

Radio-controlled heating systems

Overview of transmitters

Radio transmitters

Surface mounted radio sensor (transmitter), super flat design

Surface mounted radio sensor (transmitter) with clock

Surface mounted radio sensor (transmitter) with clock

Surface mounted radio sensor (transmitter) for averaging purposes

Surface-mounted set-point adjustor as transmitter, superflat design

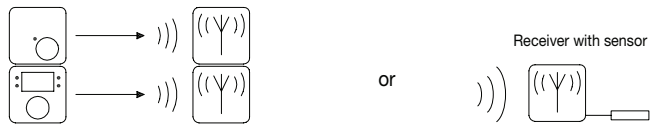
Surface-mounted set-point adjustor as transmitter with clock

Other radio transmitter variants are currently in the design stage or are available on request.

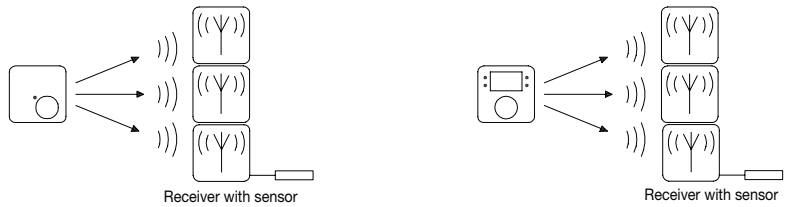
Your application?

Application examples (transmitter/receiver combination options):

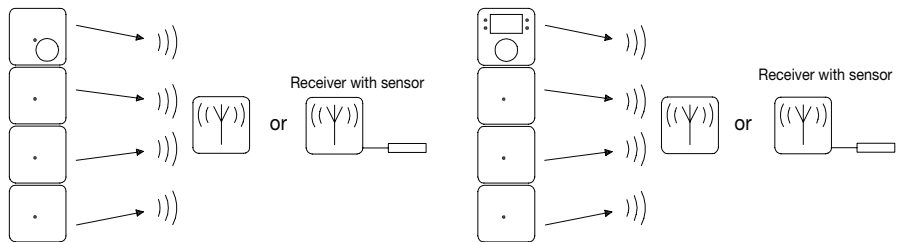
One transmitter and one receiver.



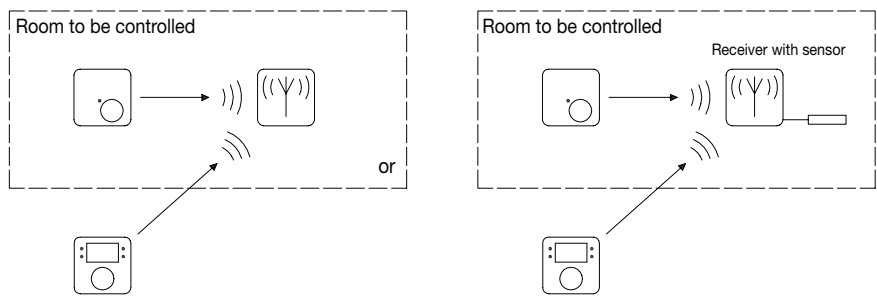
One transmitter and an unlimited number of receivers.



Averaging: one receiver averages over the values delivered to it by max. 7 actual value transmitters and by one transmitter with reference setting function.




Master-slave operation (comfort temperature indication via the related room transmitter and time-controlled ECO mode operation, ON/OFF switching, holiday and party function all enabled through the also "learned" clock transmitter).




Radio-controlled heating systems

Overview of receivers


Radio receivers



Surface mounted radio receiver




Flush-mounted radio receiver



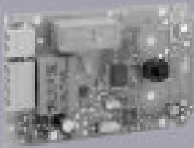
Radio receiver, pluggable

Other radio receiver variants are currently in the design stage or are available on request.


Your application?



