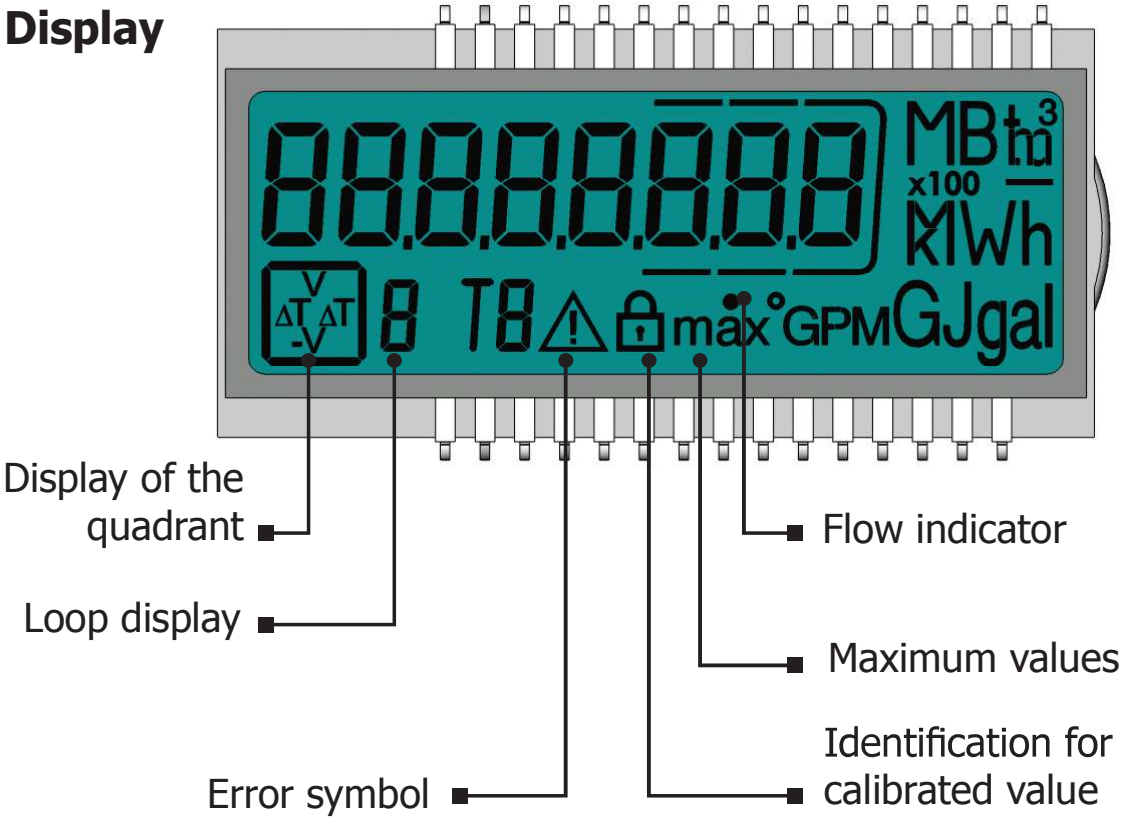
5. Display / Operation

5.1 Display



The visualization at the meter is done via a 8 digit LCD with unit and symbol display.

5.2 Push button

A push button is mounted on the front plate of the meter. This push button is used to switch to the various displays.

Action	Function
Briefly press the key (<3 seconds)	Switch within one loop
Hold the key (> 3 seconds)	Switch to the next display loop
Do not press the key for 4 minutes	Meter turns off the display automatically (energy saving, only if no error prevails)
Press the key again	The meter is in the basic display

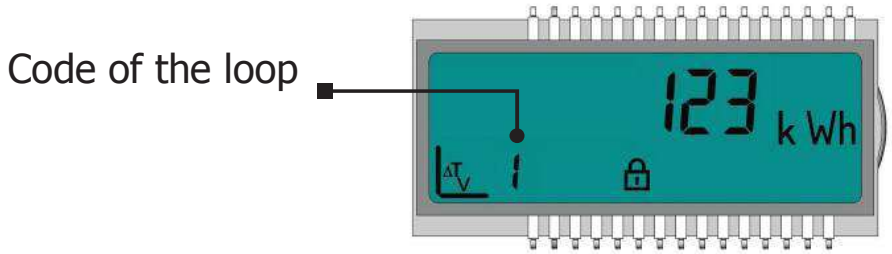
5.3 Display loops

The data read by the integrator can be viewed in several displays. These displays contain the assigned system information (e.g. accumulated energy, accumulated volume, flow, power, actual temperatures, ...) and can be accessed by calling the displays in the pre-defined sequence / loop.

