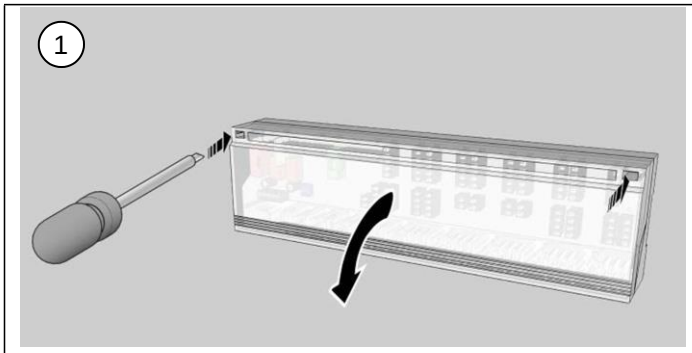
- the KM594 KELOX room thermostat – Analogue
- the KM690 KELOX room thermostat – Analogue
- the KM690D KELOX room thermostat – Digital-Standard
- the KM690U KELOX room thermostat Digital-Control
- KM596 thermal actuators



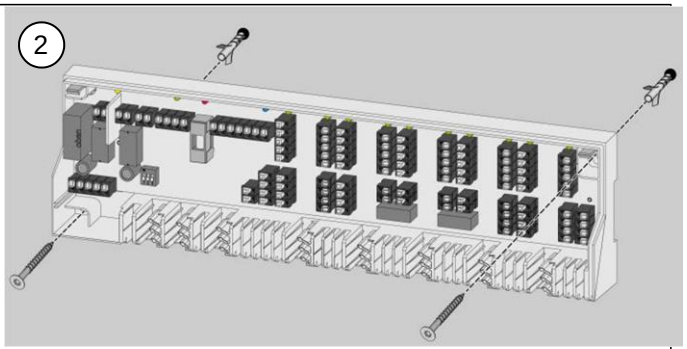
Assembly

The KM691 KELOX connection unit can be assembled in the heating circuit distributor on the rear wall or on a top-hat rail, as well as near the heating circuit distributor, directly on the wall. **ATTENTION! A 230V connection must be available in a distribution box!**

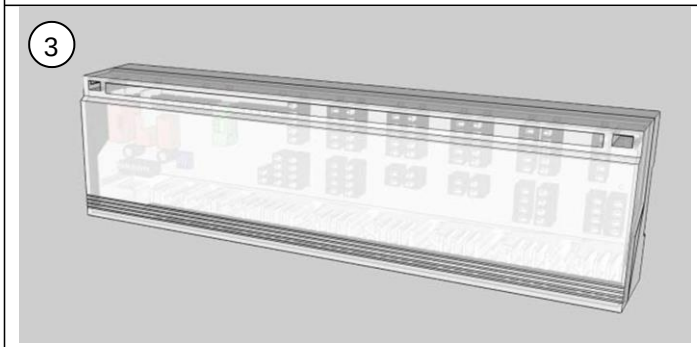
Wall assembly



Loosen the housing cover on both of the locking points with a screwdriver and remove.



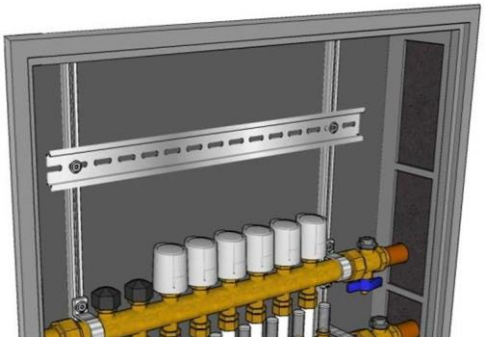
Mark both of the fastening holes for the connection unit and attach. Ensure that the connection unit is aligned horizontally. Depending on the condition of the wall, mount the connection unit with wall plugs and screws (2 units 4 mm).



Align the connection unit and hand-tighten the screws. Route the cables through the strain relief into the housing and wire the connection unit within a short time using the clamping/plug-in technology. Close the lid and attach the main voltage. The connection unit is now ready for use.

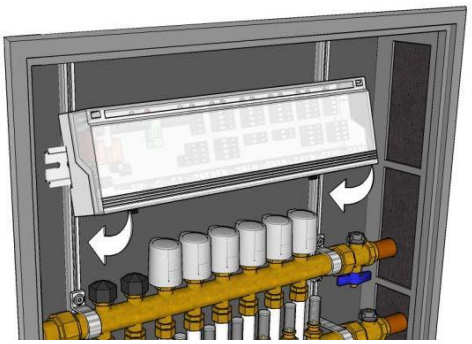
Top-hat rail assembly

1



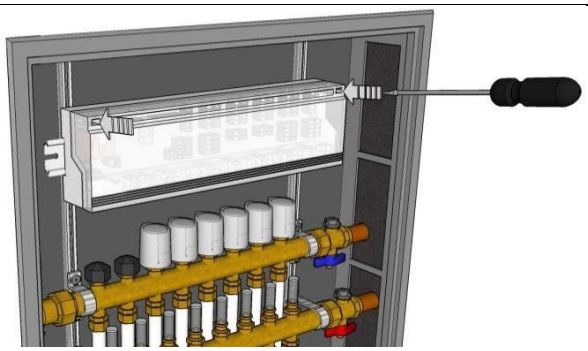
Use a surface-mounted top-hat rail or assembly in a heating circuit distribution cabinet or use an existing one.