Multiple radio receiver for installation into a heating circuit distributor (4 or 8 heating circuits)



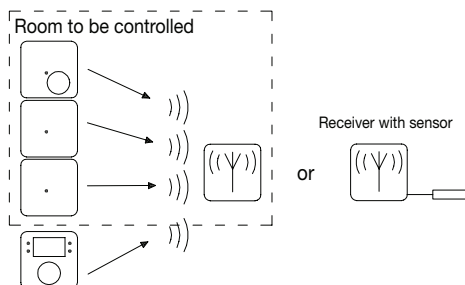
Built-in radio receiver



Radio receiver with sensor for installation in the distribution box IP 65

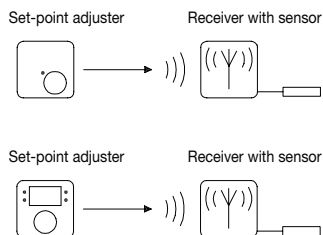
Application examples (transmitter/receiver combination options):

Master-slave operation including averaging (one receiver averages of the values delivered to it by max. 7 actual value transmitters and by one transmitter with reference setting function; time-controlled ECO mode operation, ON/OFF switching, holiday and party function all enabled through the also taught clock transmitter).

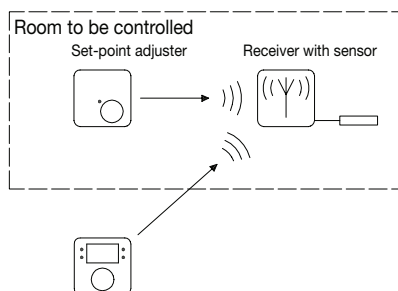


Application examples for floor tempering systems:

One transmitter (set-point adjuster without actual-value sensor) to one or an unlimited number of receivers with floor sensor.



Master-slave operation (comfort temperature pre-set via the set-point adjuster without actual-value sensor. Time-controlled ECO operation, ON/OFF, holiday and party function via the taught-in sensor).



Radio-controlled heating systems – TRANSMITTERS

Radio room temperature sensor – Design BERLIN



Technical Data	Application
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Operating voltage: batteries, 2 x Micro AAA, 1,5 V / 1,000 mAh

Setting ranges: 5 ... 30 °C

Sensor: NTC (internal)

Temperature decrease: FTRFBu... (clock): adjustable
FTRFB...: 4 K (fixly adjusted), or can, if used along with model FTRFBu (master function) be set to the decrease temperature adjusted at the radio-controlled time-switch clock.

Transmit frequency: 868.3 MHz

Radio transmission range: within the line of sight (150 m), approx. 30 m inside of buildings (min. 1 ferro-concrete ceiling/-wall or 3 brick walls)

Range suppression: mechanical (facility underneath of the adjusting knob)

LEDs: for "learn" mode and battery empty indication

Degree of protection: IP 30

Protection class: III

Equipment: range suppression, tabletop stand integrated in all housings of the Berlin 2000 design line

Admissible air moisture: max. 95 % r.h., non condensing

Storage temperature: device: -20 ... +70 °C, batteries: 20 °C

Regulations and tests: acc. to EN 300 220

Ambient temperature: -10 ... +50 °C








Housing colour: pure white, similar to RAL 9010

Housing material: plastic (ABS)

Mounting/installation: directly on the surface/wall by means of screws or adhesive strips. Berlin 3000 design housing also available with wall suspension element JZ-18 (see "Accessories")



Radio room temperature sensor for the acquisition of temperatures in living spaces, offices and hotel rooms that are subject to normal pollution. The devices are, if used in association with alre radio receivers, specially suited for the control of temperatures in individual rooms. The devices are particularly qualified for application cases in the building reconstruction sphere or wherever heating systems are to be extended. Their application helps to avoid expensive cutting up and/or plaster works for the laying of electric cables. The devices are particularly suited for use within office storeys or floors where flexibility with regard to the interior design is in the fore. Berlin 3000 design housing Programming mode known from mechanical switch clocks: programming enabled for each day individually by means of so-called "electronic stops". Lowest switching time: 15 min.

Changing the battery: a low battery is signalled by a blinking red LED on the transmitter. A low battery indication is also provided on the display of the clock transmitter.






