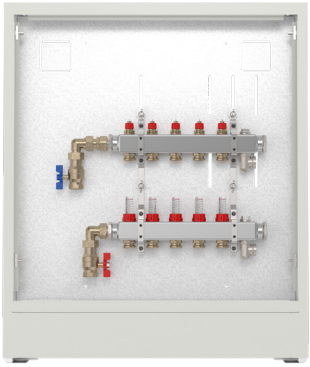
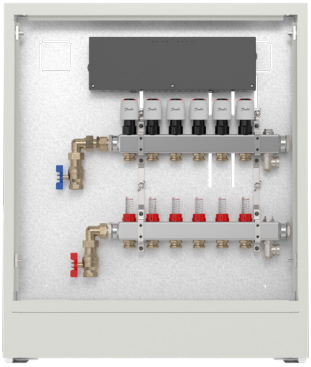
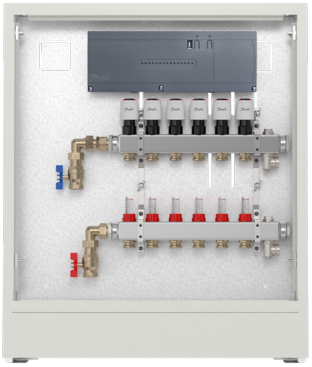
ENGINEERING TOMORROW

Data Sheet

UnoFloor
Light / Light C / Light CI

Description

Product

Danfoss prefabricated stainless steel distribution units for floor heating in cabinets.

The Danfoss UnoFloor Light series are preassembled stainless steel distribution units installed in a cabinet for in-wall installation.

These solutions make it easier for the installer to order a ready-made plug & play construction for mounting of distribution pipes for the building section.

The units are available as standard solutions with 4 to 12 connections and include manual air vent and drain valve. In addition the solutions include a flow meter to maintain the designated flow rate.

The UnoFloor Light stations are all for left connections.

UnoFloor comes wired and premounted. UnoFloor Light C includes Danfoss Icon™ 230V Wiring Center and Light Ci comes with Danfoss Icon™ 24V Master Controller.

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 & benefits

- Plug & Play construction
- Durable stainless steel distribution unit
- Minimum space required for installation
- In-wall cabinet ensures minimum time required for installation
- Pre-mounted ensures minimal risk of installation faults
- Correct heat distribution, even under partial load
- App solutions for installer and end-user (Light CI)

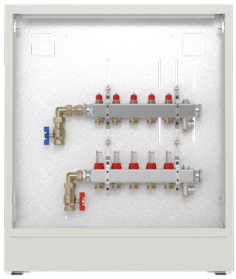
Applications

- Heat regulation in floor heating systems

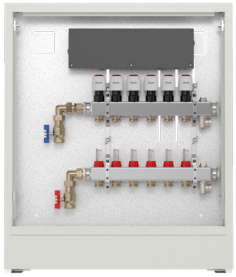
Ordering

Product code numbers

Light

	Distribution unit	Code no.
	4 connections	088X3704
	5 connections	088X3705
	6 connections	088X3706
	7 connections	088X3707
	8 connections	088X3708
	10 connections	088X3710
	12 connections	088X3712

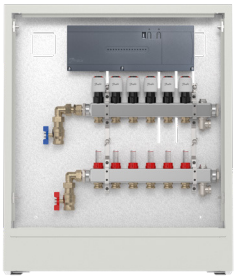
Light C

	Distribution unit	Code no.
	4 connections	088X3714
	5 connections	088X3715
	6 connections	088X3716
	7 connections	088X3717
	8 connections	088X3718
	10 connections	088X3730
	12 connections	088X3732

Wired solution – UnoFloor Light C with ICON™ Wiring Center Installed

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

Light CI

	Distribution unit	Code no.
	4 connections	088X3734
	5 connections	088X3735
	6 connections	088X3736
	7 connections	088X3737
	8 connections	088X3738
	10 connections	088X3740
	12 connections	088X3742

Wireless / wired solution – UnoFloor Light CI with ICON2™ Main Controller Installed

