



1.1 Room temperature control

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ClimaCon F Room thermostats for surface heating



The ClimaCon F room thermostats are used for temperature control of surface heating and cooling systems as well as heating and cooling ceilings in detached houses or dwellings. Depending on the room thermostat, switching between heating and cooling is possible via a change-over signal, e.g. from the heat pump. The ClimaCon F room thermostats can be used in combination with electrothermal ac-

tuators (e.g. Aktor T 2P). Alternatively, connection to a connecting block (e.g. FloorCon) is possible. The simple surface-mounted installation and quick configuration make the product very installer-friendly.

Depending on the model, there are room thermostats with reduced display, with integrated time switch and setting options via app.



ClimaCon F 100 for two pipe applications, heating or cooling, follower

Control	Two point / PWM	Operation	At the room thermostat
Installation	Surface mounting	Switching h / c*	Via change-over
Setback*	Via leader room thermostat		

Tension	Suitable for	Item No.
230 V AC	Electrothermal actuators (two point) "normally closed"	1155010
24 V AC	Electrothermal actuators (two point) "normally closed"	1155510



ClimaCon F 310 for two pipe applications, heating or cooling, leader

Switching between time programme and manual mode possible.

Control	Two point / PWM	Switching h / c*	Via change-over
Installation	Surface mounting	Other outputs	1 x potential-free
Setback*	Via time programme (adjustable in the app) Via Eco button at the room thermostat	Communication	Bluetooth
Operation	At the room thermostat With smartphone app		

Tension	0 - 10 V*	Temperature sensor*	Suitable for	Item No.
230 V AC	No	No	Electrothermal actuators (two point) "normally closed"	1155031
24 V AC	Yes	Yes	Electrothermal actuators (two point) "normally closed" Electrothermal actuators (0 - 10 V) "normally closed"	1155531



ClimaCon F 90 for two pipe applications, heating only/cooling only, follower

Control	PWM	Setback*	Via leader room thermostat
Installation	Surface mounting	Operation	At the room thermostat

Tension	Suitable for	Item No.
230 V AC	Electrothermal actuators "normally closed" (heating) Electrothermal actuators "normally open" (cooling)	1155009



ClimaCon F 210 for two pipe applications, heating only/cooling only, leader

Switching between time programme and manual mode possible.

Control	Two point / PWM	Operation	At the room thermostat
Installation	Surface mounting		With smartphone app
Setback*	Via time programme (adjustable in the app) Via Eco button at the room thermostat	Communication	Bluetooth

Tension	Suitable for	Item No.
230 V AC	Electrothermal actuators (two point) "normally closed"	1155021

ClimaCon F 90

ClimaCon F 100

ClimaCon F 210

ClimaCon F 310



	230 V	230 V	24 V	230 V	230 V	24 V
Item no.	1155009	1155010	1155510	1155021	1155031	1155531

Application

Heating only / Cooling only	●	—	—	●	—	—
Heating or cooling (switchable)	—	●	●	—	●	●

Display

Setpoint temperature	●	●	●	●	●	●
Actual temperature	—	—	—	●	●	●
Status (heating / cooling)	—	—	—	●	●	●
Mode (Auto / Eco)	—	—	—	●	●	●

Setting options

Temperature setting at the room thermostat	●	●	●	●	●	●
Temperature setting via time profiles in the app	—	—	—	●	●	●
Setback activation at the room thermostat	—	—	—	●	●	●
Timed setback via app	●*	●*	●*	●	●	●
Setback temperature	4 K	4 K	4 K	Flexible via app	Flexible via app	Flexible via app
Temperature limitation via app	—	—	—	●	●	●
External limiter function – automatic switch-off when reaching the max. / min. temperature set via app	—	—	—	—	—	●

* Leader function - only possible if leader room thermostats (ClimaCon F 210 / F 310) or a FloorCon connecting block are used.

Room thermostats heating, flush mounting



The flush-mounted electric room thermostat is required in conjunction with the Aktor T 2P electrothermal actuators (two point) for individual room temperature control.

Heating: Use electrothermal actuators (two

point) "normally closed". Temperature setback possible via external time switch.

Cooling: Use electrothermal actuators (two point) "normally open".



Room thermostat for two pipe applications, flush mounting

Setpoint range can be limited by concealed locking clips.

Control Two point Setback* Via external time switch (follower function)

Tension	Suitable for	Item No.
230 V AC	Electrothermal actuators "normally closed" (heating) Electrothermal actuators "normally open" (cooling)	1152071

Room thermostats heating/cooling



The electronic surface-mounted room thermostat is used in conjunction with electromotive or electrothermal actuators for individual room temperature control in heating and cooling

systems. It can also be used in three or four pipe systems and has an adjustable neutral zone between heating and cooling stage. The temperature is set at the room thermostat.