Model/Picture	Item No.	Application	PG
FTRFB-280.119 	BA 010409	Sensor for the acquisition of inroom temperatures and for the radio transmission of the sensed data to the controller (receiver) – with reference setter and super flat Berlin 1000 design housing.	A
FTRFB-280.120 	BA 010401 	Temperature sensor for room temperature recording and radio transmission to the controller (receiver), with set point adjuster and "Comfort/Eco" operating mode switch, "Berlin 1000 superflat" housing.	A
FTRFB-280.101 	BA 010400 	Temperature sensor for room temperature recording and radio transmission to the controller (receiver), without set point adjuster , for averaging, "Berlin 1000 superflat" housing (available from Q4 2009)	A
FTRFB-080.119 	BA 010101	Sensor for the acquisition of inroom temperatures and for the radio transmission of the sensed data to the controller (receiver) – with reference setter and Berlin 2000 design housing.	A
FTRFB-080.120 	BA 010102	Sensor for the acquisition of inroom temperatures and for the radio transmission of the sensed data to the controller (radio receiver) – with reference setter and operating mode selector switch "Comfort/ECO" including Berlin 2000 design housing.	A

Radio-controlled heating systems – TRANSMITTERS

Radio room temperature sensor – Design BERLIN

Model/Picture	Item No.	Application	PG
FTRFB-080.101 	BA 010100	Sensor for the acquisition of inroom temperatures and for the radio transmission of the sensed data to the controller (receiver) – without reference setter for averaging purposes. Housing design: Berlin 2000.	A
FTRFBu-180.121 	BA 010201	Sensor for the acquisition of inroom temperatures and for the radio transmission of the sensed data to the controller (receiver) including clock. Simplest operation through direct select keys for ON/OFF, party mode setting and the setting of the desired operating mode and for the calling of information pertaining to all actual settings. Temperature setting knob with °C scale. Indication of temperature/time in °C or °F (Fahrenheit), summer-/winter time changeover, child protection, valve protection and self-learning mode (can be deactivated), Berlin 3000 design housing, suited as master for master-slave operation, with backlighting (3rd separate battery only for backlighting – advantage: controller function is guaranteed, even when the lighting battery has run down).	A
FTRFBu-180.117	BA 010200	Sensor for the acquisition of inroom temperatures and for the radio transmission of the sensed data to the controller (receiver) including clock. like FTRFBu-180.121, but without backlighting.	A


Transmitters for tempering systems (available from Q3 2009):

Model/Picture	Item No.	Application	PG
PTRFB-283.020 	BA 010800 	Temperature set-point adjuster with on/off switch, for set-point input and radio transmission to the controller (e.g. built-in receiver HTFRU-110.124 with temperature sensor), without actual value sensor, purely for tempering, without recording room temperature, housing “Berlin 1000 superflat”.	A
PTRFBu183.021 	BA 010802 	Temperature set-point adjuster with clock for set-point input and radio transmission to the controller (e.g. built-in receiver HTFRU-110.124 with temperature sensor), without actual value sensor; purely for tempering, extremely easy to operate via direct select keys for “ON/OFF”, vacation setting, party setting, operating mode and calling of information to display all actual settings. Temperature setting knob with numerical scale. Temperature/time display in °C or °F (Fahrenheit), summertime-wintertime changeover, child protection; can be used without clock as master for set-point adjuster; with backlighting (3rd separate battery only for backlighting – advantage: controller function is guaranteed, even when the lighting battery has run down). Housing “Berlin 3000”.	A
PTRFBu183.017 	BA 010801	Like PTRFBu183.021, but without backlighting.	A

Factory-set weekly switching programme on clock transmitter:

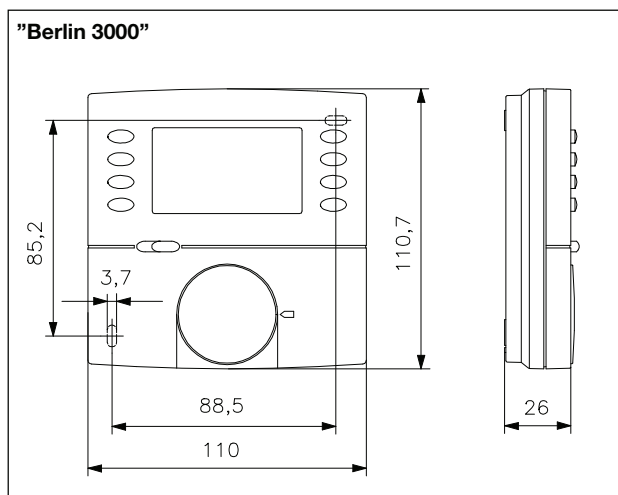
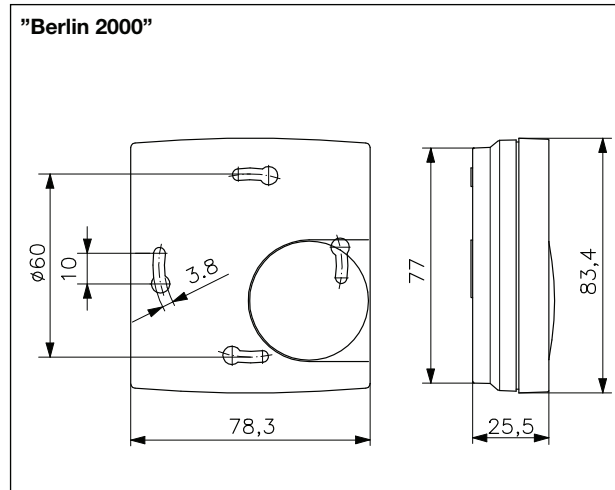
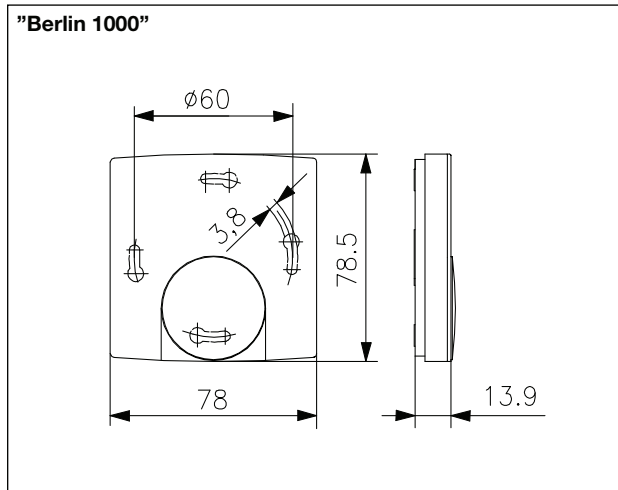
Mon. to Fri. – comfort times: 5am to 9am and 4pm to 10pm

Sat. and Sun. – comfort times: 6am to 10pm

Accessories			
JZ-18 	MN 990002	Snap-on type adapter plate for clock transmitter for universal installation (controller can be removed), see page 160.	K

Radio-controlled heating systems – TRANSMITTERS

Radio room temperature sensor – Design BERLIN








Radio-controlled heating systems – RECEIVERS

Radio temperature controllers



Technical Data		Application
Operating voltage:	230 V ~ / 50 Hz	<p>These radio heating controllers enable, if used in association with alre radio temperature sensors, to realise the control of temperatures in individual rooms. The devices are particularly qualified for application cases in the building reconstruction sphere or wherever heating systems are to be extended.</p> <p>Battery change: The requirement of a soon battery change is indicated by a red LED on the transmitter that starts flashing. The required change is beyond that also indicated on the display of the radio-controlled time switch at an already early stage.</p> <p>The restoration of the radio link between the transmitter and the receiver is, in the event a voltage loss occurred at the receiver or the transmitter, effected all automatically after the restoration of the power supply.</p> <p>Other radio receiver variants are currently in the design stage or are available on request.</p>
Switching difference:	approx. 0.5 K (room temperature)	
Transmit frequency:	868.3 MHz	
Antenna: (4-/8-channel)	Integrated in the heating circuit distributor strips.	
Indications:	Three-colour LED indicator. With devices with several receive channels there exists one indicator LED each per channel (indication of the "learning" mode, of the correct functioning of the of the radio connection and indication of a radio link loss). In addition, the associated channel(s) can, subject to the existence of an established radio connection, be indicated in retrospect by actuating the "learn" key at the transmitter.	
Protection class:	see "Equipment"	
Admissible air moisture:	95 % r. H., non condensing	
Storage temperature:	-20 ... +70 °C	
Housing material:	see "Equipment"	
Electrical connections:	0.5 ... 2.5 mm ²	
Emergency operation:	All receivers change, in the event of a radio link loss, over to emergency mode operation (40 %)	

