

Data Sheet

UnoFloor Basic

Description



The **Danfoss UnoFloor Basic** is a pre-assembled underfloor heating balancing and control distribution unit. UnoFloor comes wired and pre-mounted. The UnoFloor's Danfoss Icon™ 230V Wiring center can connect up to 14 thermal actuators and 8 room thermostats. It is provided with 230V Live circulation pump output and a potential-free relays for controlling a boiler.

The SSM stainless-steel manifold is used for controlling water flow. Each tube of the floor heating system is connected to the manifold, thus making it possible to control water flow or heat supply to each room in the building individually.

Features:

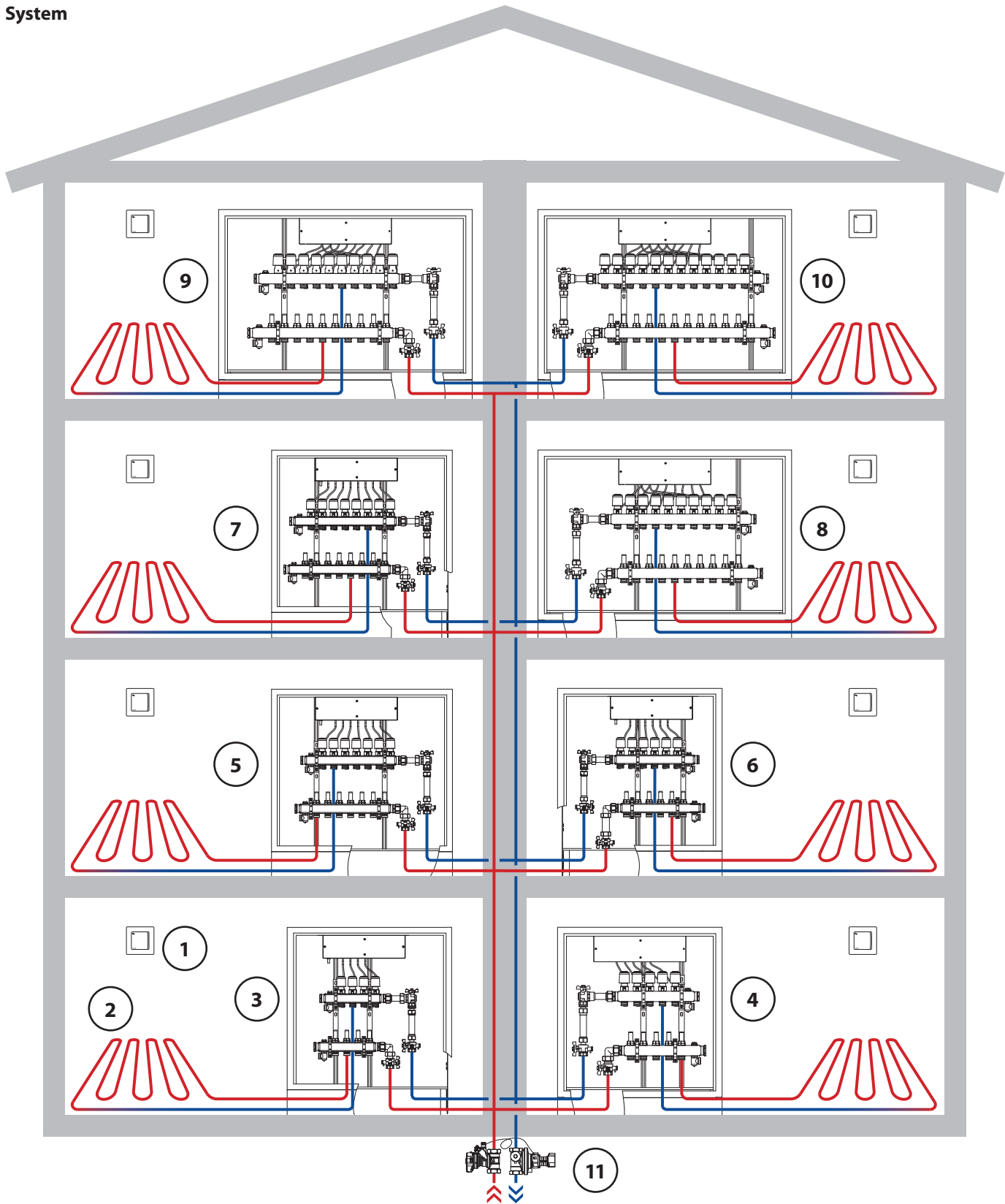
- Compact design — fits in even the smallest places.
- In-wall cabinet ensures flush installation.
- Heat meter connection set with ball valves.
- Pre-mounted — minimal risk of installation faults.
- Easy ordering — only one number necessary.
- Short installation time.

