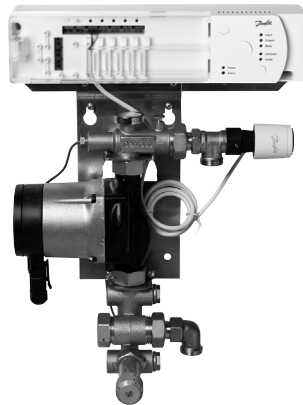


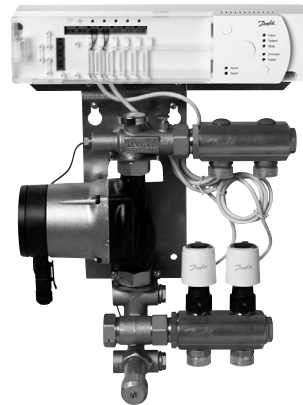
## Data Sheet

# Premounted Midi Shunts

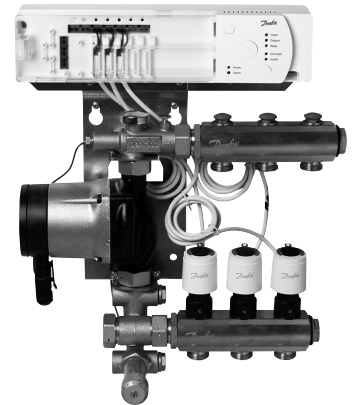
## Application



*Midi Shunt 088U0181*  
- with one circuit



*Midi Shunt 088U0182*  
- with two circuits



*Midi Shunt 088U0183*  
- with three circuits

The Danfoss floor heating midi shunt is a series of pre-mounted shunts for one, two or three heating circuits.

It comes pre-mounted with CF2 master controller, manifolds, mixing shunt and actuators in a small and compact solution.

**Features:**

- Compact design - fits in even the smallest places.
- Pre-mounted - minimal risk of installation faults.
- Easy ordering - only one number necessary.
- Short installation time.
- Free choice between four different CF2+ thermostats (ordered separately).
- Grundfos Alpha 2L pump ensures the lowest possible operating costs.

## Ordering

Midi Shunt version	For room size	Code no.
For 1 circuit, pre-mounted with CF2+ master controller, mixing shunt with Alpha 2L 15-40 circulation pump, manifold/control valve and TWA-A 24V NC actuators	up to 20 m <sup>2</sup>	<b>088U0181</b>
For 2 circuits, pre-mounted with CF2+ master controller, mixing shunt with Alpha 2L 15-40 circulation pump, manifold/control valve and TWA-A 24V NC actuators	up to 40 m <sup>2</sup>	<b>088U0182</b>
For 3 circuits, pre-mounted with CF2+ master controller, mixing shunt with Alpha 2L 15-40 circulation pump, manifold/control valve and TWA-A 24V NC actuators	up to 60 m <sup>2</sup>	<b>088U0183</b>

**Technical specifications**

Midi Shunt	088U0181	088U0182	088U0183
Number of circuits	1	2	3
Heating area	up to 20 m <sup>2</sup>	up to 40 m <sup>2</sup>	up to 60 m <sup>2</sup>
Pump type/capacity	Grundfos Alpha 2I 15-40		
Temperature controller	FH-TC, self-acting, 15-52° C		
Room control	CF2+ MC5 230V supply / 24 V output		
Actuators	TWA-A NC 24 V		

**CF-MC  
Master Controller**

CF-MC is the Master Controller in Danfoss' CF2+ wireless floor heating control system. CF-MC is connected directly to 230 V power supply, and it provides all actuator outputs with 24 V.



Code no.	088U0245
Supply voltage	230 VAC
Output voltage	24 VDC
Number of outputs	5
Transmission frequency	868.42 MHz
Transmission range	up to 30 m (in normal buildings)
Transmission power	< 1 mW
Max. running load of actuator output	35 VA (total for all outputs)
Max. load for pump relay	230 V, 8 A / 2 A (inductive)
Max. load for boiler relay	230 V, 8 A / 2 A (inductive)
Approvals	CE
Standard	EN 60730
Directives	R&TTE, LVD, EMC
Protection class	IP30
Length of mains cable	1.5 m
Weight	700 g

For further technical information, see specific CF-MC Master Controller data sheet.

**RA-N Valve /  
FHF Manifold**

Midi Shunt 088U0181 has one heating circuit and is equipped with a Danfoss RA-N pre-setting valve.

Midi Shunt 088U0182 is equipped with a FHF manifold with two circuits, and Midi Shunt 088U0183 has a three circuit manifold.

The FHF manifold is used for controlling water flow in under floor heating systems and consists of a supply and return manifold.

The supply manifold includes possibility for indi-

vidual shut-off of each circuit and.

The return manifold is equipped with integrated Danfoss RA-N pre-setting valves securing optimal hydraulic balance in the system.

The valves are controlled electronically by TWA thermal actuators.



RA-N 15 valve



FHF-3 manifold

Valve / Manifold	Code no.
RA-N 15 valve	013G0013
FHF-2 manifold	088U0502
FHF-3 manifold	088U0503

See specific data sheets for FHF manifolds and RA-N pre-setting valves for further technical information.

**TWA  
Thermal Actuator**

TWA is a small actuator for electrical on/off-control to activate valves and floor heating manifolds.

TWA is equipped with a visual position indicator to show the open or closed position of the valve.

For Midi Shunts is used the TWA-A 24 V NC (Normally Closed) version.