Picture	Model/ Item No.	Equipment	PG
	BA 110300	1-channel radio temperature controller with Schuko adapter plug, make contact 13.5 (3) A for loads of up to 3,000 W; application purpose: heating; ambient temperature 0 ... 40 °C; degree of protection IP 30; protection class II (for protection class I and II compliant consumers); housing: polycarbonate (PC), pure white, similar to RAL 9010.	A
	BA 110500	1-channel radio temperature controller for surface installation/ wall mounting integrated in Berlin 2000 design housing; make contact 13.5 (3) A for loads of up 3,000 W; application: heating, ambient temperature 0 ... 40 °C, degree of protection: IP 30; protection class II (for protection class I and II compliant consumers); housing: plastic (ABS), pure white, similar to RAL 9010.	A
	BA 110200	1-channel radio temperature controller for flush installation with 50 x 50 mm cover and "Berlin" frame. Make contact; switching capacity: up to 30 °C ambient temperature: max. 2,500 W (max. 11 A), from 30 °C ambient temperature: max. 1,700 W (max. 7.5 A), application: heating, ambient temperature: -20...50 °C at front. When rear-mounting radiators, a distance of at least 3 cm between the radiator and the wall must be maintained and the maximum surface temperature of the radiator (100 °C) must not be exceeded (note operating instructions), degree of protection: IP 30, protection class II for consumers in protection classes I and II, housing cover: polycarbonate, pure white, similar to RAL 9010, frame: ABS, pure white, similar to RAL 9010.	A
 	BA 110201	Radio heating controller for flush installation in the distributor socket. Protection rating: IP 65 , switching capacity: up to 30 °C. Ambient temperature: max 2300 W (max 10 A). The UPE radio temperature controller is used together with an a) radio room temperature sensor with set-point adjuster FTRFB ... or a b) radio set-point adjuster PTRFB ... for electrical floor heating. The controller has a sensor that is integrated into the floor and, depending on the taught-in sensor, assumes the role of a monitor (Floor temperature control) or control sensor. There are two different control modes, depending on whether taught-in sensor a) or b) is used; this is independently recognised by the remote heating controller. Whereas the radio heating controller is located in the wall near the floor along the load lines, the transmitter a) or b) can be placed anywhere in the room. The monitor function is fixed at 45 °C, hysteresis 3 K. In the room control mode, it is possible to select between mean-value control and central control. Application: Ideal for electric underfloor heating systems in bathrooms and kitchens.	A