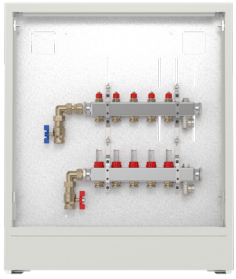
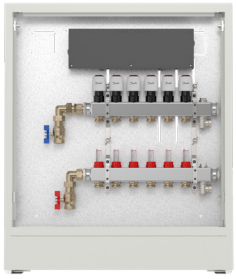
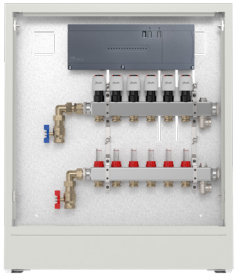
		Code no.
	Danfoss ICON2™ RT display thermostat Wireless	088U2121
	Danfoss ICON2™ Featured RT display thermostat with infrared floor sensor Wireless	088U2122
	Danfoss ICON2™ Sensor, no settings or display Wireless	088U2120
	Danfoss ICON2™ On-wall thermostat 2-wire 24V	088U2128
	Danfoss ICON2™ In-wall thermostat 2-wire 24V	088U2125
	Floor sensor	088U1110
	Danfoss Ally™ Gateway (for user-app)	014G2400

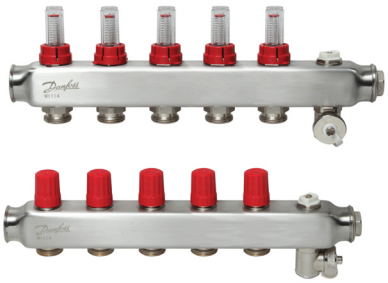
Spare parts code numbers

	Code no.
Service built-in valve for manifold	013G7376
Replacement flowmeter for FHF & SSM manifold	088U0819
TWA-A, RA , NC, 230V	088H3112
ICON Wiring center	088U1040
ICON2 Master controller advanced	088U2110
Frame and door for UniFloor cabinet 610	088X3008
Frame and door for UnoFloor cabinet 760	088X3010
Frame and door for UnoFloor cabinet 960	088X3012

Overview

Product portfolio

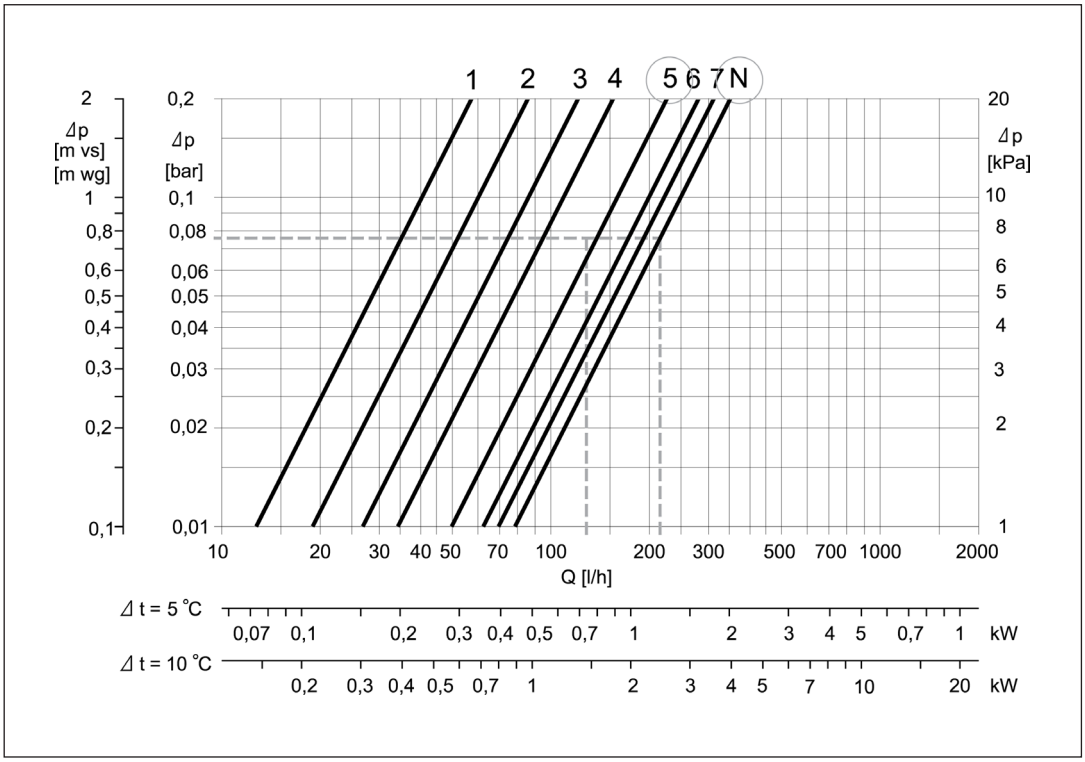
Distribution units	
Light	
	Is delivered with flow meter, without controller and thermo actuators, but prepared for mounting a controller and actuators of your choice.
Light C	
	Is delivered with flow meter and fitted with an Icon™ wiring center 230V and thermoactuators TWA NC for control of the floor heating system. Wired room thermostats.
Light CI	
	Is delivered with flow meter and fitted with an Icon2™ master controller 230V and thermo-actuators TWA NC for control of the floor heating system. Wireless or wired room thermostats. App based installation guide for the installer with the option of an installation report as documentation. By purchasing an Ally gateway, the end-user can control the room heating in his home via the Danfoss Ally app.