Ordering

Description	Type	Code no.
Underfloor heating balancing and control distribution unit includes: <ul style="list-style-type: none"> • Danfoss Icon™ Wiring center 230V; • Actuators; • Stainless steel manifold; • Heat meter set; • Cabinet; • Max differential pressure 0,6 bar; • Nominal pressure: PN6; • Max temperature: 90 °C. Use heating water according VDI 2035.	UnoFloor Basic 4L	088X3104
	UnoFloor Basic 5L	088X3105
	UnoFloor Basic 6L	088X3106
	UnoFloor Basic 7L	088X3107
	UnoFloor Basic 8L	088X3108
	UnoFloor Basic 10L	088X3110
	UnoFloor Basic 12L	088X3112
	UnoFloor Basic 4R	088X3124
	UnoFloor Basic 5R	088X3125
	UnoFloor Basic 6R	088X3126
	UnoFloor Basic 7R	088X3127
	UnoFloor Basic 8R	088X3128
	UnoFloor Basic 10R	088X3130
	UnoFloor Basic 12R	088X3132

Key UnoFloor Basic 4L: Basic — version, 4 — number of circuits, L — left assembly, if R — right assembly.

System



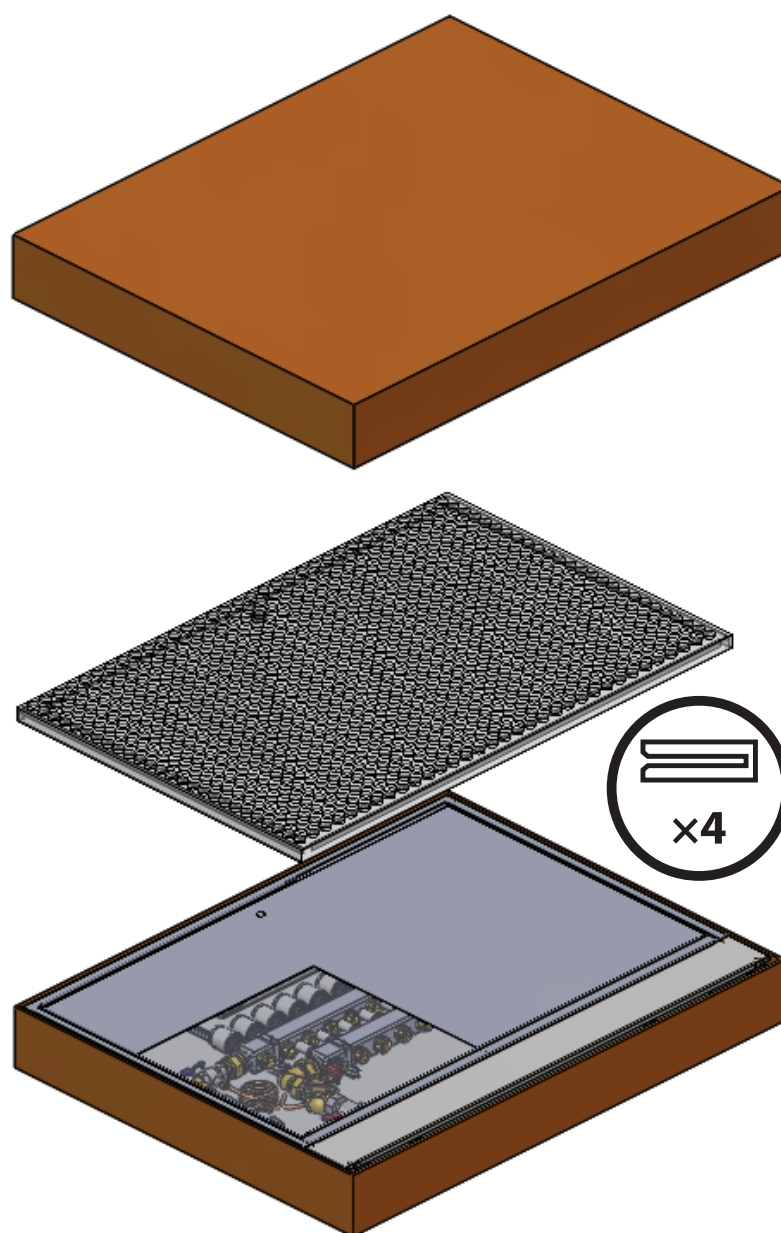
- | | |
|-------------------------------|------------------------------------|
| 1. Room Thermostats | 6. UnoFloor Basic 6L |
| 2. Underfloor heating circuit | 7. UnoFloor Basic 8R |
| 3. UnoFloor Basic 4R | 8. UnoFloor Basic 10L |
| 4. UnoFloor Basic 5L | 9. UnoFloor Basic 10R |
| 5. UnoFloor Basic 7R | 10. UnoFloor Basic 12L |
| | 11. ASV Automatic balancing valves |

