kamstrup

ULTRAFLOW® 85

Kamstrup A/S · Industrivej 28, Stilling · DK-8660 Skanderborg · T: 89 93 10 00 · info@kamstrup.dk · kamstrup.com

ULTRAFLOW® 85

> 60 °C

At a media temperature higher than 60 °C, the flow sensor should be shielded from unintended contact.

230 VAC

When connecting to a 230 V supply, there is a risk of electric shock.

16/25 bar

When working on the flow sensor in the installation, there is a risk of outflow of (hot) water under pressure.

Contents

In general 04

Information 05

Mounting of flow sensor 06

Mounting of cables 13

Sealings 16

Insulation 17

Display 18

Testing of function 19

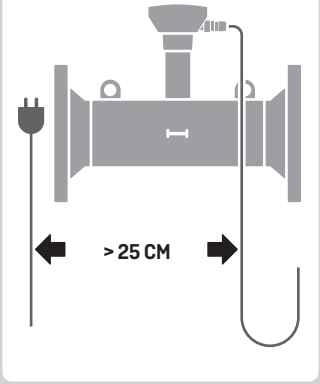
Accessories 20

In general

https://www.kamstrup.com/en-en/product-centre/ultraflow-85-dn150300#tab=Resources

https://www.kamstrup.com/

Information



E1 E2

M1 M2

5°C...55°C

ULTRAFLOW® 85: IP68

Cable Extender Box: IP68

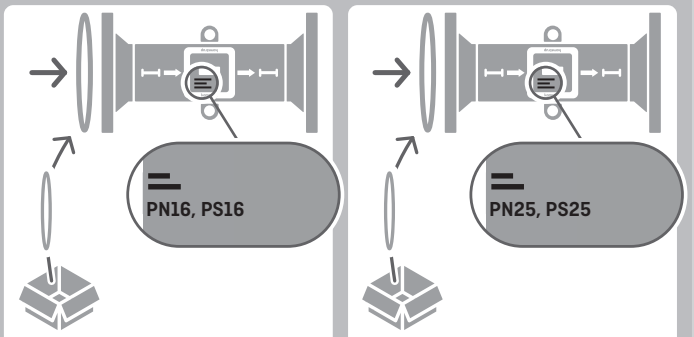
Pulse Transmitter/Divider: IP67

The meter's environmental and mechanical classes. The meter must be mounted indoors in the temperature range of 5 °C...55 °C. The meter's signal cables should be drawn at least 25 cm away from other installations.

Mounting of flow sensor

1/7

DN150 - DN300

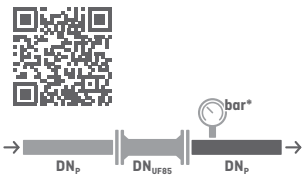


PN16, PS16	✓	PN16, PS16	✗
PN25, PS25	✗	PN25, PS25	✓

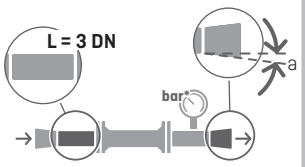
Pressure stage of the meter. The pressure stage of the provided accessories follows the markings on the meter.

DN150 - DN300

DNP = DNUF85 ✓



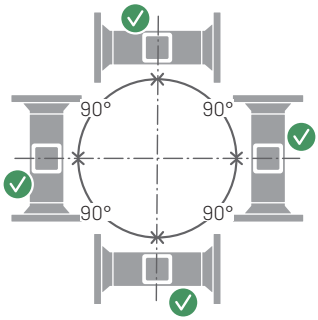
a ≤ 8° !



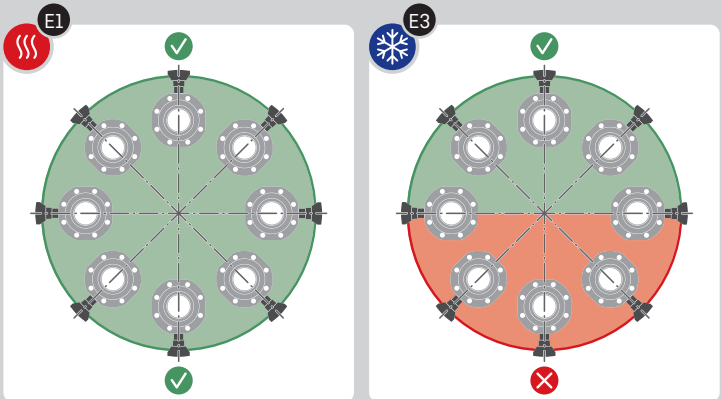
* ≥ 1.5 bar @ qp; ≥ 2.5 bar @ qs

The DN measurements of the meter must fit the installation, but smooth dimension transitions are also acceptable. The static pressure at flow sensor outlet must at all times be above the minimum requirement.