Floor Heating Manifolds	
SSM	
	The SSM manifold is used for controlling water flow in under-floor heating system. 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 indi-vidually.
Connection boxes	
ICON™ Wiring Center (UnoFloor Light C)	
	Danfoss ICONTM Wiring Center is a connection box for use in hydronic floor heating using 230V thermostats and actuators. Can connect up to 14 thermal actuators from up to 8 room thermostats. It is pro-vided with 230V circulation pump out-put and voltage-free relays for controlling a boiler. The relays are activated when one or more thermostats require heat.
ICON2™ Master Controller (UnoFloor Light CI)	
	Danfoss ICON2™ Master controller is a control box for use in hydronic floor heating using wireless or wired thermostats and 230V actuators. • Automatic balancing (PWM+), which ensure that hydraulic balancing of the system is done by the master controller based on the actual room demand. • Requires no pre-setting on the manifold • On/Off control possibility • Possibility to combine wired and wire-less thermosats in same installation
Wireless control system	
Danfoss Ally™ Gateway	
	The Danfoss Ally™ Gateway is a programmable, wire-less control system that connects all the Danfoss Ally™ devices to the internet and intelligently controls your heating via a free app downloadable from Google Play and App Store. The power supply and LAN ca-ble for the internet connection are included. By purchasing an Ally gateway, the end-user can control the room heating in his home via the Danfoss Ally app.

Functions

Operation

Presettings



Media

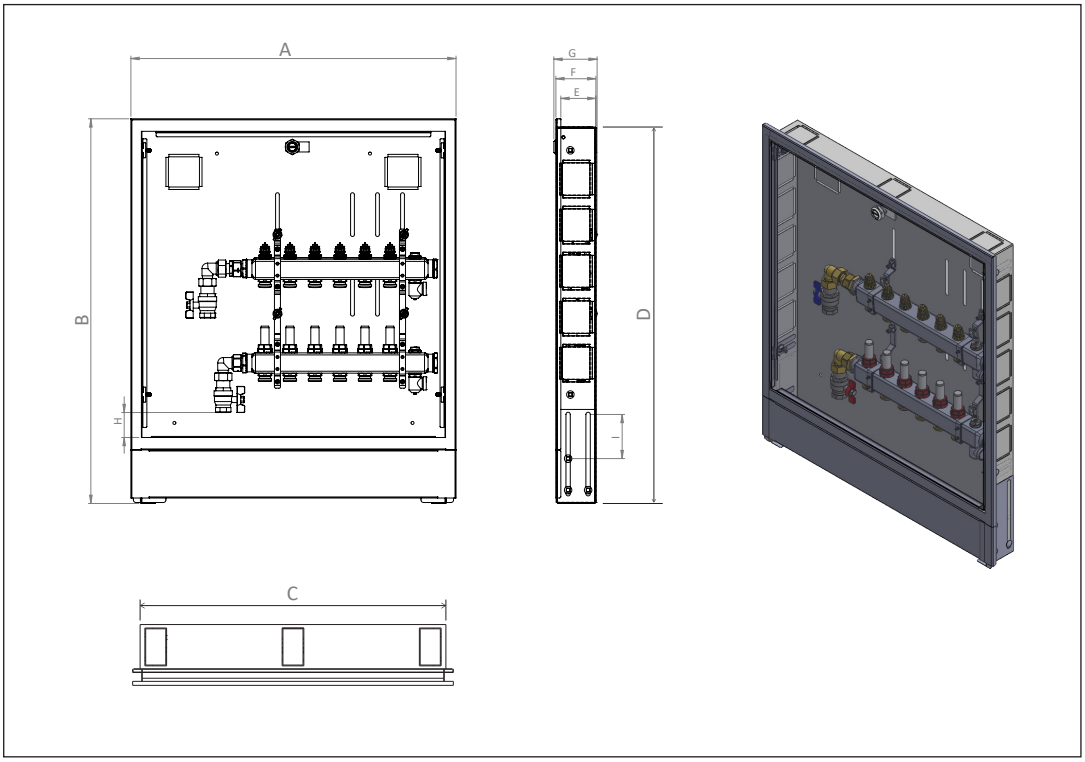
Use heating water according to VDI2035 or Ö-NORM H5195-1, fluid category ≤ 3 according to EN1717