NEW

NEW

available from Q3 2009

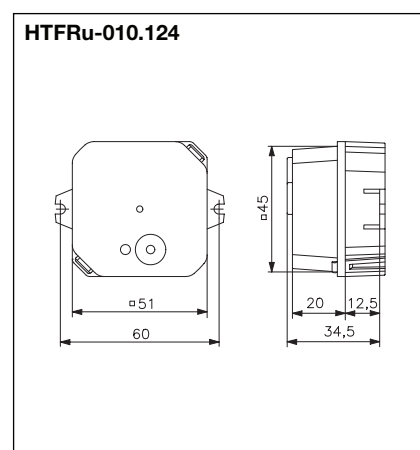
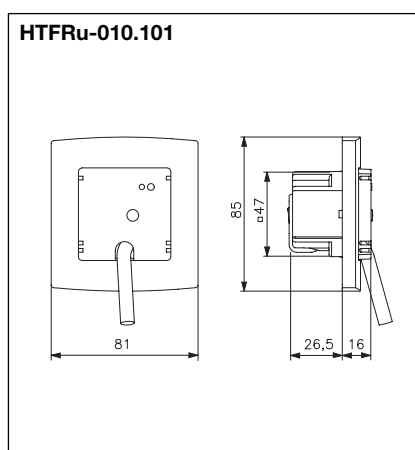
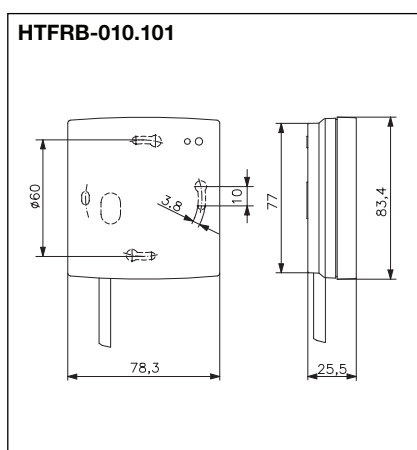
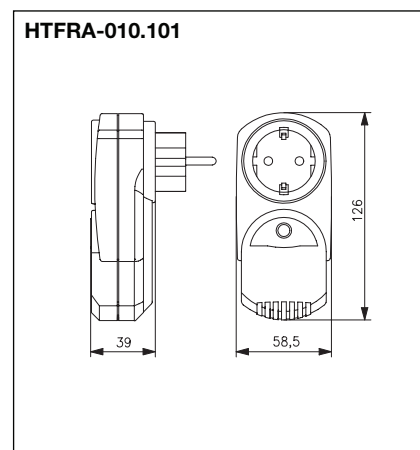
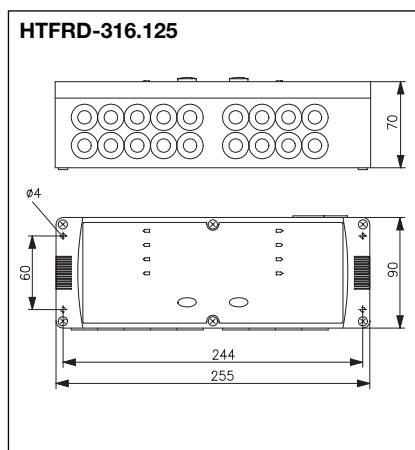
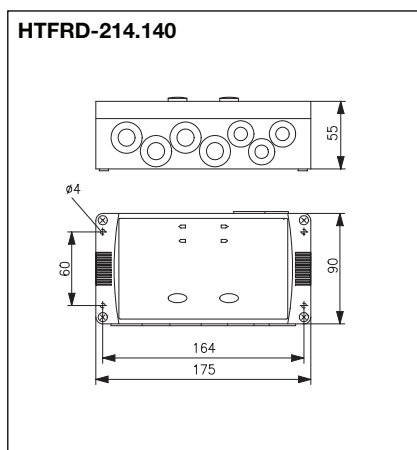
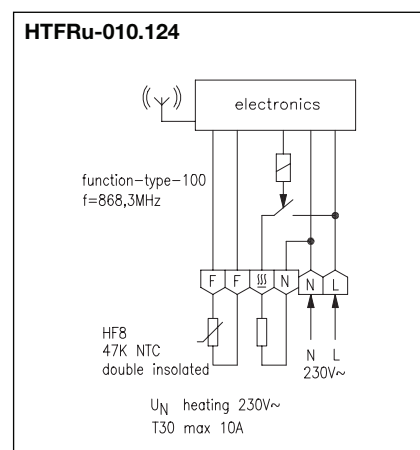
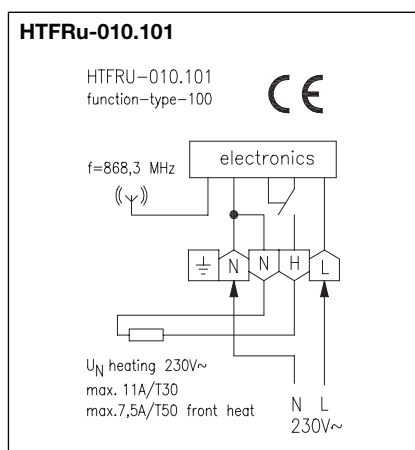
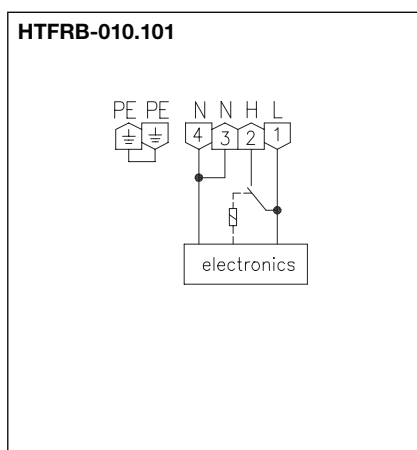
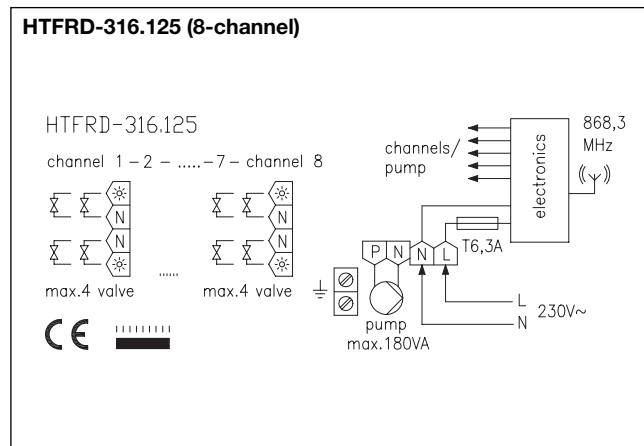
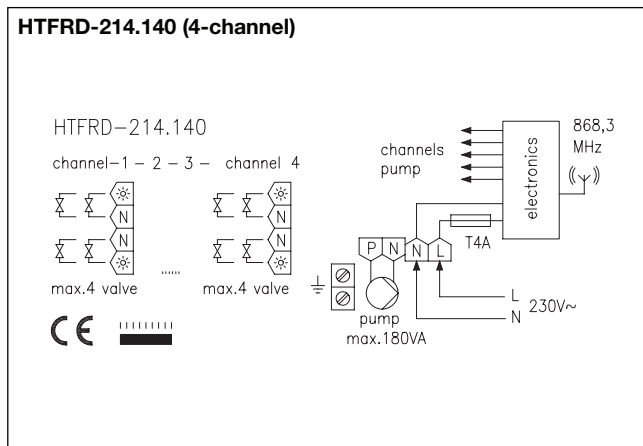
Radio-controlled heating systems – RECEIVERS