UnoFloor Basic is a Time saving provider








Time saving solution provider:

- Manifold mounted in the cabinet;
- Premounted heat meter set;
- Icon™ Wiring center fixed;
- All TWA actuators are wired with the Icon™ Wiring center.

Take the prefab for each apartment and put away frame and door which are packed together for protection. The cardboard box can be used to protect frames and doors during construction phase.



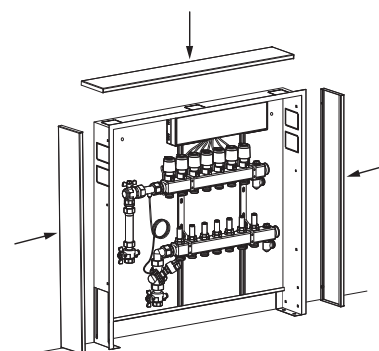
Accessories

Description		Code no.
	Danfoss Icon™ Dial, In-wall	088U1000
	Danfoss Icon™ Display, In-wall	088U1010
	Danfoss Icon™ Programmable, In-wall	088U1020
	Danfoss Icon™ Dial, On-wall	088U1005
	Danfoss Icon™ Display, On-wall	088U1015
	Danfoss Icon™ Programmable, On-wall	088U1025
	Floor sensor	088U1110

Accessories

Panels for on wall mounting are available on demand.

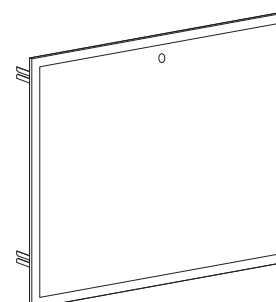
Description	Code no.
On wall panels for cabinet 610	088X3014
On wall panels for cabinet 760	088X3016
On wall panels for cabinet 960	088X3018



Accessories

Frame and door for service are available on demand.