Product details

General data

Nomimal pressure	PN 6
DH supply temperature Tmax	60 °C
Supply voltage	230V
Output voltage	230V
Connection sizes	G ¾" (IT)

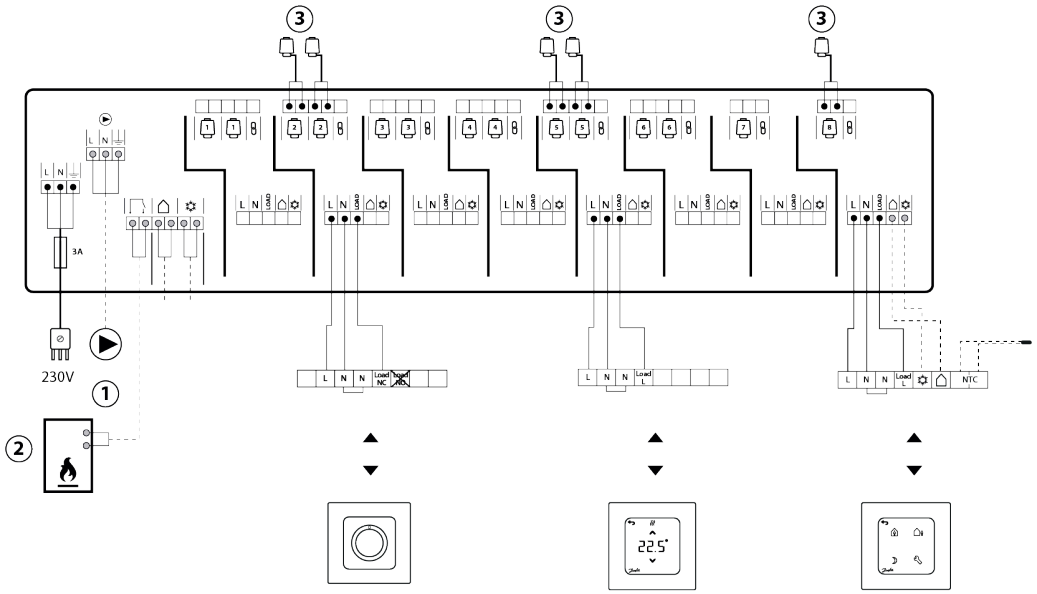
Dimensions & weights



Dimensions [mm]	A	B	C	D	E	F	G	H	I
4 connections	650	769	619	752	70	80	86	50	88
5 connections	650	769	619	752	70	80	86	50	88
6 connections	650	769	619	752	70	80	86	50	88
7 connections	800	769	769	752	70	80	86	50	88
8 connections	800	769	769	752	70	80	86	50	88
10 connections	1000	769	969	752	70	80	86	50	88
12 connections	1000	769	969	752	70	80	86	50	88