Room thermostat for four pipe applications, surface mounting

Neutral zone Adjustable between 0.5 K and 7.5 K



Tension	Control	Suitable for	Item No.
24 V AC	0 - 10 V (2x)	Electrothermal actuators (0 - 10 V) "normally closed"	1152151 °

Room thermostats heating/cooling with fan control



Room thermostats for electrical control of fan coil units for demand-oriented heating and cooling. Depending on the room thermostat, fan coil units in two or four pipe systems can

be controlled.

The temperature as well as the fan speed can be set at the room thermostat. Furthermore, various operating modes can be set.



Room thermostat for two pipe applications, heating only/cooling only, 230 V

Setback* Via adjustable time programme Installation Flush mounting

Tension	Control	Suitable for	Item No.
230 V AC	Two point	Electrothermal actuators "normally closed" (heating) Electrothermal actuators "normally open" (cooling)	1152453



Room thermostat for two pipe applications, heating or cooling, 24 V

Installation Surface mounting Other outputs Two point auxiliary heating

Tension	Control	Suitable for	Item No.
24 V AC	0 - 10 V	Electrothermal actuators (0 - 10 V) "normally closed"	1152064



Room thermostat for four pipe applications, heating and cooling, 24 V

Installation Surface mounting Other outputs Two point auxiliary heating

Tension	Control	Suitable for	Item No.
24 V AC	0 - 10 V (2x)	Electrothermal actuators (0 - 10 V) "normally closed"	1152065

Room thermostats - Accessories

Electrical connecting block for surface heating

When using item no. 1400980 / 82 with 24 V, an external power supply of 24 V must be available. Item no. 1153053 can be used as transformer.



Description	Item No.
6 control zones, heating, 24 V / 230 V	1400980
10 control zones, heating / cooling (change-over), pump control, 230 V	1400981
10 control zones, heating / cooling (change-over), pump control, 24 V	1400982
10 control zones, heating / cooling (change-over), pump and boiler control and integrated time switch, 230 V	1400983

FloorCon Electrical connecting block with automatic hydronic balancing for surface heating and cooling



Description	Item No.
FloorCon F 200, without channel allocation, connection of 8 room thermostats / 12 actuators, 230 V	1400984 ::
FloorCon F 300, with channel allocation, connection of 8 room thermostats / 12 actuators, 230 V	1400985 ::

Temperature sensor for FloorCon

The temperature sensor is required 1x for the supply of the heating circuit distributor/collector and 1x in the return per heating circuit.



Description	Item No.
Temperature sensor for FloorCon F, 850 mm	1029094 ::

Aktor T 2P electrothermal actuator for FloorCon connecting block



Description	Item No.
Two point control, "normally closed", 230 V, 2 m cable	1012452

Safety temperature limiter**Description**

For max. limitation of the heating circuit temperature, 20 °C - 90 °C

Item No.

1344583

Sensor GA FD Dew point monitor

Is required in conjunction with room thermostats to protect against condensation on cooling surfaces.

Description

For heating/cooling applications to prevent condensation, 24 V, with change-over contact

Item No.

1141951

wibutler Smart Home system



The Smart Home sector includes the networking of several trades within individual dwellings or detached houses. By means of a gateway, various components can be integrated into the Smart Home system and controlled via smartphone, tablet or PC. By connecting the gateway to a commercially available rout-

er, remote access is easily possible while on the move.

The intelligent wibutler pro 2 gateway is the heart of the smart home. In addition to surface heating and radiators, other systems such as lighting and shading can also be integrated.



Scope of delivery

1 x R-Tronic RT B wireless thermostat item no. 1150780
 1 x mote 420 wireless actuator item no. 1150766

Item No.

1150792 ■■



OVbalance Home Basic set - radiator



Scope of delivery

1 x wibutler per item no. 1150799
 1 x R-Tronic RT B wireless thermostat item no. 1150780
 1 x mote 420 wireless actuator item no. 1150766

Item No.

1150790 °



wibutler gateway 2 (EnOcean, Zigbee, LAN, WLAN)



Operation

With smartphone app
 With tablet app
 Via computer
 Amazon Alexa

System requirements terminals

Apple: at least iOS 9

Tension

Item No.

1150791 ■■



wibutler gateway (EnOcean, Z-Wave, Zigbee, LAN, WLAN)

The lighting, shading, heating and sanitary, air conditioning, ventilation and security systems can be interconnected with the help of the wibutler gateway.