Code no.	088H3110
Supply voltage	24 V
Max. inrush current	350 mA
Frequency	50-60 Hz
Running power consumption	2 W
Spindle travel time	~3 min.
Ambient temperature	0-60° C
Enclosure	IP 41
Cable length	1200 mm

For further technical information, see specific TWA actuator data sheet.

## FH-TC Temperature controller

FH-TC is a self-acting thermostatic sensor, used for flow temperature control of floor heating and radiator heating systems. The water temperature is directly measured by a stainless steel immersion sensor.  
Code no.: 088U0302



### Features:

- Closes on rising sensor temperature.
- Closes against differential pressure of up to 6 bar.
- Temperature range: 18 - 52° C.
- Designed for pressure PN 10.

### Temperature setting

1	2	3	4	5	6	max.
20°C	25°C	30°C	35°C	40°C	45°C	52°C

## Thermostats

Room thermostats must be ordered separately. Choose between these models:



### CF-RS Standard Thermostat

- Easy wireless assignment with Link Test to Master Controller CF-MC.
- Min. and max. limitation of temperature settings.
- Powered by 2 x AA Alkaline 1.5V batteries.
- LED indication for low battery.

Code no.: 088U0210



### CF-RP Public Thermostat (tamperproof)

- Easy wireless assignment with Link Test to Master Controller CF-MC.
- Min. and max. limitation of temperature settings.
- Powered by 2 x AA Alkaline 1.5V batteries.
- LED indication for low battery.
- Hidden set point adjustment for use in childrens rooms, schools, office buildings etc.

Code no.: 088U0211



### CF-RD Display Thermostat

- Easy wireless assignment with Link Test to Master Controller CF-MC.
- Min. and max. limitation of temperature settings.
- Powered by 2 x AA Alkaline 1.5V batteries.
- LED indication for low battery.
- Digital display showing actual or set room temperature.

Code no.: 088U0214



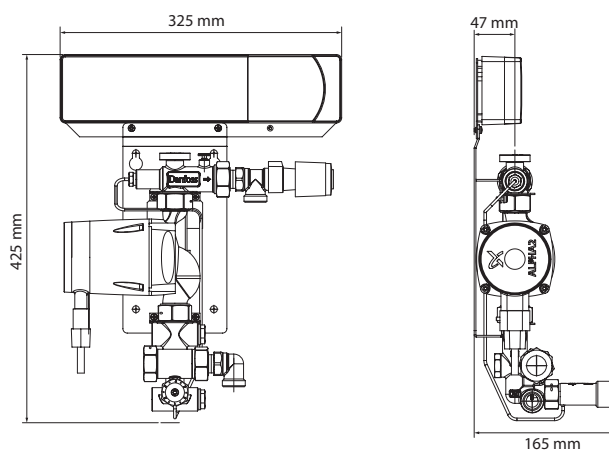
### CF-RF Display Thermostat with InfraRed floor sensor

- Easy wireless assignment with Link Test to Master Controller CF-MC.
- Min. and max. limitation of temperature settings.
- Powered by 2 x AA Alkaline 1.5V batteries.
- LED indication for low battery.
- Digital display showing actual or set room temperature.
- InfraRed floor sensor for minimum and maximum floor surface temperature limitation.

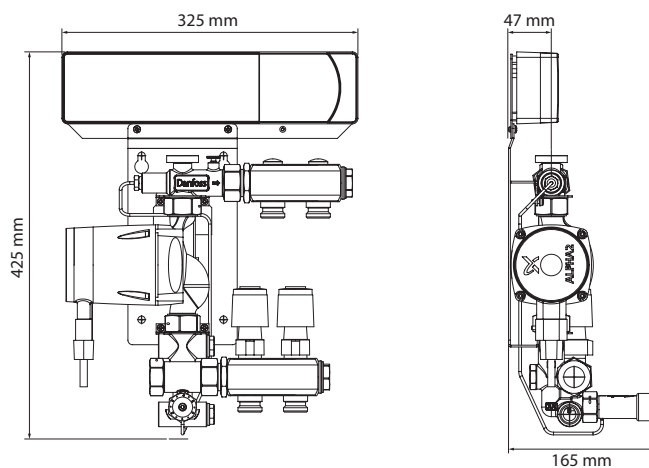
Code no.: 088U0215

For further technical information, see specific CF-Rx data sheet.

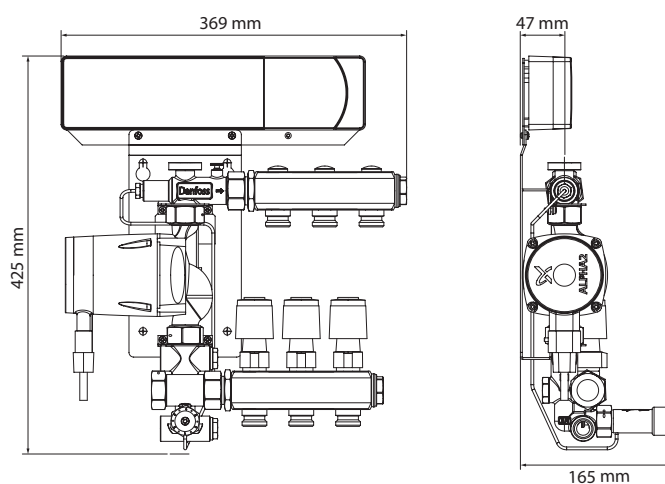
Dimensions



*Midi Shunt 088U0181*



*Midi Shunt 088U0182*



*Midi Shunt 088U0183*

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