Description	Code no.
Frame and door for cabinet 610	088X3008
Frame and door for cabinet 760	088X3010
Frame and door for cabinet 960	088X3012



**SSM
Floor Heating Manifold**



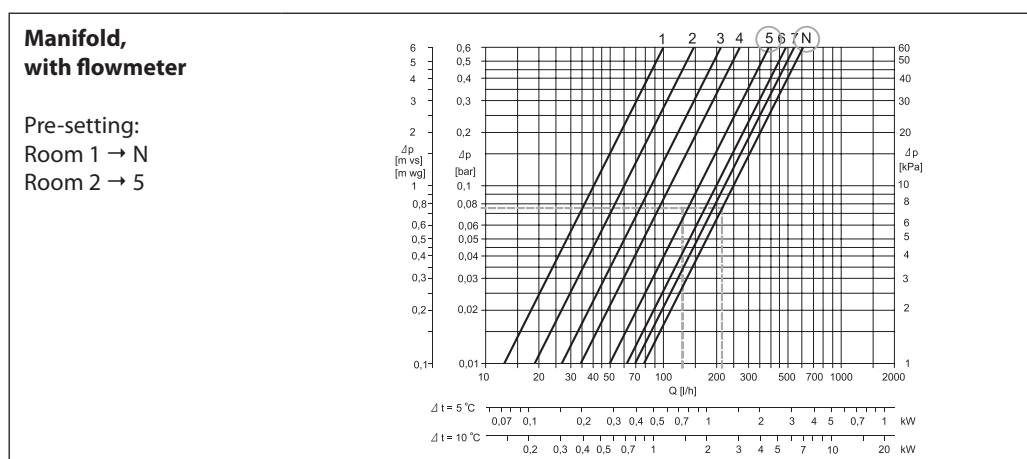
Manifold set 5+5, with flowmeter

The SSM manifold is used for controlling water flow in under floor heating systems. Each tube of the floor heating system is connected to the manifold, thus making it possible to control water flow or heat supply to each room in the building individually.

Part of assembly

Description	Type	
	Manifold set 4+4, with flowmeter	SSM-4F
	Manifold set 5+5, with flowmeter	SSM-5F
	Manifold set 6+6, with flowmeter	SSM-6F
	Manifold set 7+7, with flowmeter	SSM-7F
	Manifold set 8+8, with flowmeter	SSM-8F
	Manifold set 10+10, with flowmeter	SSM-10F
	Manifold set 12+12, with flowmeter	SSM-12F
	Heat meter set, connection: 3/4" x 110 mm 1" AG	FBH-WMZ

Pre-setting diagram



Presetting the manifold valves

The diagram shows the capacities for each heating circuit at different presettings of the manifold valves.

Based on the above calculations and capacity diagram each manifold valve is preset by rotating the red ring until the correct value on the ring is in-line with the sight mark on the valve.

**Danfoss Icon™
230V Wiring Center**



Danfoss Icon™ 230V Wiring Center is a connection box for use in hydronic floor heating using 230V thermostats and actuators.

