

THERMOB

PRODUCT LINE



- **SMART WIRELESS ROOM THERMOSTATS WITH WIFI**
- **FAN COIL SMART THERMOSTATS**
- **WIRING CENTERS: WIRED + WIRELESS**
- **3 WAY MIXING VALVE CONTROLLERS**
- **SOLAR THERMAL THERMOSTATS**
- **WATER HEATER THERMOSTATS AND TIMERS**

Mobile App for Android, iOS, WEB App.

ROOM THERMOSTAT- WIRELESS**ThermoB.RF1D.W, RF1D2.W, RF1D2A.W**

**1 zone, wire less (RF)
week schedule**

**Heat / Cool
WiFi remote control**



Room module „R1D” 90x90x23mm

Models:

Room module – wall hang or free standing, power supply 2xAAA

	Models ThermoB	WiFi	Outputs Type and Usage		Notes
			n1 (R3)	n2 (R2)	
1	RF1D	-	Heat / Cool SPDT, 8A	-	Control of boiler, heat pump, other with 2 pipe system
2	RF1D.W	YES			
3	RF1D2.W	YES	Heat SPST-NO/5A	Cool SPST-NO/5A	Control of 4 pipe system
4	RF1D2.1.W	YES	Heat/Cool SPST-NO/5A	Start/Stop SPST-NO/5A	Control of heat pump, storage tank with pump

Characteristics:

Two modules: room module and output module with wireless radio (RF) link between modules

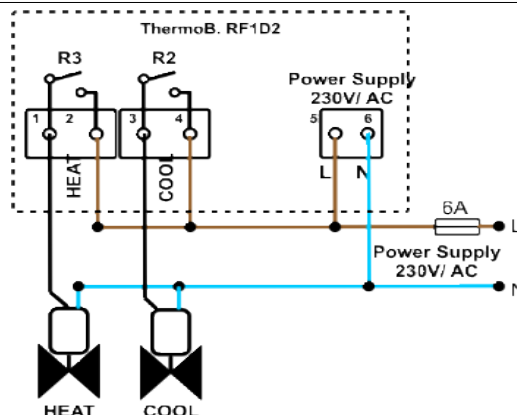
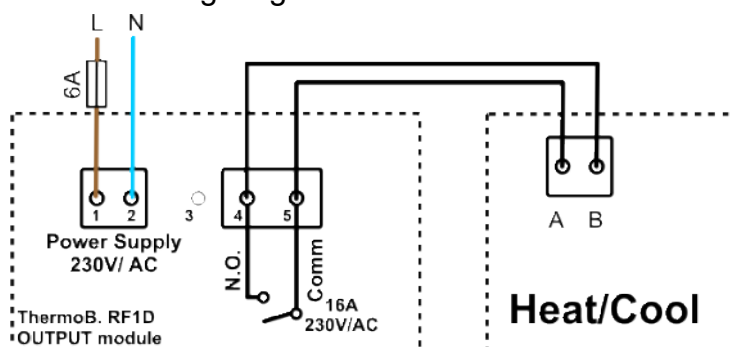
Room module:

- Zones: 1
- LCD display with 4 buttons and back light
- Two temperature set points and manual mode:
 - * ECO for economy period or night time
 - * COMFORT for comfort dwell temperature
- Build in sensor for room temperature
- Battery powered: 2x AAA

Remote Output module:

- up to 2 relay outputs (voltage free)
- Button for manual activation of outputs
- Two way RF link between “room”, “output” modules and Internet via WiFi
- Power supply: 180-230VAC, <2VA
- WiFi: 2.4Ghz/802.11b/g/n
- Radio link (RF) 866MHz
- Programmable delay of RF1D1.W of R3 or R2

Wiring diagram:



ROOM THERMOSTAT- WIRELESS**ThermoB.RHF1D2.W + humidity sensor**

1 zone, wire less (RF)
week schedule

Heat / Cool
WiFi remote control



Room module „R1D” 90x90x23mm

Models: Room module – wall hang or free standing, power supply 2xAAA

	Models ThermoB	WiFi	Outputs Type and Usage		Notes
			n1 (R3)	n2 (R2)	
1	RHF1D2.W	YES	Heat / Cool SPST, 5A	Dehumidify, SPST, 5A	Control of boiler, heat pump, other with 2 pipe system + output for dehumidify
2	RF1D.W				

Characteristics:

Two modules: room module and output module with wireless radio (RF) link between modules

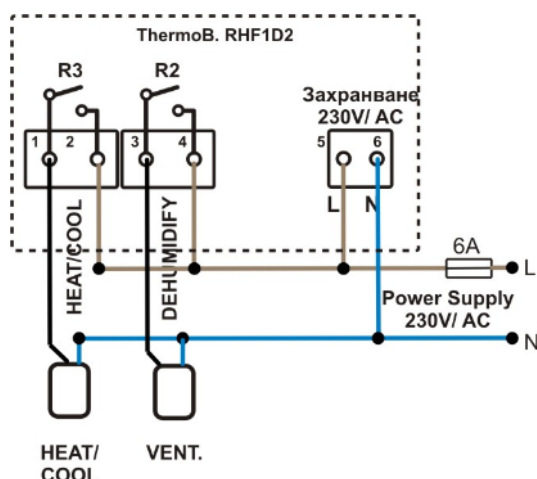
Room module:

- Zones: 1
- LCD display with 4 buttons and back light
- Two temperature set points and manual mode:
 - * ECO for economy period or night time
 - * COMFORT for comfort dwell temperature
- Build in sensor for room temperature
- Build in sensor for humidity RH%
- Battery powered: 2x AAA

Remote Output module:

- 2 relay outputs (voltage free)
- Button for manual activation of outputs
- Two way RF link between “room”, “output” modules and Internet via WiFi
- Power supply: 180-230VAC, <2VA
- WiFi: 2.4Ghz/802.11b/g/n
- Radio link (RF) 866MHz
- TPI mode, hysteresis mode, self learn

Wiring diagram:



Humidity related Functions:

- start/stop of heat or cool if humidity is outside margins:
- cooling stop if humidity goes high
- heating stop if humidity goes low
- start/stop output “dehumidify”
- adjustable set points for low and high margins of humidity

Additional features:

- Self learn algorithm
- Control algorithms:
ON/OFF at hysteresis
Fuzzy TPI

ROOM THERMOSTAT- WIRELESS**ThermoB.RF2D3.W**

**2 zones, wire less (RF)
week schedule**

**Heat / Cool
WiFi remote control**



2 x ThermoB.R1D

Room (zone) module „R1D” 90x90x23mm

Models: Room module – wall hang or free standing, power supply 2xAAA

Models ThermoB	Rooms	WiFi	Outputs Type and Usage			Notes
			n1 (R3)	n2 (R2)	n3 (R1)	
1RF2D3	2	-	Heat / Cool Zone 1	Heat / Cool Zone 2	Common output Zone 1+2 SPST- NO/5A	2 zones with common start command
2RF2D3.W	2	YES	SPST-NO/5 A	SPST-NO/5A	SPST- NO/5A	

Characteristics:

Three modules: 2 room modules and output module with wireless radio (RF) link between

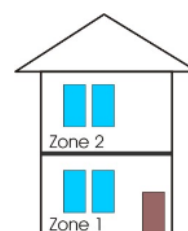
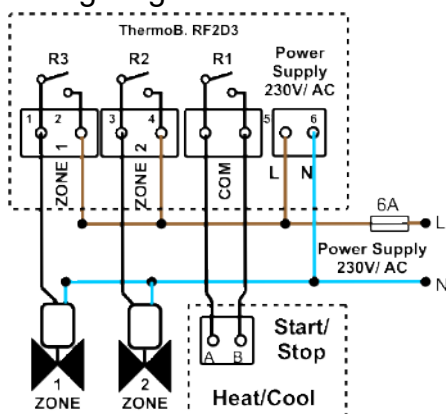
Room module:

- Zones: 2, one room module per zone
- LCD display with 4 buttons and back light
- Two temperature set points and manual mode:
 - * ECO for economy period or night time
 - * COMFORT for comfort dwell temperature
- Build in sensor for room temperature
- Battery powered: 2x AAA

Remote Output module:

- 3 relay outputs (voltage free)
- Button for manual activation of outputs
- Two way RF link between “room”, “output” modules and Internet via WiFi
- Power supply: 180-230VAC, <2VA
- WiFi: 2.4Ghz/802.11b/g/n
- Radio link (RF) 866MHz
- Programmable delay of COM output or last operating zone output.