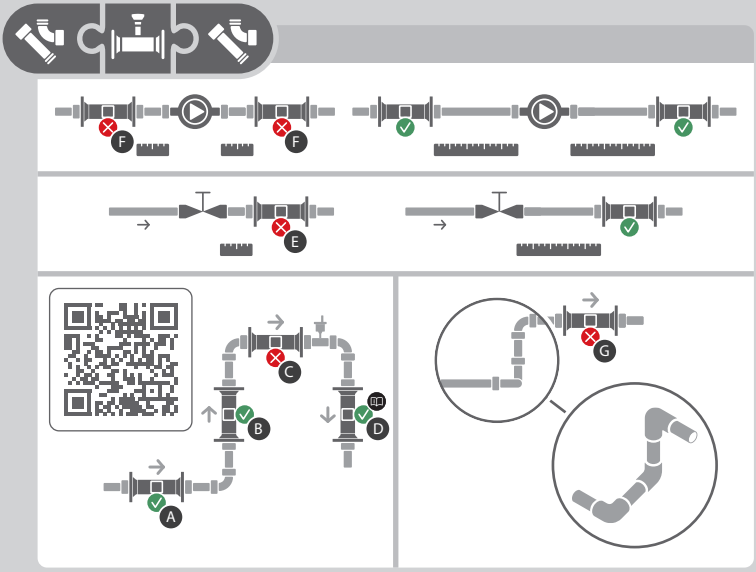
2/7



The flow sensor can be mounted horizontally, vertically or at an angle.



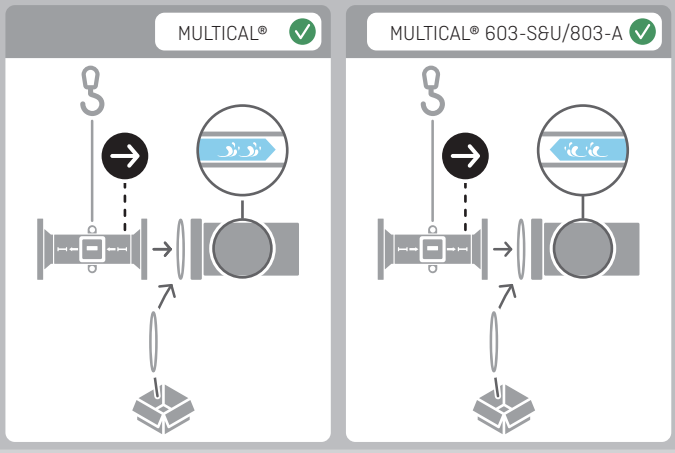
ULTRAFLOW® 85 can be installed in different orientations around the pipe axis.
In case of a cooling installation the display must not be positioned downwards.



A Recommended position - horizontally mounted.
B Recommended position - vertically mounted with flow pipe upwards.
C Unacceptable position due to risk of air build-up.
D Acceptable position in closed systems - vertically mounted with flow pipe downwards.
E Ought not to be placed immediately after a valve, with the exception of block valves (ball valve type) which must be fully open when not used for blocking.
F Ought not to be placed immediately before or after a pump.
G Ought not to be placed immediately after a double bend in two planes.