Operation	With smartphone app With tablet app Via computer Amazon Alexa	System requirements terminals	Apple: at least iOS 9 Android: at least Android 4.4
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Tension	Item No.
100 - 240 V AC	1150799 °



R-Tronic Wireless thermostat (EnOcean)

Installation	Surface mounting	Power supply	Battery operated
Communication	EnOcean	Compatible with wibutler	Yes

Designation	Humidity sensor*	EEP*	Item No.
RT B (EnOcean)	No	A5-10-02	1150780
		A5-10-03	
		A5-10-04	
		A5-10-06	
		A5-10-06 + RPS	
RTF B (EnOcean)	Yes	A5-10-11	1150781
		A5-10-12	
		A5-10-22	
		A5-10-23	



mote 420 Wireless actuator (EnOcean)

Only functions in combination with communication centres / gateways (e.g. with the wibutler gateway) and room thermostats supporting this EnOcean Equipment Profile.

Communication	EnOcean	Battery lifespan	About 2 years
Power supply	Battery operated		

Valve connection	EEP*	Item No.
Connection thread M 30 x 1.5	A5-20-01	1150766



R-Tronic System for individual room temperature control



The R-Tronic wireless thermostats with closed radio communication (proprietary) are used in stand-alone operation in connection with wireless actuators to control radiators or in connection with a multi-channel wireless receiver to control surface heating systems.

The temperature setting as well as the storage of time programmes is carried out at the wireless thermostat. Depending on the model, an additional measurement of the relative humidity in % and the CO₂ concentration in ppm is possible.

Power is supplied by batteries or a power supply unit (100 - 240 V). For the battery-operated models, power supply via the mains is possible as an alternative.

In battery operation, up to 3 participants can be taught in, in mains operation, up to 8 participants can be taught in. In mains operation it is also possible to teach in wireless actuators, window contacts and a single-channel wireless receiver. The single-channel wireless receiver enables the control of a fan depending on the set CO₂ threshold value. For this application a thermostat must be used which can measure the CO₂ concentration.



R-Tronic Wireless thermostat (proprietary radio communication)

Installation _____ Surface mounting _____ Communication _____ Proprietary radio _____

Designation	Humidity sensor*	CO ₂ sensor	Power supply	Item No.
RT B	No	No	Battery operated	1150680
RTF B	Yes	No	Battery operated	1150681
RTFC K	Yes	Yes	Plug-in power supply unit with table stand	1150682 °
RTFC K	Yes	Yes	Flush-mounted power supply unit with wall bracket	1150684 °

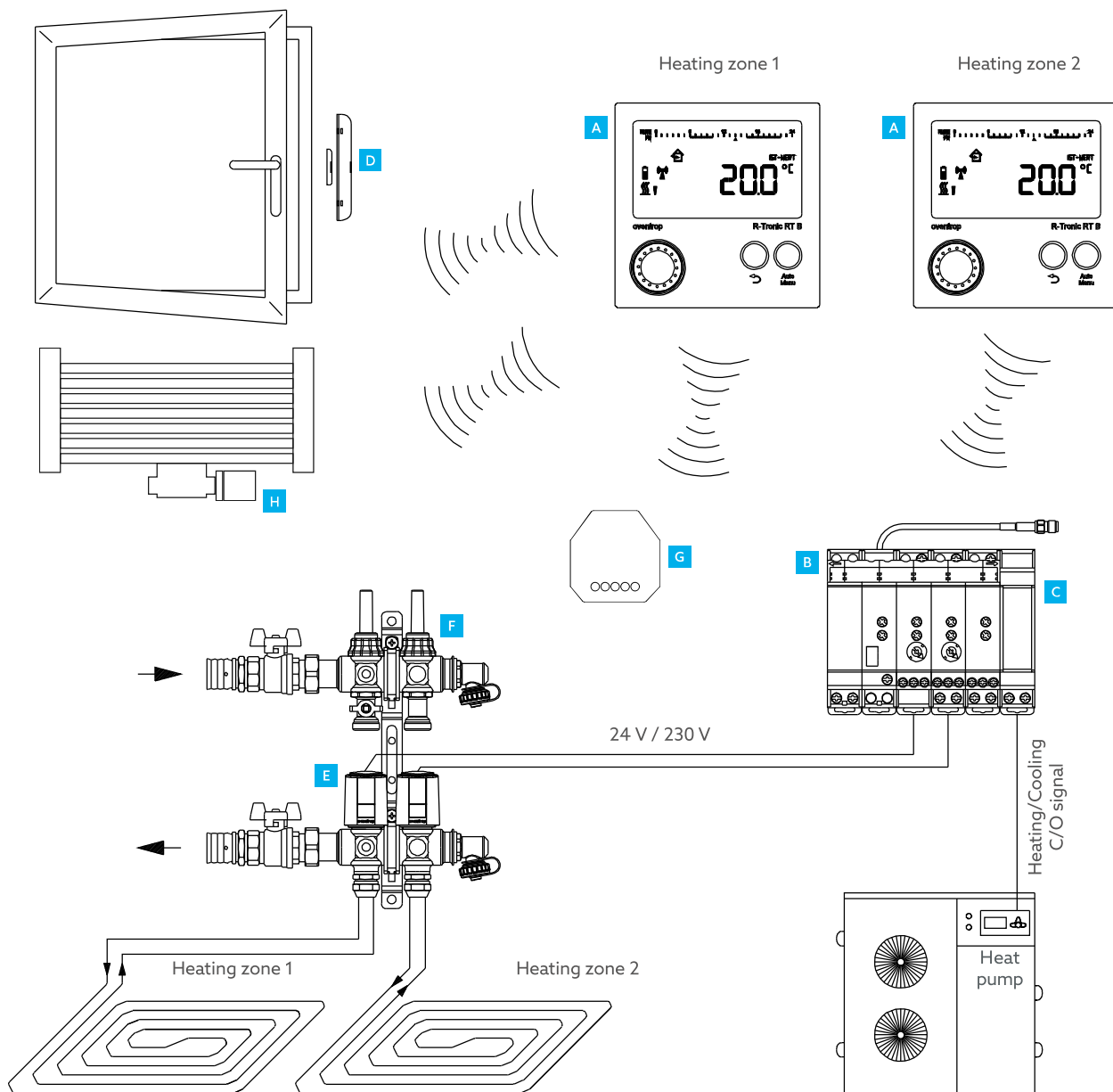
note 320 Wireless actuator (proprietary radio communication)