Wiring diagram:



ROOM THERMOSTAT – WIRED**ThermoB.FC10.W**

**1 zone, wired
week schedule**

**Heat / Cool
WiFi remote control**



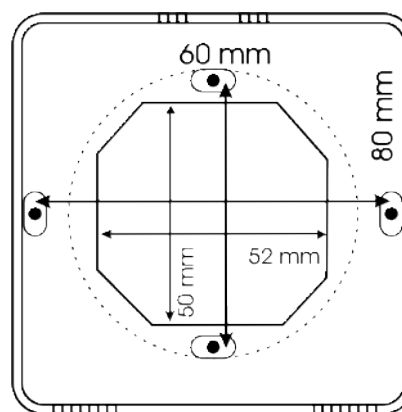
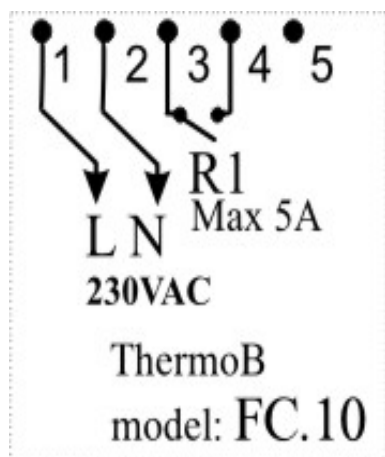
Front panel dimensions 90x90x17mm

dimensions of back part 50x53x28mm

Characteristics:

One module, flush install or wall box install 60 mm $\pm$ 3 or 80mm $\pm$ 1

- | | |
|---|---|
| <ul style="list-style-type: none"> - Zones: 1 - LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in sensor for room temperature | <ul style="list-style-type: none"> - 1 relay output 5A; (voltage free) - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Fuzzy TPI, hysteresis mode, self learn algorithm of version "T" |
|---|---|



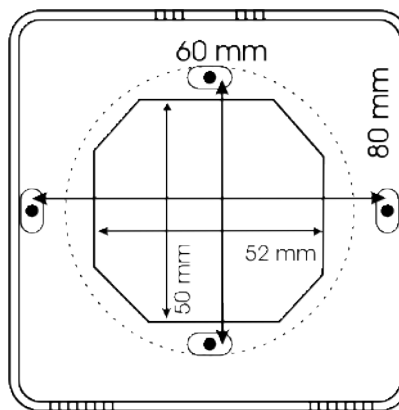
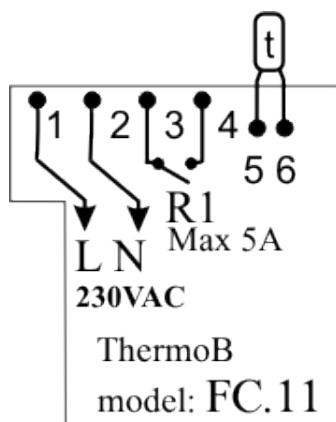
ROOM THERMOSTAT – WIRED**ThermoB.FC11.W****With Auxiliary temperature sensor****1 zone, wired
week schedule****Heat / Cool
WiFi remote control**

Front panel dimensions 90x90x17mm

dimensions of back part 50x53x28mm

Characteristics:One module, flush install or wall box install 60 mm $\pm$ 3 or 80mm $\pm$ 1

- | | |
|--|---|
| <ul style="list-style-type: none"> - Zones: 1 + auxiliary sensor - LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in sensor for room temperature - Auxiliary temperature sensor | <ul style="list-style-type: none"> - 1 relay output 5A; (voltage free) - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Fuzzy TPI, hysteresis mode, self learn algorithm of version "T" |
|--|---|



ROOM THERMOSTAT – WIRED**ThermoB.FHC11.W****With humidity sensor and auxiliary temperature sensor****1 zone, wired
week schedule****Heat / Cool
WiFi remote control**

Front panel dimensions 90x90x17mm

dimensions of back part 50x53x28mm

Characteristics:One module, flush install or wall box install 60 mm $\pm$ 3 or 80mm $\pm$ 1

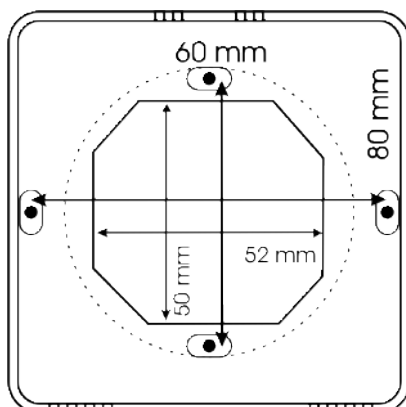
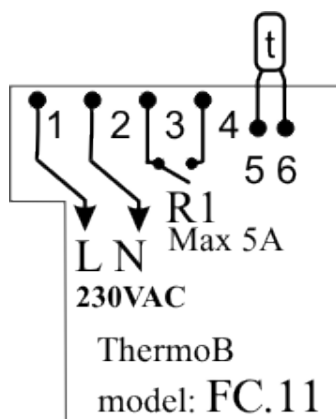
- | | |
|--|---|
| <ul style="list-style-type: none"> - Zones: 1 + auxiliary sensor - LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature | <ul style="list-style-type: none"> - Build in sensor for room temperature - Auxiliary temperature sensor - Build in humidity sensor - 1 relay output 5A; (voltage free) - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Fuzzy TPI, hysteresis mode, self learn algorithm of version "T" |
|--|---|

Humidity related Functions:

- start/stop of heat or cool if humidity is outside margins:
- cooling stop if humidity goes high
- heating stop if humidity goes low
- adjustable set points for low and high margins of humidity

Additional features:

- Self Teach
- Control algorithms:
ON/OFF at hysteresis
Fuzzy TPI



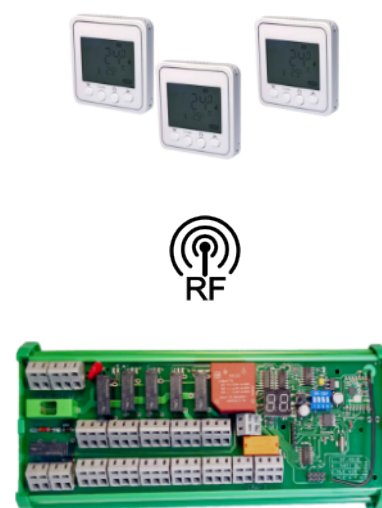
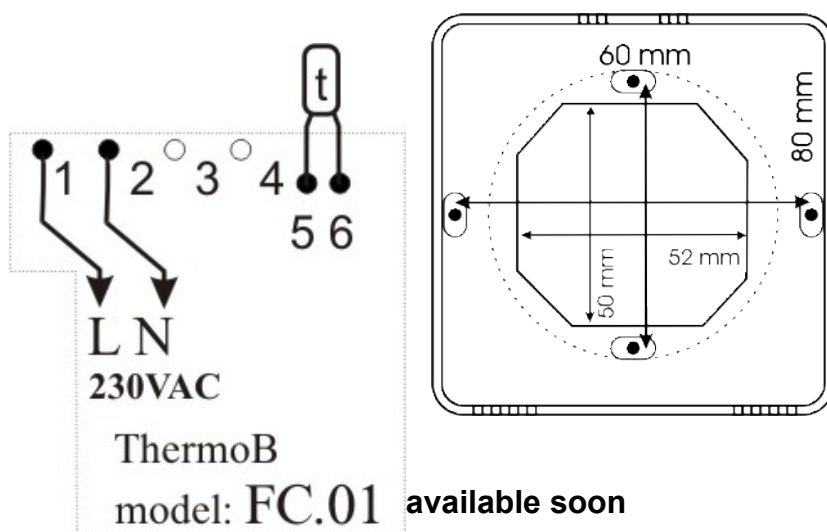
ROOM THERMOSTAT – WIRELESS**ThermoB.FC01.R****With Auxiliary temperature sensor****1 zone, wired
week schedule****Heat / Cool****WiFi remote control****Wireless radio (RF) link to wiring center FHB5RFW**

Front panel dimensions 90x90x17mm

dimensions of back part 50x53x28mm

Characteristics:One module, flush install or wall box install 60 mm ± 3 or 80mm ± 1

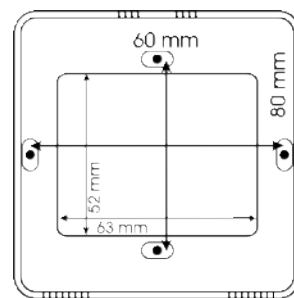
- | | |
|--|---|
| <ul style="list-style-type: none"> - Zones: 1 + auxiliary sensor - LCD display with 4 buttons and white back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in sensor for room temperature - Auxiliary temperature sensor | <ul style="list-style-type: none"> - no relay output - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - wireless command to wiring center FHB5RFW |
|--|---|



FAN COIL SMART THERMOSTAT**ThermoB.FC41.W**

**1 zone: fan coil (+underfloor)
up to 3 fixed fan speeds
week schedule**

**Heat / Cool
2/4 pipe system; 1-2 Stages
WiFi remote control**



Front panel dimensions 90x90x17mm

Flush install
or wall box D80

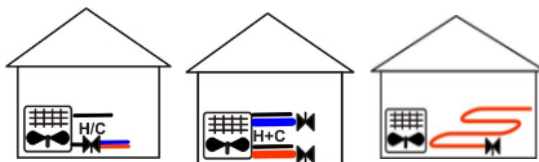
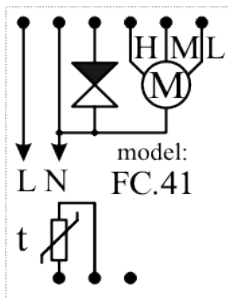
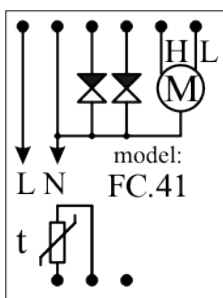
Dimension of back
part 62x51x24mm

Characteristics:

One module, flush install or wall box install 80mm $\pm$ 1

- | | |
|--|--|
| <ul style="list-style-type: none"> - Zones: 1 (2) - LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in sensor for room temperature - Auxiliary temperature sensor, NTC.2 | <ul style="list-style-type: none"> - 4 relay outputs 5A; voltage supply 230V - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Dual zone heat/cool (fan coil unit + under floor zone) |
|--|--|

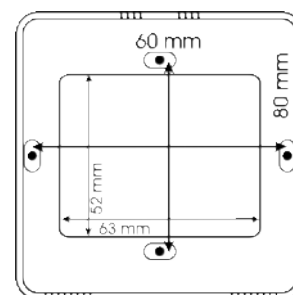
	System Type	Outputs				Fan Enable		Sensor NTC.2	Stages
		1	2	3	4	Time	NTC.2		
1	Common type, 2 pipe system	FCU valve	Fan speed High Mid Low			YES	YES	Fan enable / stop	1
2	4 pipe system	FCU valve Heat	FCU valve Cool	Fan speed High Low		YES	YES	Fan enable / stop	1
3	Fan Coil Unit + Under Floor Zone	FCU valve	UFH valve (Zone 2)	Fan speed High Low		YES	-	Under floor start / stop	2
		UFH valve	Fan:High	Md	Low	-	YES	Fan enable / stop	



- Self learn algorithm
- Fan control: proportional, PI
- Zone 2 control: Fuzzy TPI, histeresis

FAN COIL SMART THERMOSTAT**ThermoB.FC41.WR****1 zone: fan coil (+underfloor)****Heat / Cool****up to 3 fixed fan speeds****2/4 pipe system; 1-2 Stages****week schedule****WiFi remote control****Wireless (RF) link to wiring center FHB5RCW**

Flush install
or wall box D80



Dimension of back
part 62x51x24mm

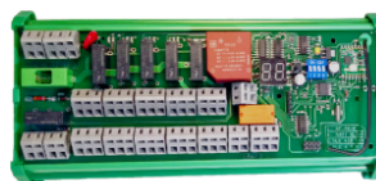
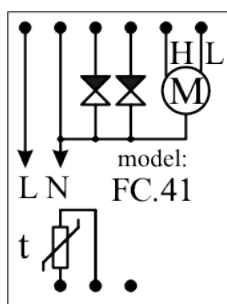
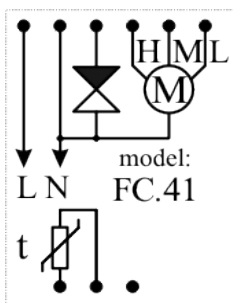
Front panel dimensions 90x90x17mm

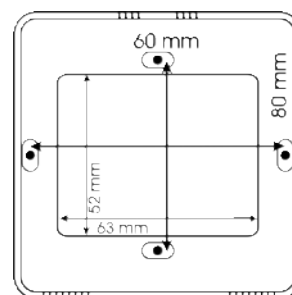
Characteristics:

One module, flush install or wall box install 80mm $\pm$ 1

- | | |
|--|---|
| <ul style="list-style-type: none"> - Zones: 1 (2) LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in sensor for room temperature - Auxiliary temperature sensor, NTC.2 | <ul style="list-style-type: none"> - 4 relay outputs 5A; voltage supply 230V - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Dual zone heat/cool (fan coil unit + under floor zone) - Wireless radio (RF) link of valve FCU and UFH („zone2) to wireless wiring center FHB5RC |
|--|---|

	System Type	Outputs				Fan Enable		Sensor NTC.2	Stages
		1	2	3	4	Time	NTC.2		
1	Common type, 2 pipe system	FCU valve	Fan speed High Med Low			YES	YES	Fan enable / stop	1
2	4 pipe system	FCU valve Heat	FCU valve Cool	Fan speed High Low		YES	YES	Fan enable / stop	1
3	Fan Coil Unit + Under Floor Zone	FCU valve	UFH valve	Fan speed High Low		YES	-	Under floor start / stop	2
		UFH valve	Fan:High	Med	Low	-	YES	Fan enable / stop	

**FHB5RC**

FAN COIL SMART THERMOSTAT**ThermoB.FC21T.W****1 zone: fan coil (+underfloor)****4 Fan speeds, Line voltage control****week schedule****Heat / Cool****2/4 pipe system; 1-2 Stages****WiFi remote control**

Front panel dimensions 90x90x17mm

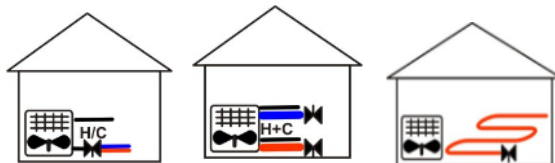
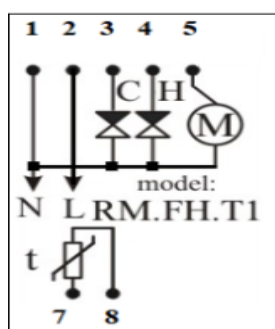
Flush install
or wall box D80Dimension of back
part 62x51x24mm**Characteristics:**

One module, flush install or wall box install 80mm ±1

Automatic fan low speed adjust at reduced power supply voltage !!!