Radio temperature controllers

Picture	Model/Item No.	Equipment	PG
	BA 120600	<p>4-channel radio temperature controller for installation in the heating circuit distribution cabinet; application purpose: heating; 4 relay contacts (make contact) 5 (1) A; max. 4 actuating drives per heating circuit can be connected directly (max. 16 actuating drives in total), including pump module; ambient temperature -10...50 °C; degree of protection: IP 65; protection class II (for protection class I and II compliant consumers); housing: plastic, light grey (RAL 7035); functions: max. 4 time zones possible (i.e. up to 4 clock equipped transmitters can be connected); master-slave operation; emergency mode operation; averaging (up to 8 transmitters can be "learned" per channel + 1 transmitter for master-slave operation); radio link status indication for each channel. The top of the device can, in order to enable the "learning" of the radio transmitters mounted in the different rooms, be removed. The power supply is, during this time, ensured by means of a 9 V block battery. The "learning" of the individual transmitters can be realised very easily through the channel selection option in combination with the related "learn" key. Fixing: 4 screws for wall mounting are included in the standard delivery scope – optionally, there is a magnet fixing set (JZ-24) available that facilitates the installation of the device inside the heating circuit distribution cabinet.</p>	A
	BA 120400	<p>8-channel radio temperature controller for installation inside the heating circuit distribution cabinet; application purpose: heating; 8 relay contacts (make contact) 5 (1) A, max. 4 actuating drives per heating circuit can be connected directly (max. 32 actuating drives in total), including pump module; ambient temperature -10...50 °C; degree of protection: IP 65; protection class II (for protection class I and II compliant consumers); housing: plastic, light grey (RAL 7035); functions: max. 8 time zones possible (i.e. up to 8 clock equipped transmitters can be connected); master-slave operation; emergency mode operation; averaging (up to eight 8 transmitters can be "learned" per channel + 1 transmitter for master-slave operation); radio link status indication for each channel. The top of the device can, in order to enable the "learning" of the radio transmitters mounted in the different rooms, be removed. The power supply is, during this time, ensured by means of a 9 V block battery. The "learning" of the individual transmitters can be realised very easily through the channel selection option in combination with the related "learn" key. Fixing: 4 screws for wall mounting are included in the standard delivery scope – optionally, there is a magnet fixing set (JZ-24) available that facilitates the installation of the device inside the heating circuit distribution cabinet.</p>	A
Accessories			
	BN 990002	Magnet fixing set for simple and secure fixing of the multi channel receivers.	K

Radio-controlled heating systems – RECEIVERS

Radio temperature controllers



Overview of heating controllers