Mounting of flow sensor

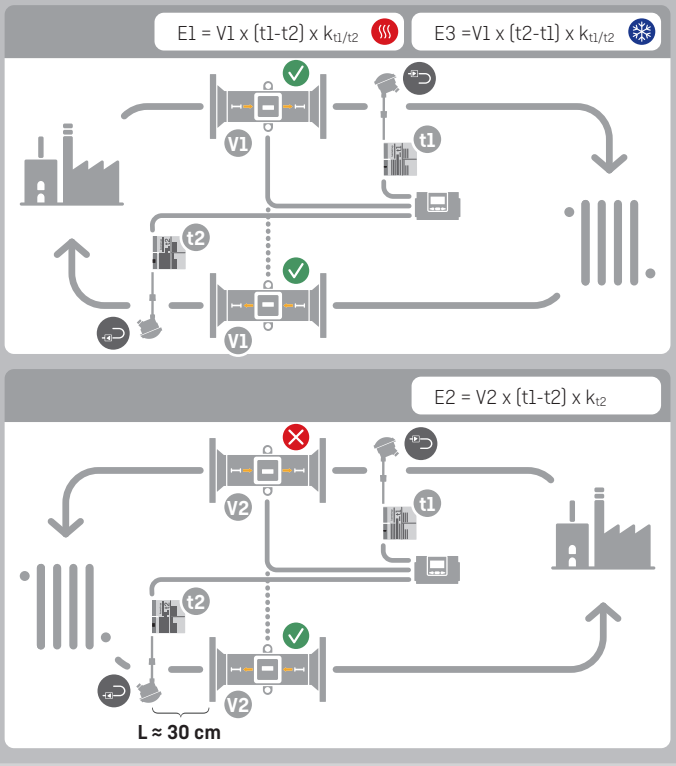
4/7



ULTRAFLOW® 85 is prepared to measure both forward flow, indicated with arrows on the flow sensor, and reverse flow. For reverse flow consult the data sheet of ULTRAFLOW® 85.

Mounting of flow sensor

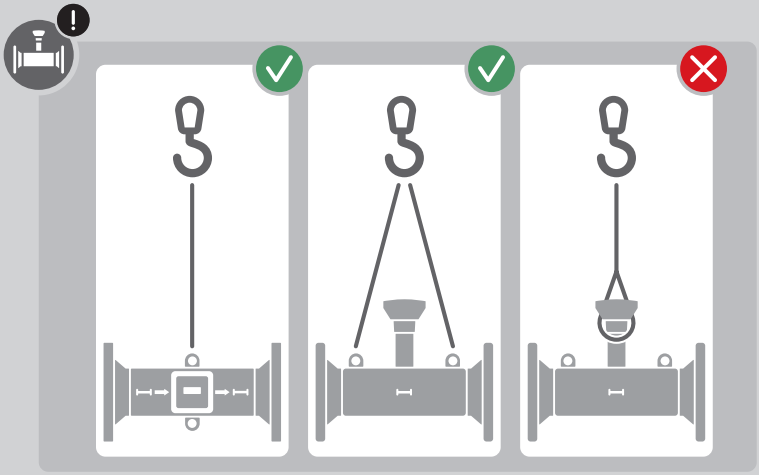
5/7



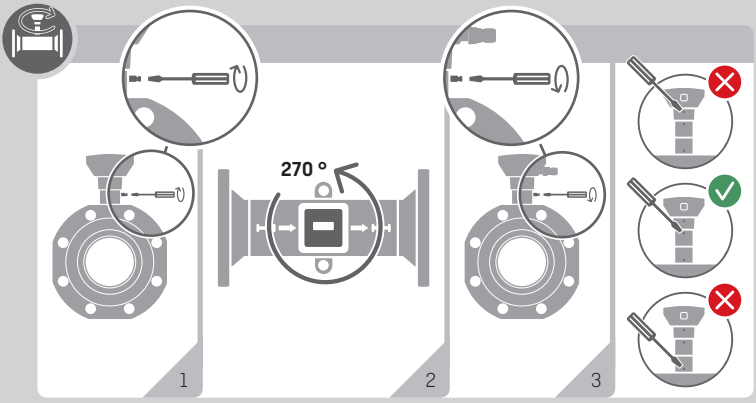
When measuring forward flow [V1], ULTRAFLOW® 85 can be mounted in inlet and outlet. When ULTRAFLOW® 85 is measuring reverse flow [V2], the flow sensor must be mounted in outlet next to t2 to obtain a correct energy calculation.

Mounting of flow sensor

6/7



ULTRAFLOW® 85 may be lifted in the lifting rings only. Do not lift on the electronics box.