The display content of each loop is programmed at factory with standard information.

Various display windows consist of up to seven value displays alternating in the 2 - 4 s rhythm.

The display is updated every 2s, since an internal calculation takes place every 2s.



Main loop (1)

Sequence	Window 1	Window 2
1.1	Accumulated energy	
1.2	Accumulated volume	
1.3	Accumulated cold energy (heat meters with cooling tariff)	
1.4	Flow	
1.5	Power	
1.6	Flow temperature Return flow temperature *)	Return flow temperature **)
1.7	Differential temperature	
1.8	Operating days	
1.9	Error status	Error hours
1.10	Display test	

*) without a decimal place; **) with one decimal place respectively

The basic display shows the display "energy", if the meter is integrated into the pipeline, the pipeline is filled completely with water and no error prevails (sequence 1.1).

As soon as an error occurs, it is permanently shown in the basic display. The meter will not enter the power saving mode. If the cause of the error is eliminated, the error in the display disappears.

Due date loop (2)

Sequence	Window 1	Window 2	Window 3
2.1	Due date 1 date	Due date 1 energy	"Accd 1A"
2.2	"Accd 1"	Date of future due date 1	
2.3	Due date 1 previous year	Date due date 1 previous year energy	"Accd 1L"
2.4	Due date 2 date	Due date 2 energy	"Accd 2A"
2.5	"Accd 2"	Date of future due date 2	
2.6	Due date 2 previous year date	Due date 2 previous year energy	"Accd 2L"

Information loop (3)

Sequence	Window 1	Window 2
3.1	Actual date	
3.2	"SEC_Adr"	Secondary address
3.3	"PRI_Adr 1"	Primary address
3.4	Installation location	
3.5	Software version	Check sum

Month loop (6) (heat- or cooling meter)

Sequence	Window 1	Window 2	Window 3	Window 4
6.1	"LOG"	Date last month	Energy	Volume
6.2	"LOG"	Date -1	Energy	Volume
:	:	:	:	:
6.24	"LOG"	Date -23	Energy	Volume

Month loop (6) (heat meters with cooling tariff)

Sequence	Window 1	Window 2	Window 3	Window 4	Window 5
6.1	"LOG"	Date last month	Heat energy	Cold energy	Volume
6.2	"LOG"	Date -1	Heat energy	Cold energy	Volume
:	:	:	:	:	:
6.24	"LOG"	Date -23	Heat energy	Cold energy	Volume

6. Error messages

The meter constantly performs self-diagnostics and can display various error messages. If an error occurs, the error code is displayed in the main loop.

All windows, however, can still be accessed by pressing the key.

The error message disappears automatically as soon as the source of the error is corrected. All errors that occur for longer than 6 minutes without interruption, are saved in the error memory.

Error code	Description
C - 1	Basic parameter error in flash or RAM - Meter must be replaced
E - 1	Erroneous temperature measurement Temperature range exceeds [-19.9 °C...190 °C] Sensor short circuit Sensor break
E - 3**	Temperature sensor mixed up in hot and cold line
E - 4	Hardware error during ultrasonic measuring Ultrasonic transducer defective Short-circuit ultrasonic transducer
E - 5	too frequent reading no M-Bus communication possible for a short time
E - 6**	flow direction incorrect Installation of flow sensor wrong
E - 7	No reasonable ultrasonic receive signal Air in the measuring path
E - 9	Warning: Running out of battery capacity

** application dependent

7. Maintenance

Flow sensor and temperature sensor may not be connected from the integrator.
After repair work, perform recalibration in an accredited testing agency.

Information concerning reconditioning or maintenance can be found in the processing concept (this will be made available for laboratories and testing agencies upon request).

8. Disposal

The meter contains a lithium battery, which is not rechargeable. Do not use force to open the battery. It must never come into contact with water, short-circuited or exposed to temperatures over 75 °C.

Empty batteries and no longer required electronic devices or components are hazardous waste.

This device must not be disposed together with the domestic waste.
Return it to the manufacturer for recycling.

9. Declaration of conformity for MID meters

See from page 65 onwards.

Further information as well as the actual declaration of conformity are available at:
http://www.diehl.com/en/diehl-metering/products-solutions/product-download/
Please select the partner "Diehl Metering GmbH" and the product area "Thermal Energy Metering".