Compatible with R-Tronic wireless thermostats (proprietary radio communication).



Power supply _____ Battery operated _____ Communication _____ Proprietary radio _____
 Battery lifespan _____ About 2 years _____

Valve connection	Note	Item No.
Connection thread M 30 x 1.5	-	1150665
Squeeze connection	For integrated valve sets and thermostatic valves of the company Danfoss, series RA	1150675 °



A	R-Tronic RT B / R-Tronic RTF B Wireless thermostat	1150680/81
B	R-Con Wireless receiver	1150770-73
C	R-Con HC Extension module heating / cooling	1150774
D	FK-C F Wireless window contact	1153070

E	Aktor T 2P Electrothermal actuator two point control	1012415/16
F	Multidis SF Heating circuit distributor/collector	1406552-62 1404952-62
G	Wireless repeater	1153060
H	mote 320 Wireless actuator	1150665/75



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Aktor T Electrothermal actuators



Electrothermal actuators are used for heating, ventilation and air conditioning. The actuators can be used for room temperature control or as zone valves.

They can be used, for example, with conventional radiators, radiators with integrated valve sets, heating circuit distributors/collectors, radiant heating ceilings, cooling ceilings and induction units in conjunction with two point

room thermostats.

All electrothermal actuators are protected against overvoltage, a varistor is not required.

Oventrop offers actuators in the variants "normally closed" and "normally open". The model with auxiliary switch can switch e.g. a pump directly via the integrated, potential-free contact.

Aktor T 2P two point control



Valve connection	Connection thread M 30 x 1.5	Stroke	5 mm
Installation position	Any		
Installation	Plug-in connection with valve adapter		

Tension	Version	Cable* (m)	Item No.
230 V AC	"Normally closed"	1	1012415
24 V AC / DC	"Normally closed"	1	1012416
230 V AC	"Normally open"	1	1012425
24 V AC / DC	"Normally open"	1	1012426
230 V AC	"Normally closed" with integrated auxiliary switch	1	1012435
24 V AC / DC	"Normally closed"	2	1012442
230 V AC	"Normally closed"	2	1012452
230 V AC	"Normally closed"	5	1012455
230 V AC	"Normally closed"	10	1012459

Aktor T ST 0 - 10 V control



Valve connection	Connection thread M 30 x 1.5	Stroke	5 mm
Installation position	Any		
Installation	Plug-in connection with valve adapter		

Tension	Version	Cable* (m)	Item No.
24 V AC	"Normally closed"	1	1012953

Aktor T - Accessories

Valve adapter



Description

Connection thread M 30 x 1.5

Connection thread M 30 x 1.5, high model (11 mm), necessary when using the actuators item no. 10124.. and 1012953 with Hycoccon ETZ/HTZ or Multiblock T/TU/TFU/TQ and the design cover

For Oventrop valves with connection thread M 30 x 1.0 (manufactured until 1998)

For valves with squeeze connection

Item No.