2



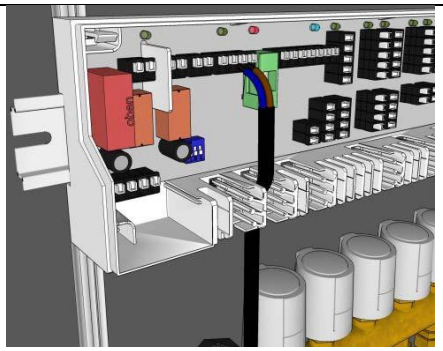
Position connection unit on the top-hat rail with a slight tilt and snap it into place.

3



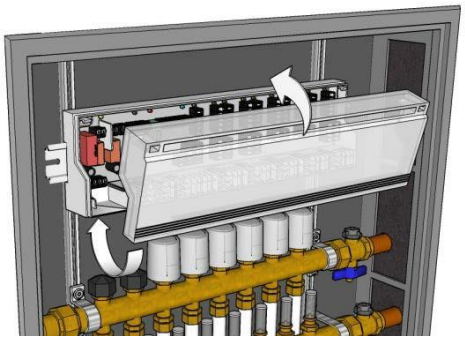
Loosen the housing cover on both of the locking points with a screwdriver and remove.

4



Route the cable through the strain relief into the housing and wire the connection unit within a short time using the clamping/plug-in technology.

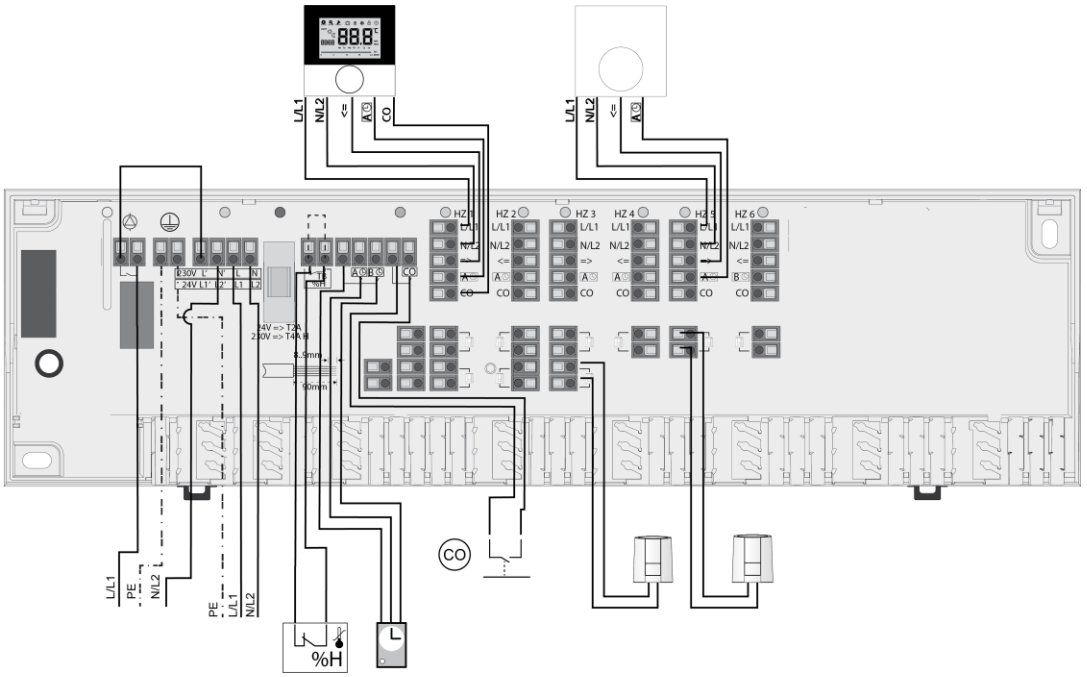
5



Close the lid and attach the main voltage. The connection unit is now ready for use.

Wiring

- Digital controller
- Analogue controller
- Actuator
- Boiler
- Pump
- Voltage source
- %H Temperature limiter / dewpoint sensor
- System clock
- CO Change-over heating/cooling
- Cooling



Additional information at www.kekelit.com/control

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