- | | |
|--|--|
| <ul style="list-style-type: none"> - Zones: 1 (2) LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in sensor for room temperature - Auxiliary temperature sensor, NTC.2 | <ul style="list-style-type: none"> - 2 relay outputs 5A; voltage supply 230V - Triac output <0.8A for fan speed, 230V - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Dual zone heat/cool (fan coil unit + under floor zone) - Speed 1 and 3 are user selected, speed 2 is middle of 1 and 3, speed 4 is maximal. |
|--|--|

System Type		Outputs			Fan Enable		Sensor NTC.2	Stages
		1	2	Fan speed	Time	NTC.2		
1	Common type, 2 pipe system	FCU valve	-	4 speed	YES	YES	Fan enable / stop	1
2	4 pipe system	FCU valve Heat	FCU valve Cool	4 speed	YES	YES	Fan enable / stop	1
3	Fan Coil Unit + Under Floor Zone	FCU valve	UFH valve (Zone 2)	4 speed	YES	-	Under floor start / stop	2

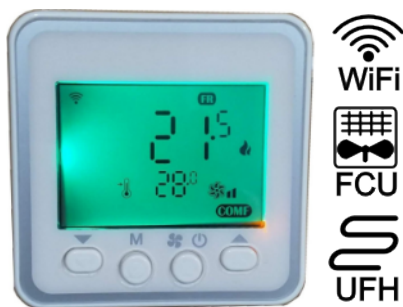


- Self learn algorithm
- Fan control: proportional, PI
- Zone 2 control: Fuzzy TPI, hysteresis

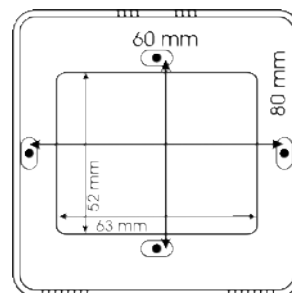
FAN COIL SMART THERMOSTAT**ThermoB.FC22V(P).W**

1 zone: fan coil (+underfloor)
4 fan speeds 0-10V/ PWM
week schedule

Heat / Cool
2/4 pipe system; 1-2 Stages
WiFi remote control



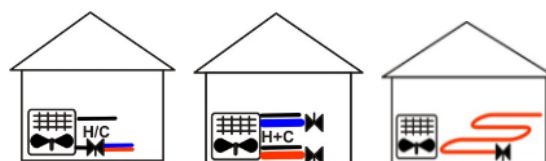
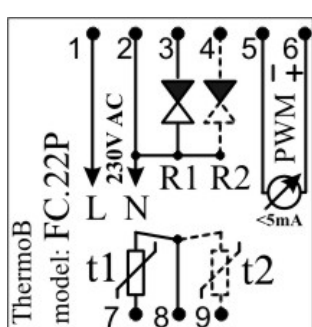
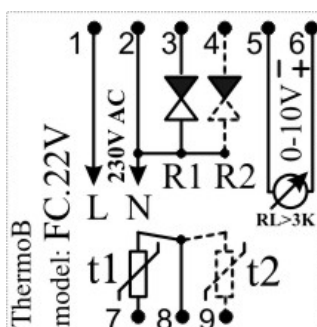
Front panel dimensions 90x90x17mm

Flush install
or wall box D80Dimension of back
part 62x51x24mm**Characteristics:**

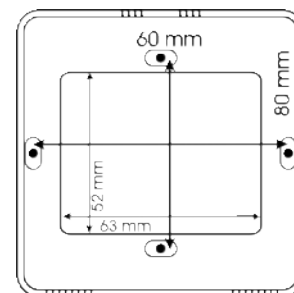
One module, flush install or wall box install 80mm ±1

- | | |
|---|---|
| <ul style="list-style-type: none"> - Zones: 1 (2) LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in or remote sensor for room temperature (t.2) - Auxiliary temperature sensor (t1), NTC.2 | <ul style="list-style-type: none"> - 2 relay outputs 5A; voltage supply 230V - Fan speed output 0-10V or PWM - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Dual zone heat/cool (fan coil unit + under floor zone) <ul style="list-style-type: none"> „V” – 0-10V “P” – PWM (10V, 1kHz) |
|---|---|

	System Type	Outputs			Fan Enable		Sensor NTC.2	Stages
		1	2	Fan speed	Time	NTC.2		
1	Common type, 2 pipe system	FCU valve	-	4 speed	YES	YES	Fan enable / stop	1
2	4 pipe system	FCU valve Heat	FCU valve Cool	4 speed	YES	YES	Fan enable / stop	1
3	Fan Coil Unit + Under Floor Zone	FCU valve	UFH valve (Zone 2)	4 speed	YES	-	Under floor start / stop	2



- Self learn algorithm
- Fan control: proportional, PI
- Zone 2 control: Fuzzy TPI, hysteresis

FAN COIL SMART THERMOSTAT**ThermoB.FC22V(P).WR****1 zone: fan coil (+underfloor)****Heat / Cool****4 fan speeds 0-10V/ PWM****2/4 pipe system; 1-2 Stages****week schedule****WiFi remote control****Wireless (RF) link to wiring center FHB5RFW**

Front panel dimensions 90x90x17mm

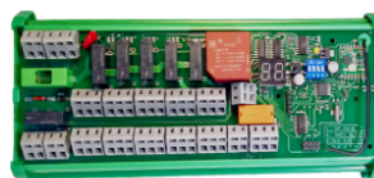
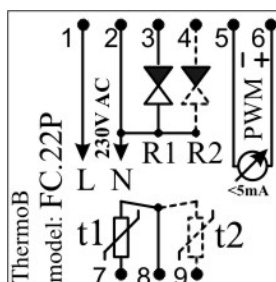
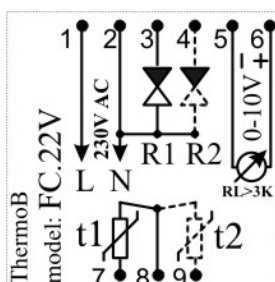
Flush install
or wall box D80Dimension of back
part 62x51x24mm**Characteristics:**

One module, flush install or wall box install 80mm ±1

Wireless radio (RF) link of "FCU valve" and "UFH valve" to command a wiring center FHB5RFW

- | | |
|---|---|
| <ul style="list-style-type: none"> - Zones: 1 (2) LCD display with 4 buttons and back light - Two temperature set points and manual mode: <ul style="list-style-type: none"> * ECO for economy period or night time * COMFORT for comfort dwell temperature - Build in or remote sensor for room temperature (t.2) - Auxiliary temperature sensor (t1), NTC.2 | <ul style="list-style-type: none"> - 2 relay outputs 5A; voltage supply 230V - Fan speed output 0-10V or PWM - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Dual zone heat/cool (fan coil unit + under floor zone) <ul style="list-style-type: none"> "V" – 0-10V "P" – PWM (10V, 1kHz) |
|---|---|