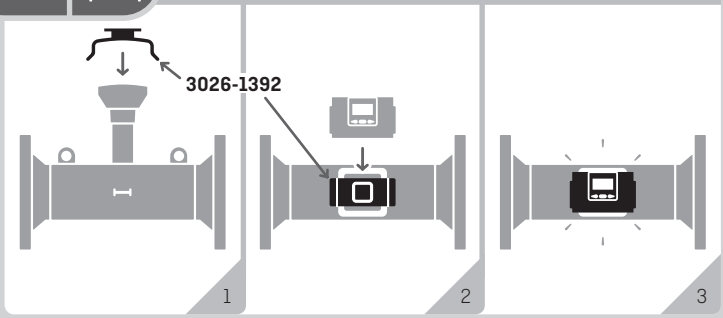


The top cover including display can be rotated by 270 °.

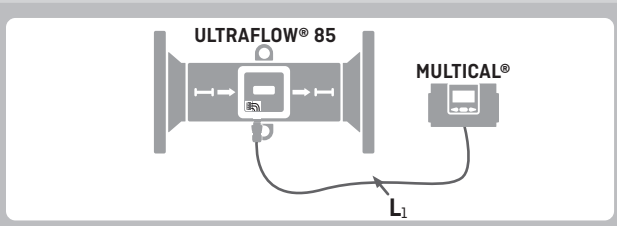
1 Loosen the screw on the side
2 Rotate the top cover
3 Fasten the screw again

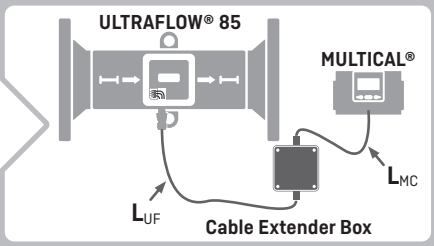
Mounting of flow sensor

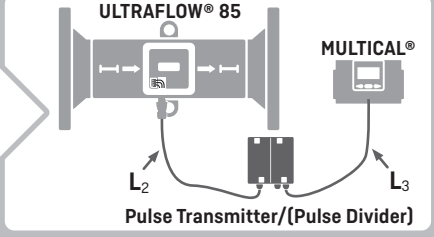
7/7



ULTRAFLOW® 85 with calculator mount bracket 3026-1392 allows direct mounting of MULTICAL® 603/803 on the top cover of ULTRAFLOW® 85.





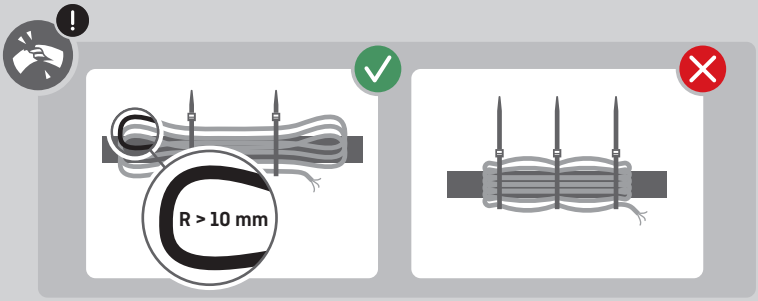


	≤ 10 m	3 x ø 0.5 mm²
L_1	≤ 10 m	3 x ø 0.5 mm²
L_2	≤ 10 m	3 x ø 0.5 mm²
L_3	≤ 10 m	3 x ø 0.5 mm²
L_3	≤ 100 m	2 x ø 0.5 mm²
L_{UF}	≤ 29 m	3 x ø 0.5 mm²
L_{MC}	≤ 1 m	3 x ø 0.5 mm²

Summary of cable lengths, diameters, and connections between ULTRAFLOW® 85 and MULTICAL®. Use Cable extender box 66-99-036 and Pulse Transmitter 66-99-903-YZ-XXX/(Divider 66-99-907-YZ-XXX) for extensions. Refer to supplementary technical documentation for details.

