ISTEC
Flow Measurement & Control

INSTALLATION GUIDE COMPACT HEAT METER
MODELS 4400

NOTE

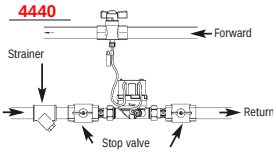
This installation guide is intended for trained personnel and therefore does not include basic working steps.

IMPORTANT

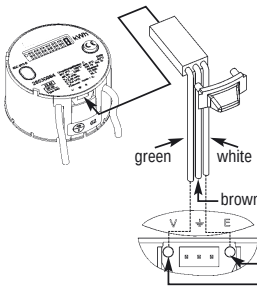
The seal on the heat meter must not be damaged! A damaged seal will result in immediate invalidation of the factory warranty and calibration.

INSTALLATION OF HEAT METER

The heat meter can be installed in the forward or return line. The heat meter is to be installed so that the direction of flow corresponds to the direction of the arrow on the volume measuring component (Fig.).



CONNECTION FOR M-BUS AND PULSE VERSION



DISPLAY UNIT FOR 4440 IN KWH

READ LOOP

233.4 — Basic display

Accumulated energy since initial operation

*8.8.8.8.8.8.8 (all on) ← (all off) — Segment test of LC display then automatic change to date reading: Alternates between energy and reading date

* 15.4 ↔ 31.12.02

Energy on reading date

To change to the service level, keep the button pressed for 5 seconds.

M-BUS PIN ASSIGNMENT: GREEN AND WHITE

Pulse output: Energy output (white wire) to terminal marked E.

Volume output (green wire) to terminal marked V.

THE 4440 HEAT METER IS EQUIPPED WITH FOLLOWING DIAGNOSTIC DISPLAYS

233.4	F-1	Temperature sensor defective Replace device
Accumulated energy since initial operation in kWh/MWh to two decimal places		
	C-1	RAM check error Meter must be removed
	F-3	Return sensor registers a higher temperature than forward sensor
	F-4	Volume sensor defective Meter must be removed
	F-5	Heat meter operates correctly. Optical communication is temporarily out of operation to save power
	F-6	Wrong direction of flow in heat meter

SERVICE LOOP

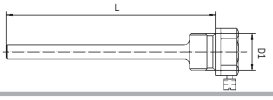
Window 1 (3 s)	Window 2 (1 s)	Description
1.22	-3-	Flow rate in m³/h
Resolution 0.001 m3/h		
76.	-4-	Forward temperature in °C
Resolution 0,1 °C		
55.	-5-	Return temperature in °C
Resolution 0,1 °C		
21.	-6-	Temperature difference in K
Resolution 0,1 K		
28.49	-7-	Power in kW
Resolution 0,001KW		
1921.37	-8-	Volume in m³
Resolution 0,001 KW		
31.12.02	-9-	Next reading date

If the display is switched off, this display appears the first time the button is pressed. To return to the first level, press the button again for 5 seconds.

Note: The display switches off automatically 5 min after the last press of the button.

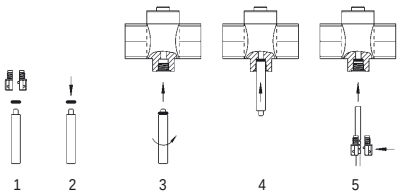
INSTALLATION IN A POCKET FOR M-TWZ AND WS-TWZ

Nominal diameter	DN 15/20	DN 25/40	DN 50/65	DN 80/100
Length	L = 34 mm	L = 50 mm	L = 70 mm	L = 85 mm
Coupling thread	D = G 1/2 B			



INSTALLATION IN THE BALL VALVE

- ❑ Close ball valve.
- ❑ Unscrew the plug screw from the ball valve.
- ❑ Place an O-ring from the enclosed set (1) on the mounting pin (2). The second O-ring is spare.
- ❑ Insert the O-ring into the hole of the plug screw of the ball valve with the mounting pin using turning movements (3).
- ❑ Position the O-ring in its final position with the other end of the mounting pin (4).
- ❑ Place the two halves of the plastic screw around the temperature sensor. Press the two halves together so that the stud on each half of the plastic screw fits into the hole on the other half.



- ❑ Insert the temperature sensor with the plastic screw into the ball valve and tighten the plastic screw by hand.
- ❑ Check for leaks.

FAULT CLEARANCE

If temperatures are indicated but no flow rate:

- ❑ Check and correct direction of meter
- ❑ Remove meter, blow into meter and check that the impeller turns or the + sign (active flow) flashes in the display. If this fails to cure the problem: Replace the meter.

BEFORE LOOKING FOR A FAULT IN THE HEAT METER ITSELF, PLEASE CHECK THE FOLLOWING POINTS:

- ❑ Is the heating system in operation – Is the circulating pump running?
- ❑ Are the stop valves fully open?
- ❑ Is the pipe clear (clean strainers)?
- ❑ Are all the seals intact (tampering)?
- ❑ Is the rating correct?