System Type	Outputs			Fan Enable		Sensor NTC.2	Stages
	1	2	Fan speed	Time	NTC.2		
1 Common type, 2 pipe system	FCU valve	-	4 speed	YES	YES	Fan enable / stop	1
2 4 pipe system	FCU valve Heat	FCU valve Cool	4 speed	YES	YES	Fan enable / stop	1
3 Fan Coil Unit + Under Floor Zone	FCU valve	UFH valve (Zone 2)	4 speed	YES	-	Under floor start / stop	2

**FHB5RC**

3 WAY MIXING VALVE CONTROLLER**ThermoB.3HWC432, 3HWC412P/V**

Temperature set point related
to outside temperature

Fixed temperature set point

Outputs: 3 pos.@230V / 0-10V/ PWM

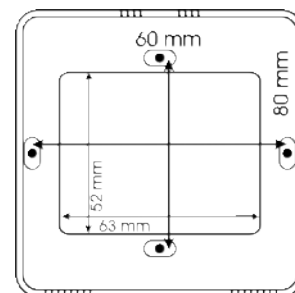
Separate temperature
curves for Heat and Cool
modes



Front panel dimensions
90x90x17mm



Flush install
or wall box D80



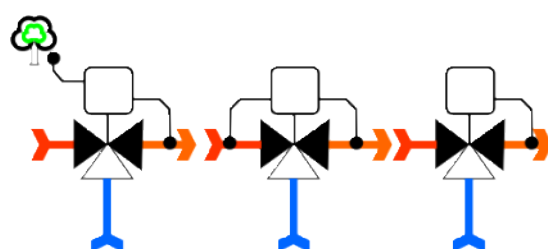
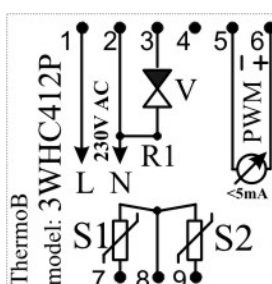
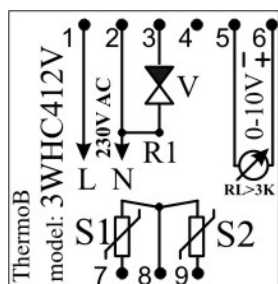
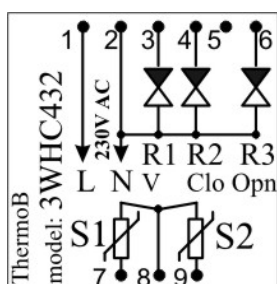
Dimension of back
part 62x51x24mm

Characteristics:

One module, flush install or wall box install 80mm ±1

- | | |
|---|--|
| <ul style="list-style-type: none"> - Modes of operation: <ul style="list-style-type: none"> * User selected set point, full range * Fixed set point with pre defined narrow range of correction by end user. * Set point automatically calculated based on outside temperature with pre defined narrow range of correction by end user - Automatic / Manual selection of Heat/Cool mode | <ul style="list-style-type: none"> - LCD display with 4 buttons and back light - 2 temperature sensor - 1 or 3 relay outputs 5A; voltage supply 230V - Auxiliary output „pump“ - Output 0-10V or PWM - Power supply: 180-230VAC, <2VA - 3HWC432 – 3 pos@230V - 3HWC412V – output 0-10V - 3HWC412P – output PWM (10V, 1kHz) |
|---|--|

System Type	Outputs			Modes:	Sensor S1	Sensor S2
	1	2	3			
1 3WC432	pump	Close motor	Open motor	Temperature curve	Temperature of output "mixed" fluid	Outside temperature
2 3WC412V	pump	-	Valve pos. 0-10V	Automatic Heat/Cool switchover	Temperature of output "mixed" fluid	Temperature of supply fluid
3 3WC412P	pump	-	Valve pos. PWM	Fixed set point	Temperature of output "mixed" fluid	Not used

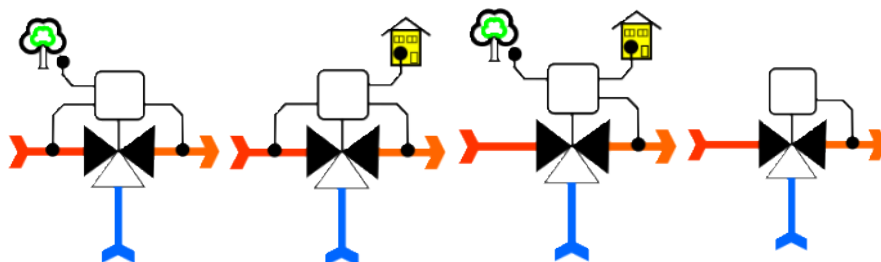


3 WAY MIXING VALVE CONTROLER**ThermoB.3WM+HC**

Temperature set point related to outside temperature Separate temperature curves for Heat and Cool modes
 Fixed temperature set point Room temperature sensor
 Outputs: 3 pos. @230V



Din rail install , W=70mm



Modes:

ExtT, Aut

LocT Aut H/C

ExtT, HT/CL

Local T

Characteristics:

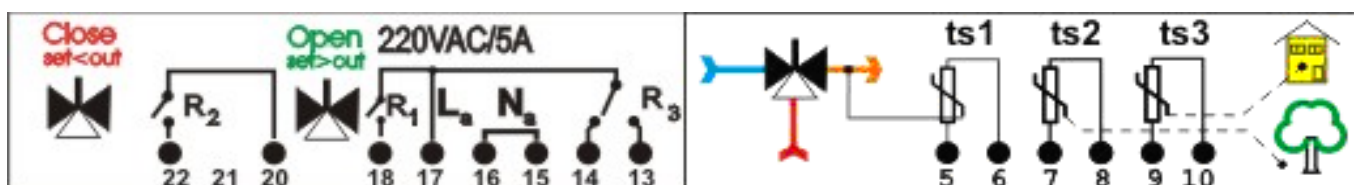
Single module, DIN rail install

- Modes:

- * User selected set point, full range
- * Fixed set point with pre defined narrow range of correction by end user.
- * Set point automatically calculated based on outside temperature with pre defined narrow range of correction by end user

- LCD display 8x2 alphanumeric with 4 buttons
- 3 temperature sensors
- 3 relay outputs 5A; voltage supply 230V
- Power supply: 180-230VAC, <2VA
- Automatic / Manual selection of Heat/Cool mode
- Room temperature $\pm 2^{\circ}\text{C}$ out of range, means for fast action

Function	Mode	Set point of mixing temperature adjustment	Sensor 2	Sensor 3
ExtT_Aut	Automatic Heat/Cool	Set point automatically calculated based on outside temperature for each Heat and Cool modes and supply fluid temperature selects Heat/Cool mode	Outside temperature	Temperature of supply fluid
ExtT_HT	Heat	Set point automatically calculated based on outside temperature, fixed mode "Heat"	Outside temperature	Room temperature
ExtT_CL	Cool	Set point automatically calculated based on outside temperature, fixed mode "Cool"	Outside temperature	Room temperature
LocT_Aut	Automatic Heat/Cool	Two separate set points each for Heating and Cooling based on Heat/Cool mode	Temperature of supply fluid	Room temperature



FHB7R2

7 zones, 2 relay outputs

- 7 zone inputs from room thermostats – wired @230V

- 7 outputs for zone actuator @230V

Relay outputs, internally controlled:

- **Pump** – activate/deactivate with delay after room thermostat signal

- **AUX (boiler/HP)** – activate/deactivate with delay after room thermostat signal

- Pump blockage prevention



Characteristics:

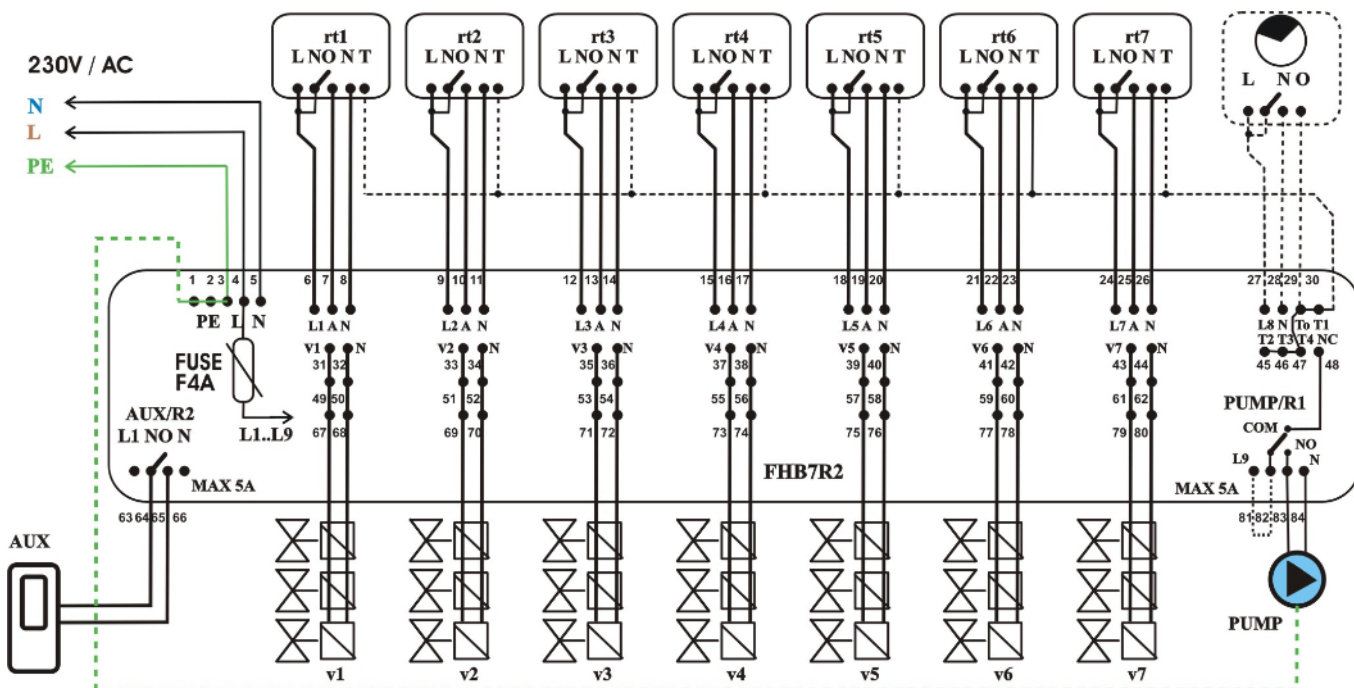
Delay and Functions:	
- Delay of output „Pump“	0 / 3 minutes
- Delay of output „AUX“ (boiler/HP/Other)	0 / 5 / 10 / 15 minutes
- Pump blockage prevention	Activate pump once each 7 days (On/Off)



DIN rail install

Dimensions: 90x200x50mm

Light indicator for operation of each zone and output



WIRING CENTER- WIRED**FHB4p4R2, Underfloor + Fan Coil Unit**

4 UFH zones, 4 FCU zones, 2 relay outputs

- 4 zone inputs from room thermostats – wired @230V
- 4 inputs from fan coil unit – wired @230V
- 2 expansion inputs: UFH and FCU
- 1 input for DHW demand
- 4 outputs for zone actuators @230V

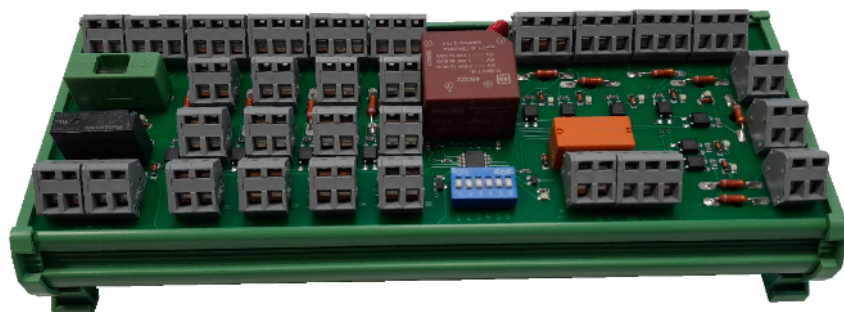


Relay outputs, internally controlled:

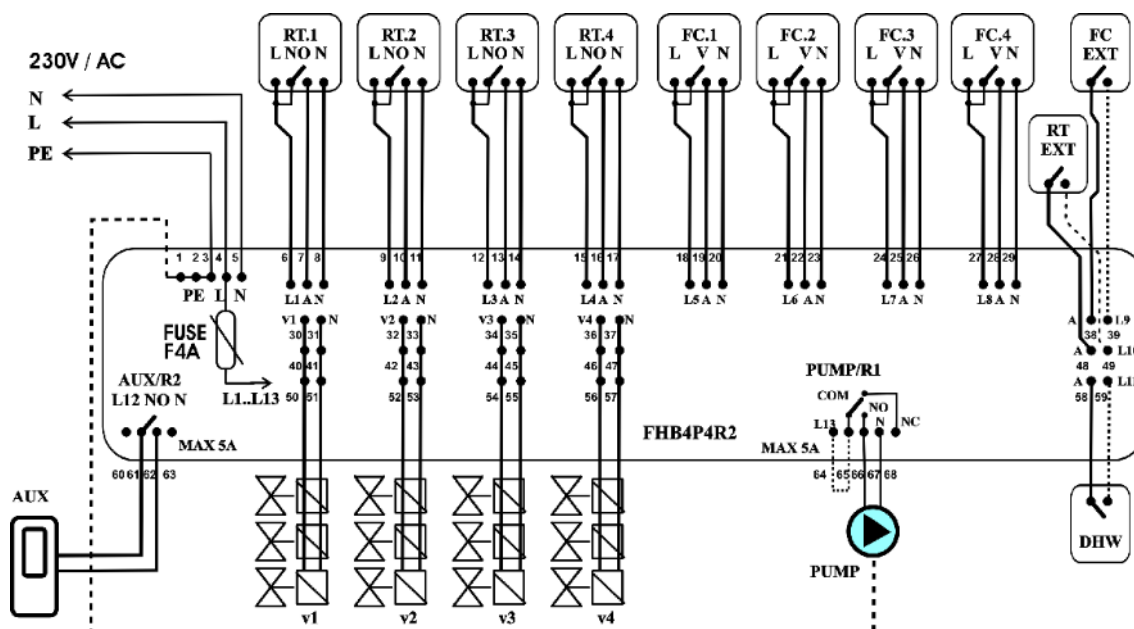
- **Pump** – activate/deactivate with delay after room thermostat and/or FCU signal
- **AUX (boiler/HP)** – activate/deactivate with delay after any input signal
- Pump blockage prevention

Characteristics:

Delay and Functions:	
- Delay of output „Pump“	0 / 3 minutes
- Delay of output „AUX“ (boiler/HP/Other)	0 / 5 / 10 / 15 minutes
- Pump blockage prevention	Activate pump once each 7 days (On/Off)
- DHW demand input's action	Switch off “pump” output (On/Off)
- FCU inputs action	FCU input can activate „Pump” output (On/Off)



DIN rail install
 Dimensions: 90x200x50mm
 Light indicator for operation of each zone and output



WIRING CENTER- WIRELESS**FHB5RW, underfloor with WiFi option****5 zones, 7 relay outputs****- 5 wireless radio (RF) room thermostats****- 5 outputs for zone actuators @230V****Relay outputs, internally controlled:**

- Pump** – activate/deactivate with delay after room thermostat zone
- AUX (boiler/HP)** – activate/deactivate with delay after any zone signal
- Pump blockage prevention**
- Small display 2 digits**
- Optional Internet remote control for each of 5 zones via WiFi module**

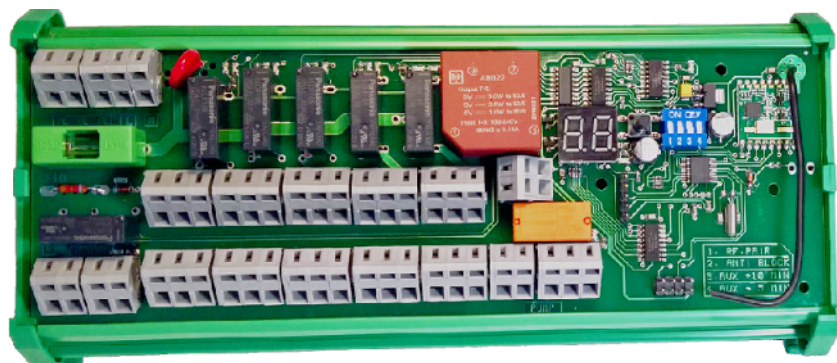
Characteristics:

Delay and Functions:

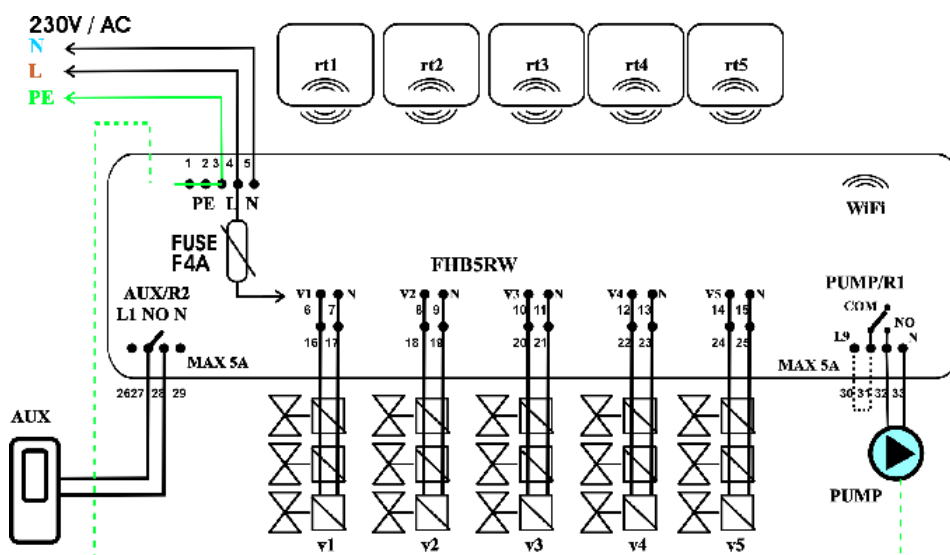
- Delay of output „Pump“	0 / 3 minutes
- Delay of output „AUX“ (boiler/HP/Other)	0 / 5 / 10 / 15 minutes
- Pump blockage prevention	Activate pump once each 7 days (On/Off)



1 to 5 x ThermoB.RD1



DIN rail install
Dimensions: 90x200x50mm
Light indicator for operation
of each zone and output



WIRING CENTER- WIRELESS**FHB5RC, Underfloor and Fan Coil Unit****5 zones, 7 relay outputs****5 FCU units with wireless (RF) link FC22V/P.WR, FC41.WR****1 input UFH Cool enable****5 zone outputs for underfloor actuators @230V****Relay outputs, internally controlled:**

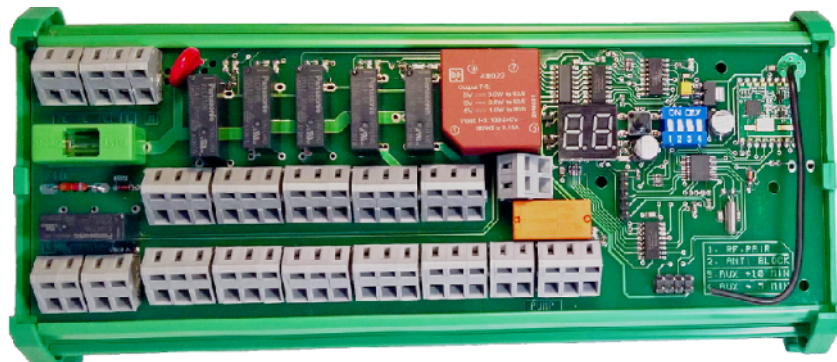
- **Pump 1** – (low temperature circuit): active at UFH circuit command
- **AUX (Pump 2)** – (high temperature circuit): active at FCU circuit command
- Pumps blockage prevention
- Small display 2 digits

Characteristics:

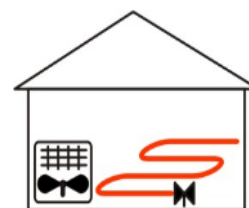
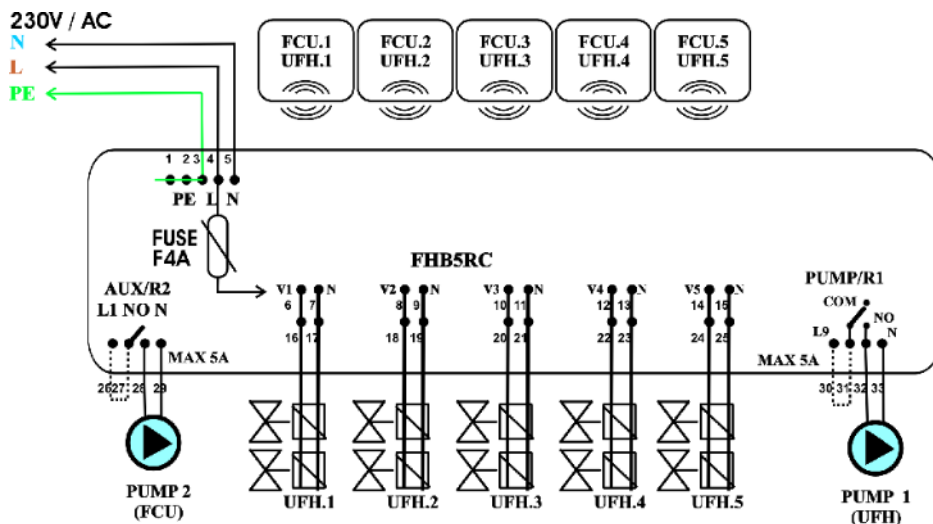
Delay and Functions:	
- Delay of output „Pump“	0 / 3 minutes
- Delay of output „AUX“ (Pump 2)	0 / 3 minutes
- Pump blockage prevention	Activate pump once each 7 days (On/Off)
- Operation of UFH zones in Cool mode	Enable / Disable