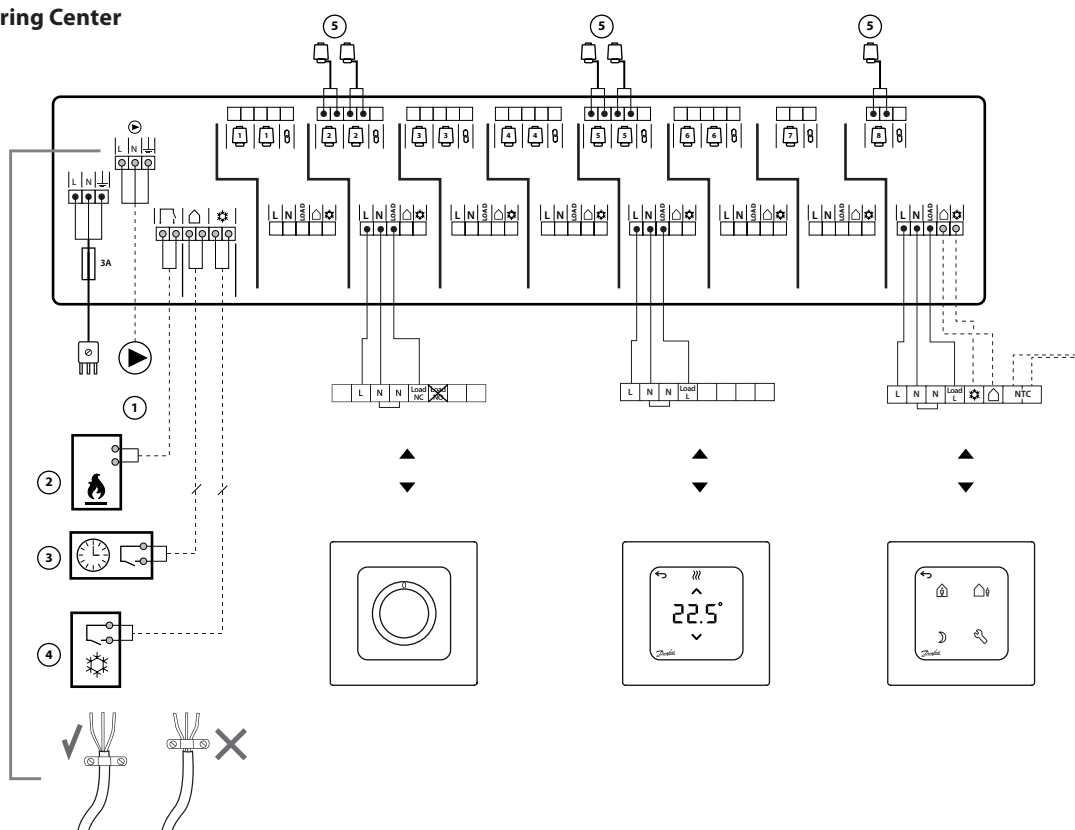
The Icon™ 230V Wiring Center can connect up to 14 thermal actuators from up to 8 room thermostats. It is provided with 230V Live circulation pump output and a voltage-free relays for controlling a boiler. The relays are activated when one or more thermostats require heat.

Technical data

Max. number of thermostats	8
Max number of actuators	14
Supported actuator types	Normally closed (NC)
Internal fuse	3 A
Conforms with directives	LVD, EMC, RoHs, WEEE
Supply voltage	220-240 V AC
Supply frequency	50/60 Hz
Output voltage, actuators	230 V AC
Ambient temp. range, operation	0 °C to 50 °C
Storage temp. range	-20 °C to +60 °C
Output relay, pump	230 V Max. 100 W
Output relay, boiler	Voltage-free Max. 2 A
Output cooling	230 V when active
Output Setback	230 V when active
Input Cooling	External switch input (230 V rating)
Input setback	External switch input (230 V rating)
Rated impulse voltage	4 kV
Temperature for ball pressure test	75 °C
Control pollution degree	Pollution degree 2
Disposal instructions	As electronic waste

Wiring

Danfoss Icon™ 230V Wiring Center



TWA
Thermal Wax Actuator



The TWA is a small actuator for electrical on/off controls to activate several types of valves and floor heating manifolds.