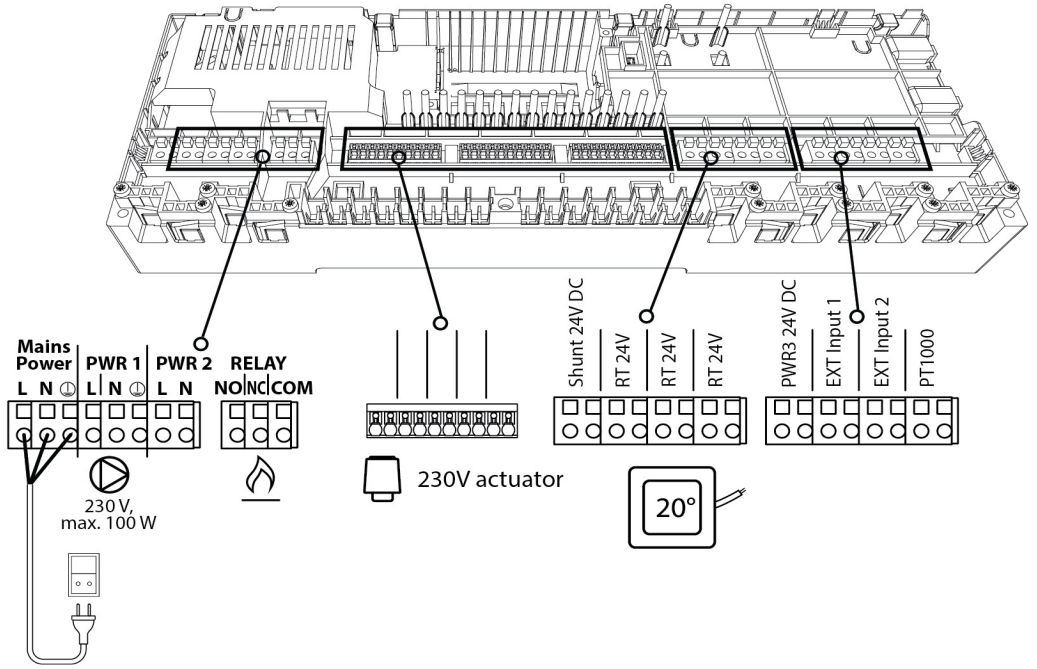
Installation

ICON™ Wiring Center (UnoFloor Light C)



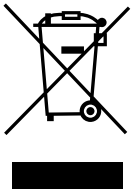
1 Circulation pump
2 Heat signal (potential free)
3 230V thermal actuator, NC

ICON2™ Master Controller (UnoFloor Light CI)



1 Circulation pump
2 Heat signal (potential free)
3 230V thermal actuator, NC

Certificates, declarations and approvals

CE - marking in accordance with the standards	EMC (ElectroMagnetic Compatibility Directive) LVD (Low Voltage Directive) RoHS (Restriction of Hazardous Substances Directive)
	This product is in the scope of the WEEE (Waste of Electrical and Electronic Equipment) Directive https://assets.danfoss.com/documents/403603/AH493135940717en-000101.pdf

Tender text

Pre-assembled underfloor heating balancing and control distribution unit must come wired and pre-mounted, fitted in in-wall cabinet.

Cabinet must be painted in white (RAL 9016), 769 mm in height, up to 1000 mm in width and 88 mm in depth.

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. Balancing of the floor heating system shall be done on a swivel scale ranging from 1-7 and N 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 of up to 12 outlets with air vent and drain / fill function valve. Ball valves must be available as an option for positive shut-off between manifold and system.

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

- Maximum flow temperature: 60 °C
- Maximum differential pressure: 0,6 bar
- Maximum operating pressure with flow meter: 6 bar
- Maximum operating pressure, without flow meter: 10 bar
- Max Kv setting of the valve (N): 0,97 m

Light C:

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: 230 V

AC. Voltage: 230 V AC, max. power per output: 3 W.

The actuator must be premounted 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.

Light CI:

It must be possible to connect the room thermostats to the NC/NO actuators via a connection box.

The connection box must have not less 15 channels and 15 actuator outputs, have potential-free relay, one micro disconnection output and permanent 230 V (max 50W) output. Supply voltage: 230 V AC. Output voltage for actuators: 230 V, max. power per output: 2 W. It must be possible to set up to 15 actuators for 1 room thermostat. It must be possible to control system by smartphone app and have pre-set work profiles with applications. Connection box must have possibility to be upgraded to wireless solution by Wireless module. For accurate hydronic control, automatic heat load control feature must be available.

The actuator must be premounted 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.

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Danfoss A/S
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