Mounting of cables

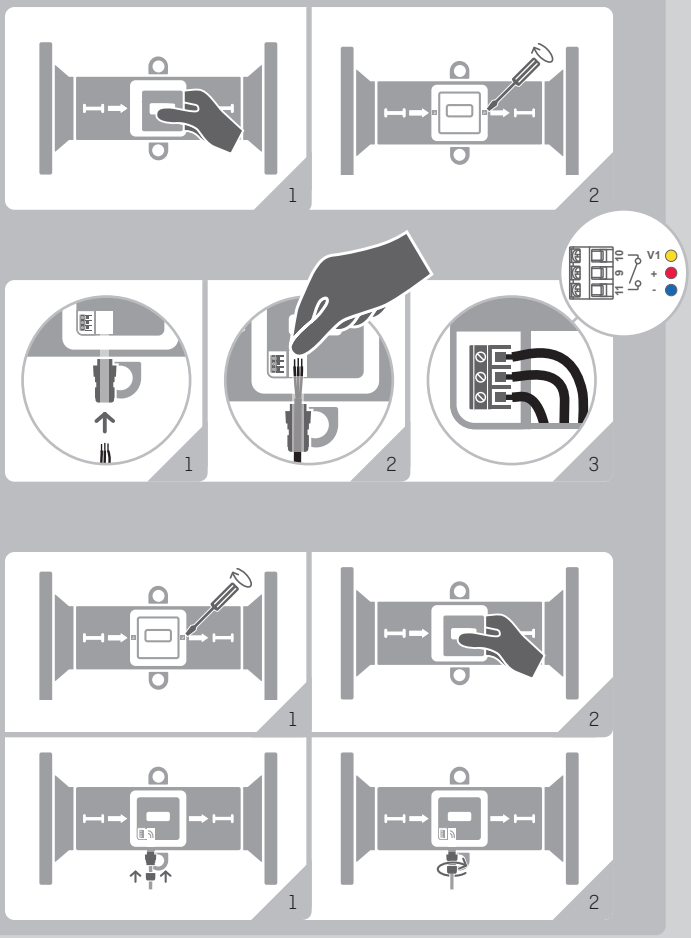
2/3



If too long cables are bent in connection with the mounting, a bending radius of at least 10 mm must be ensured.

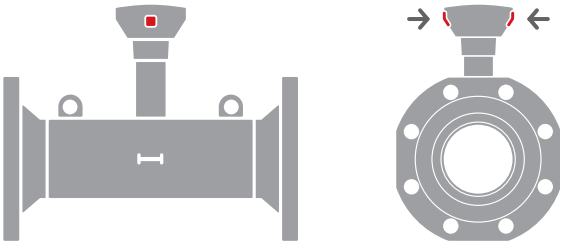
Mounting of cables

3/3



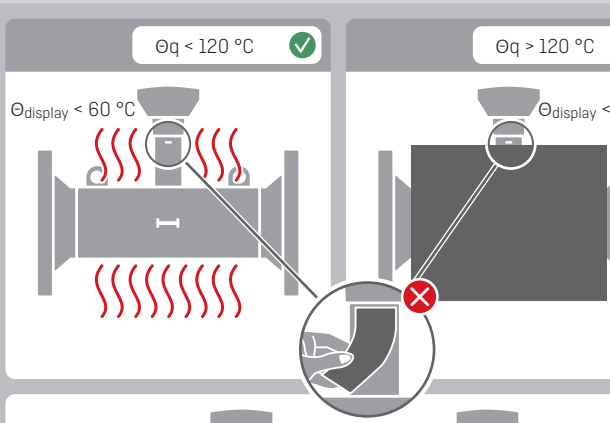
Remove top cover and unscrew the transparent lid. Guide the signal cable through the cable screw connection. Mount the 3-wire cable in the screw terminal as indicated and remount transparent lid and top cover. The cable screw connection must be tightened.

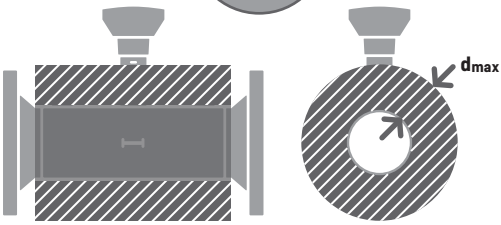
Sealings



Mounting of installation seals. To protect ULTRAFLOW® 85 against fraud the top cover must be sealed with sealing labels.