1...5x FC22V/P.W,R ; FC41.WR



DIN rail install
 Dimensions: 90x200x50mm
 Light indicator for operation
 of each zone and output



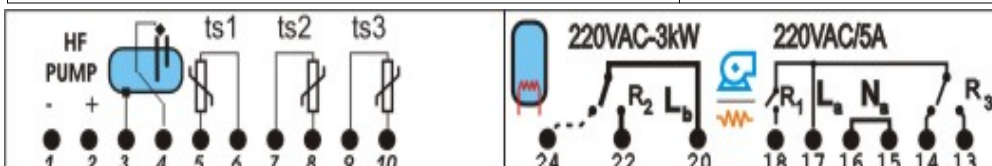
ALL Units, common data:	
Temperatures:	
measure range -10°.. +50°/ step 0.5°C	Set point range +15°C .. +45°C/ step 0.5°C
Operation: -5T45, RH80%	Storage: -25T65, RH80%
Connectivity:	
RF radio 866Mhz; 80-100m range at open space	WiFi:2.4Ghz/802.11b/g/n,WEP/WPA-PSK/ WPA2-PSK
Full two way radio link and parameters share between room modules, output modules, Internet (where applicable)	
Temperature set point adjust and mode selection: both, locally from room module and remote via Internet (where applicable)	
Mobile App Proxel Connect available for Android, iOS, and WEB App.	
Cloud service in EU	

yet more to come

SOLAR THERMAL THERMOSTATS**DTSF3, up to 8 schemes of operation****3 temperature inputs, 3 relay outputs****- PWM output for solar pump speed adjust****- Water level sensor****- Real time clock with timer function for heater****Relay outputs, internally controlled:****- Relay 1** – solar pump mainly**- AUX** – pump 2 or valve (scheme dependent)**- Heater** – very high power relay for electric heater up to 3kW or pump/valve (scheme dependent).**Schemes:**

1	Thermosiphonic type with tank electric heating, trace heating, water level sensor for tank with electrically controlled refill valve.
2	Thermosiphonic type with auxiliary tank with circulation and electric heater
3	Remote solar panel with tank, solar pump, electric heater of tank and electrically controller tank overheat evacuation valve. Variable pump speed.
4	Remote solar panel with tank, solar pump, electric heater of tank, water level sensor and electrically controlled refill valve. Variable pump speed.
5	Remote solar panel with main and auxiliary tanks, solar pump, electric heater of main tank and tank select valve and priority of tank. Variable pump speed.
6	Remote solar panel with tank with top and bottom coils, solar pump, electric heater of tank and coil select valve with priority of top side. Variable pump speed.
7	Remote solar panel with tank with two coils, auxiliary heating source (gas boiler, etc) connected to coil #2, solar pump, electric heater of tank and pump#2/valve to enable coil #2 source. Variable solar pump speed.
8	Remote solar panel with tank with two coils, auxiliary heating source (gas boiler, etc) connected to coil #2, solar pump, pump#2/valve to enable coil #2 source. Pump#3 for main boiler circulation. Variable solar pump speed.
9	Remote solar panel with main and auxiliary tanks, two independent solar pumps, electric heater of main tank. Both tanks can heat up independently. Variable pump#1 speed.
*	Level sensor measures water conductivity

- 8x2 alphanumeric display with 4 buttons - 3 relay outputs: #1 SPST- 5A; voltage supply 230V #2 SPDT- 5A; voltage supply 230V #3 SPDT- 16A; voltage free (30A relay) - 3 temperature sensors - 26 parameters to adjust - Electric heater with time zone function. Two temperature set points: lower and in time zone	- Heater modes: Automatic / Manual / OFF / Vacancy - Power supply: 180-230VAC, <2VA - Single module, DIN rail install 70mm - Pump speed automatically adjust based on temperature difference solar / tank - Overheat and freeze protection - PWM 10V / 1kHz
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SOLAR THERMAL THERMOSTATS

- DTLED2** single scheme, simple use
 2 temperature inputs, 2 relay outputs
 - PWM output for fixed solar pump speed
 Relay outputs, internally controlled:
 - **Relay 1** – solar pump
 - **Heater** – electric heater control signal

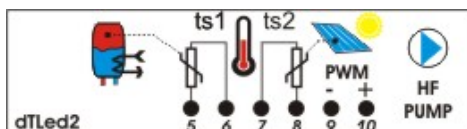
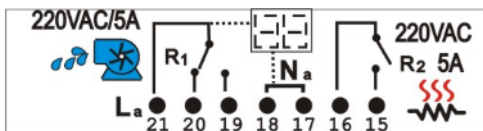
**Schemes:**

- | | |
|---|--|
| 1 | Remote solar panel with tank, solar pump, electric heater of tank and electrically controller tank overheat evacuation valve. Variable pump speed. |
|---|--|

Electric Heater activation to keep a preset temperature:

- any time around the clock
- with time delay of 15 min after last solar pump activation

- | | |
|--|---|
| <ul style="list-style-type: none"> - 2 digit LED display with one button - 2 relay outputs:
 #1 SPDT- 5A; voltage supply 230V
 #2 SPST- 5A; voltage free - 2 temperature sensors - PWM 10V / 1kHz, fixed speed operation, adjusted by a hidden knob. | <ul style="list-style-type: none"> - Mode:
 Automatic / Vacancy with slide switch - Power supply: 180-230VAC, <2VA - Single module, DIN rail install 70mm - 3 vital parameters to adjust by jumper switch - dT selection by a hidden knob - Overheat and freeze protection |
|--|---|



WiFi HEATER RELAY FOR HOT WATER TANK**R1.W-DIN**

- 1x input for wired temperature sensor**
- **1x Relay** – power relay for electric heater up to 3kW
 - **Real time clock with schedule for heater operation.**

**Usage:**

1	To read temperature and control a heater to keep two separate temperature set points in DHW tank based on defined schedule.
2	Switch ON/ OFF of electric heater based on defined schedule without temperature reading - The remaining input can be used for external command to switch on the heater for 1 hour
3	Remotely Switch ON/ OFF of electric heater from Internet
	The schedule and mode of operation are set via internet and mobile app

- No display - 3 led indicators - 1 main button for mode selection manual / automatic - Two temperature set points and manual mode: * ECO for economy heating * COMFORT for comfort	- 1 power full relay 30A (can be voltage free) for direct controll of electric heater up to 3kW. - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Installation on DIN rail, to be incorporated in apartment wall box or other protective enclosure
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TIMER RELAY FOR HOT WATER TANK WITH WIFI**RT1W-DIN**

- 1x Relay – power relay for electric heater up to 4kW
- 1x knob for local timer setup
- 1x input for local timer start button
- Real time clock with schedule for heater operation.
- Remote (Internet) timer start/stop and setup

**Usage:**

1	To activate once a heater or device for pre-defined time or by schedule Usually used for DHW tank heating.
2	Switch ON/ OFF of electric relay output based on defined schedule
3	Remotely Switch ON/ OFF of the output from Internet
	The schedule and mode of operation are set via internet and mobile app

- No display - 2 led indicators (Relay state and WiFi) - 1 main button for local mode selection manual ON/OFF - 1 knob for timer period setting from 15 min to 120 min - 1 extra input for timer start/stop local button.	- 1 power full relay 30A, can directly control electric heater up to 4kW. - Power supply: 180-230VAC, <2VA - WiFi: 2.4Ghz/802.11b/g/n - Installation on DIN rail, to be incorporated in apartment wall box or other protective enclosure
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