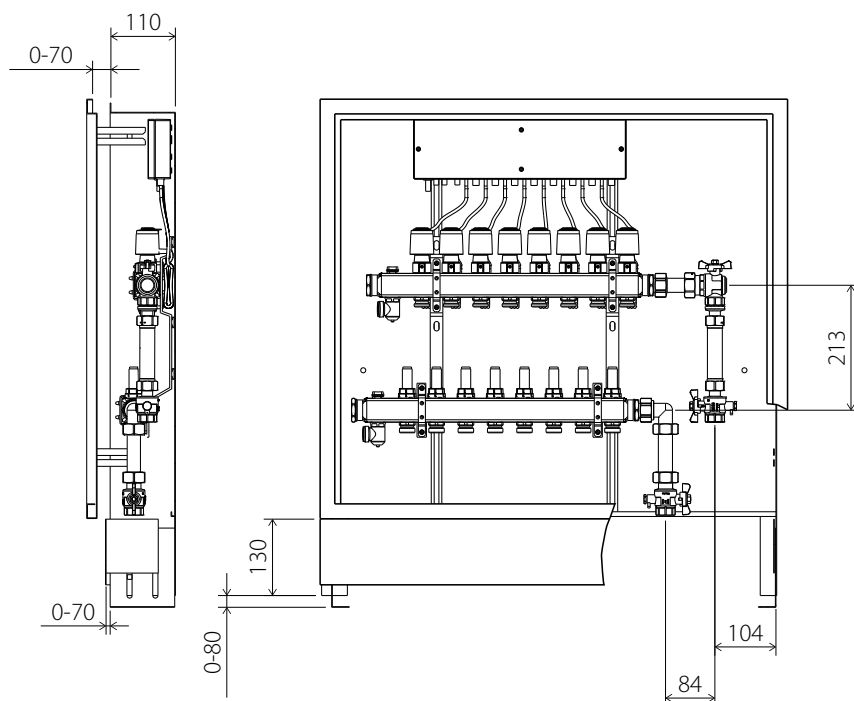
Part of assembly

Actuator	Connection type	Supply Voltage	Function
TWA-A	RA	230 V AC	NC

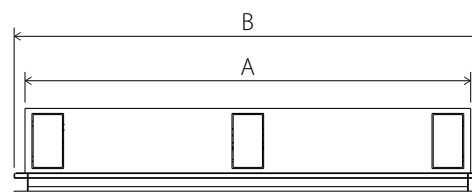
Technical specifications

Supply voltage	230 V (3 A pre-fuse)
Max. inrush current	230 V: 250 mA
Frequency	50-60 Hz
Running power consumption	2 W
Spindle travel time	~3 min.
Ambient temperature	0 °C to 60 °C
Enclosure	IP 41
Cable length	950 mm
k_{VS} (m ³ /H)	0,10 to 1,10
Max. Δp (Bar)	0,6

Dimensions



Number of circuits	A	B	C
4, 5, 6	610 mm	647 mm	750 mm
7, 8	760 mm	797 mm	750 mm
10, 12	960 mm	997 mm	750 mm



Tender text

Pre-assembled underfloor heating balancing and control distribution unit must come wired and pre-mounted, suitable for left- and right-hand side connection to the manifold, fitted in in-wall cabinet.

Cabinet must be painted in white (RAL 9016), 840mm in height, up to 800mm in width and 120mm in depth.

It must be possible to connect the room thermostats to the NC actuators via a connection box. The connection box must have not less 8 channels and 14 actuator outputs, have two potential free relays: one for the pump and one for the boiler. Distribution voltage: 230VAC. Voltage: 230VAC, max. power per output: 3W.

The manifold is used for heat regulation in floor heating systems. Each circuit in the floor heating system is connected to the manifold, which makes it possible to regulate the heat supply to each room in the building independently.

The manifold shall consist of a flow and return manifold where the flow manifold must be able to close each circuit independently. The return manifold must be equipped with presetting valves, ensuring optimal balancing of the system. Flow control of the floor heating system shall be done on a visible presetting scale, so that the value can

be read and checked after commissioning. Valves shall be controlled electronically by thermal actuators installed without adapters.

The manifold must be provided in modules with air vent and drain / fill function valve.

The manifold must be made of stainless steel and have the following specifications:

- Maximum flow temperature : 90 °C;
- Maximum differential pressure: 0,6 bar;
- Maximum operating pressure: 6 bar;
- Max Kv setting of the valve (N): 0,97 m²/h.

The actuator must be pre-mounted on a valve. The actuator receives a signal from the room thermostat. Based on the signal, it opens and closes the valve which makes it possible to regulate the energy supply to each room in the building independently. For easy and secure installation, the actuator must be delivered as one part (no adapter) and mounted on the manifold by use of an Allen screw.

The heat meter connection set must be suitable for left and right hand side connection to the distributor/collector. Connection set must include 110 mm length meter spool piece with no reducing 3/4" connection and flat seals. The connection to the manifold is 1" flat sealing.

Danfoss A/S

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