Insulation

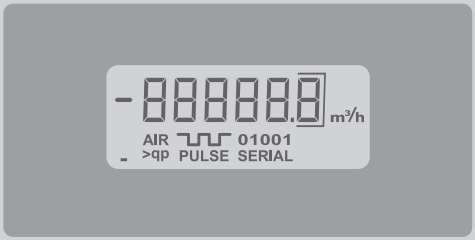




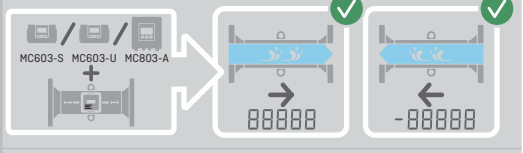
DN	d_{max}
DN150	80 mm
DN200	80 mm
DN250	120 mm
DN300	120 mm

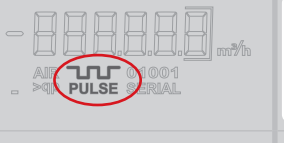
At a medium temperature Θ_q > 120 °C the flow sensor must be insulated to avoid overheating of the display. The ventilation hole must not be covered, when insulating the flow sensor. Consider the max thickness of the insulation sheet as indicated in the tabel to avoid covering of the ventilation hole.

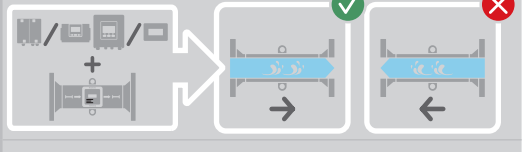
Display

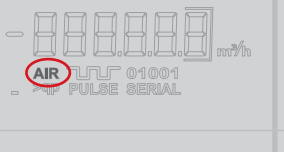


The actual flow and the status of the flow sensor is indicated in the display.

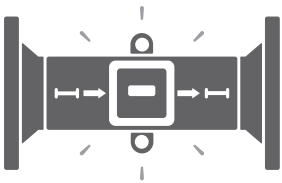




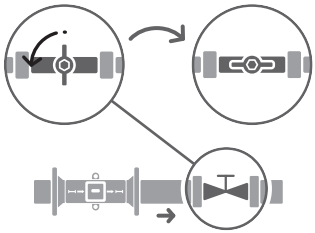




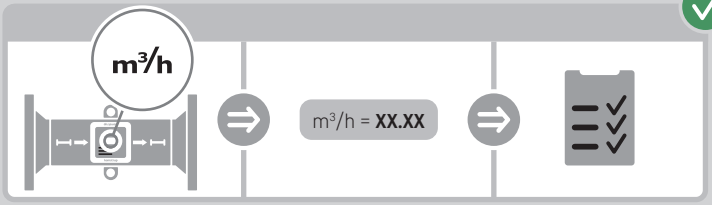
Testing of function



1



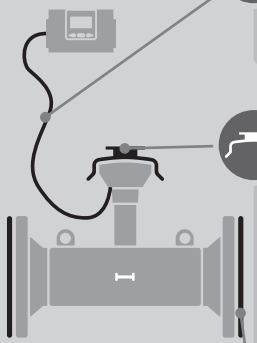
2



After the installation is completed, the meter is checked to ensure it functions correctly. Open thermoregulators and valves to establish water flow through the system. Then check if reliable values are shown for flow.

Accessories

https://www.kamstrup.com/en-en/heat-solutions/meters-devices/accessories



2.5 m silicone cable (3-wire)	5000-333
5 m silicone cable (3-wire)	5000-259
10 m silicone cable (3-wire)	5000-270

Bracket for MULTICAL® 603/803*	3026-1392
Cable Extender Box	66-99-036
Pulse Transmitter	66-99-903-YZ-XXX
Pulse Divider	66-99-907-YZ-XXX

* MC803 + 30-26-857 =

MULTICAL® 803 also requires bracket 30-26-857

Gasket, DN150 PN16 (1 pc.)	1150-214
Gasket, DN200 PN16 (1 pc.)	1150-215
Gasket, DN250 PN16 (1 pc.)	1150-216
Gasket, DN300 PN16 (1 pc.)	1150-164
Gasket, DN150 PN25 (1 pc.)	1150-140
Gasket, DN200 PN25 (1 pc.)	1150-139
Gasket, DN250 PN25 (1 pc)	1150-141