1012461

1012462

1012890

1012463

Reinforcing cap



Description

For electrothermal actuators, including special valve adapter with connection thread M 30 x 1.5 for installation

Item No.

1012450

Aktor M Electromotive actuators



Electromotive actuators are used for heating, ventilation and air conditioning. Amongst others, the actuators can be used for room temperature control. They can be used, for example, with conventional radiators, radiators with integrated valve sets, heating circuit distribu-

tors/collectors (except for item no. 1012710 / 11), radiant heating ceilings, cooling ceilings and induction units.

Oventrop offers electromotive actuators with and without communication interfaces.



Aktor M steady with 0 - 10 V

With the electrical emergency control function, the actuator moves to a predefined stroke position in the event of a supply voltage failure. Various characteristic lines can be set for Cocon QTZ (item no. 1012717, PN 25 only).

Modulating proportional actuator	Yes	Stroke	4 mm
Automatic valve anti-blocking function	Yes	Cable*	1.5 m
Direction of action adjustable	Yes	Zero point detection	Yes

Tension	Electrical emergency control function	Additional two point / three point control	Position feedback	Item No.
24 V AC / DC	Yes	No	Yes	1012717
24 V AC / DC	No	Yes	No	1012725
24 V AC / DC	No	No	Yes	1012726



Aktor M two point and three point control

Automatic valve anti-blocking function	No	Cable*	1.5 m
Direction of action adjustable	No	Zero point detection	Yes
Stroke	4 mm		

Tension	Item No.
230 V AC	1012729



Aktor M two point control, with short operating time (3 s), connection thread M 30 x 1.5

Automatic valve anti-blocking function	No	Contact open - drive tappet retracts	Yes
Stroke	6.5 mm	Cable*	1.5 m

Tension	Item No.
230 V AC	1012710
24 V AC / DC	1012711



Aktor M with KNX interface

Power consumption extremely low, no external power supply necessary. With integrated binary input (e.g. for window contact, dew point sensor, motion detector).

Stroke 4 mm

Tension

21 - 32 V DC (from KNX bus)

Item No.

1012746



Aktor M with Modbus RTU interface, connection thread M 30 x 1.5

Various parameters can be configured and/or read out via Modbus RTU (e.g. volume flow, valve characteristic line, sensor type, operating hours, operating and fault messages). Two universal inputs/outputs enable the connection of temperature sensors, window contacts and humidity sensors, as well as the control of 0 - 10 V rotary actuators.

Automatic valve anti-blocking function	Yes	Cable*	1.5 m
Position feedback	0 - 100 %	Zero point detection	Yes

Tension

24 V AC / DC

24 V AC / DC

Suitable for

Cocon QTZ

Cocon QTR/QFC DN 40/50

**Stroke
(mm)**

9

14

Item No.

1012745

1158014

Actuators with radio interface



Electronic battery operated actuators for room temperature control at the radiator with communication interface:

The mote 420 wireless actuator can be used in combination with R-Tronic wireless thermostats (EnOcean) or be integrated into Smart Home systems (e.g. wibutler). The actuator is configured in the Smart Home system via app.

The mote 320 wireless actuator can be used in combination with R-Tronic wireless thermostats (proprietary radio communication). The actuator is configured at the R-Tronic wireless thermostat.

The mote 200 wireless actuator offers a stand-alone solution. The actuator with Bluetooth interface is configured via a mobile terminal or directly at the actuator.



mote 420 Wireless actuator (EnOcean)



Only functions in combination with communication centres / gateways (e.g. with the wibutler gateway) and room thermostats supporting this EnOcean Equipment Profile.

Communication	EnOcean	Battery lifespan	About 2 years
Power supply	Battery operated		

Valve connection

Connection thread M 30 x 1.5

EEP*

A5-20-01

Item No.

1150766



mote 320 Wireless actuator (proprietary radio communication)



Compatible with R-Tronic wireless thermostats (proprietary radio communication).

Communication	Proprietary radio	Battery lifespan	About 2 years
Power supply	Battery operated		

Valve connection

Connection thread M 30 x 1.5

Item No.

1150665

mote 200 Electronic wireless thermostat (Bluetooth)



Communication	Bluetooth	Battery lifespan	About 2 years
Power supply	Battery operated		

Valve connection

Connection thread M 30 x 1.5

Item No.

1150961