



Electronic water meter Q water 5.5

Electronic MID-conform water meter for determining water consumption in water supply systems

The electronic water meter Q water 5.5 has been designed as a compact, single-jet dry running meter for nominal flows of Q_3 2.5 m³/h and Q_3 4.0 m³/h.

It stores the cumulated consumption value on a selectable due date and indicates this on the display for recording consumption costs.

The Q water 5.5 transmits the consumption values permanently by means of a radio signal via the integrated radio module to the QUNDIS remote meter read-out systems Q AMR and Q walk-by.

Parameter setting or manual read-out can also be carried out via the IrDA interface.

Application

The electronic water meter used for measuring water quantities. The main areas of application are in water supply systems where the water is outputted individually to different consumers.

This is meaningful in:

- 】 Apartment buildings
- 】 Offices and administration buildings

Typical users are:

- 】 Private building owners
- 】 Housing associations
- 】 Building service companies
- 】 Property management companies

Functions

- 】 Measurement of water consumption
- 】 Cumulation of the consumption values
- 】 Saving of the cumulated consumption values on the due date
- 】 Display of consumption values
- 】 Display of the most important operating data
- 】 Self-monitoring with error display
- 】 Data transmission by radio
- 】 Leak detection
- 】 Parameter setting and read-out via optical interface (IrDA-compatible)

Technology

Measuring principle

The counter works according to the single-jet measuring principle. The water flow hits an impeller wheel tangentially; the speed of this wheel is scanned magnetically via a GMR sensor.

Storing the consumption values

The water consumption values are continually cumulated. The current status is stored at 23.59 h on the next due date.

The due date can be programmed in the factory; December 31 is the default setting.

When the annual consumption is stored, the water meter calculates a checksum. Those who read the meter themselves must communicate this checksum together with the due date value read off to the evaluation office; it is used to check that the display has been read off correctly.

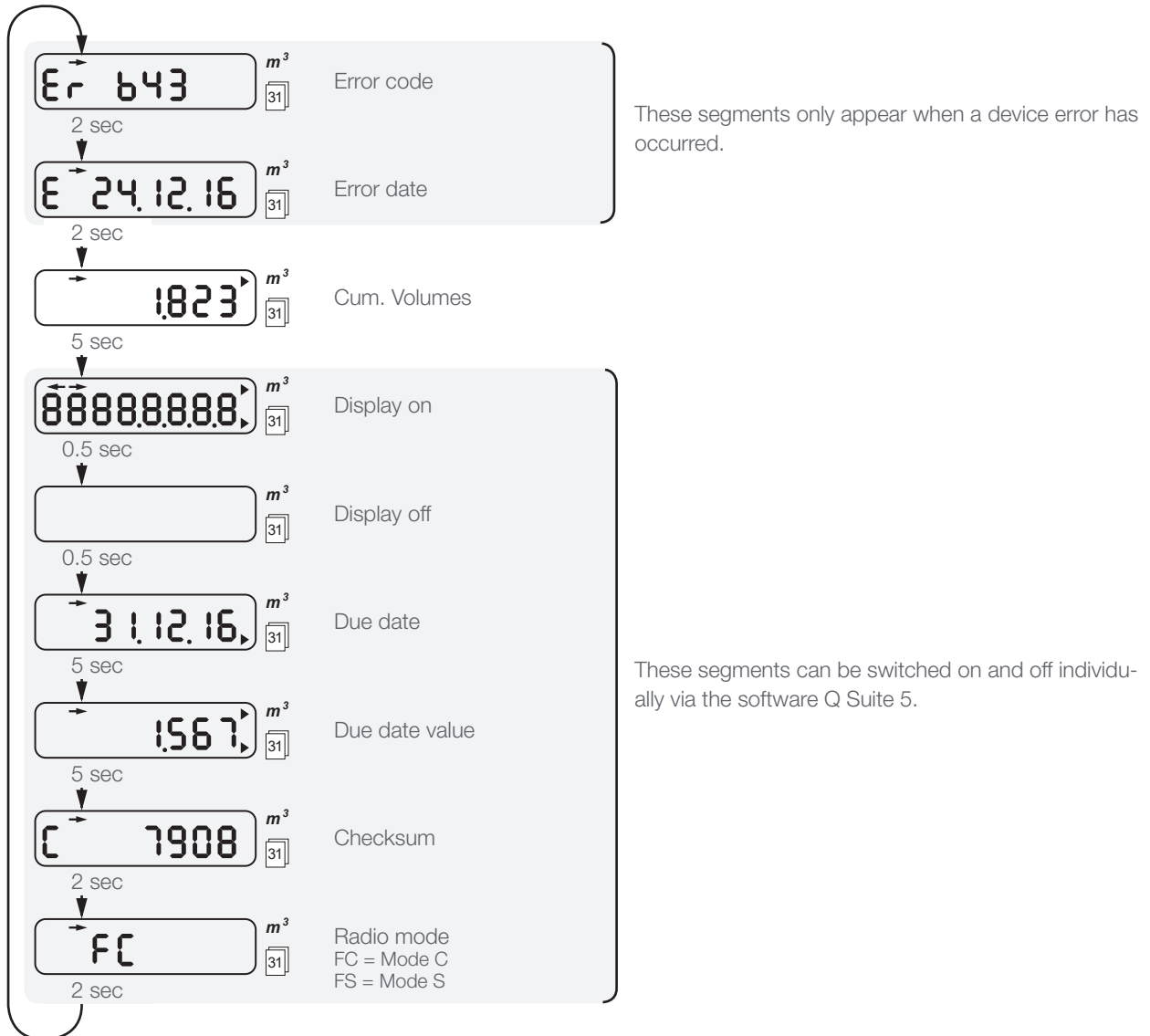
The stored due date value remains in place for one year.

Stored data

- 】 Current consumption value
- 】 Due date value
- 】 Due date
- 】 13 monthly values
- 】 Error code
- 】 Error date
- 】 Current meter reading (reverse)

Displays

The water meter has a rolling display. This covers the following values and parameters:



Version

The on-wall meter is made up of the measuring capsule and the calculator unit. The fitting is installed in the pipe using threaded joints. It is made of brass and contains the measuring chamber with the single-jet impeller wheel sensor. The inlet connecting sleeve contains a screen to trap larger soil particles. The water meter is designed as a compact device.

Calculator unit

The calculator unit contains the electronics and the eight-digit display (LCD). The operating voltage of DC 3 V is provided by a lithium battery. There is an IrDA interface underneath the display for the automatic read-out of the meter values. The calculator unit can be turned through 360° on the volume meter.

Radio (wireless) features C-mode

- 】 Radio system – parallel transmission of Q walk-by and Q AMR data telegrams
- 】 Q walk-by: 365 days per year, 10 hours per day
- 】 Q AMR: every 7.5 minutes, 24 hours per day
- 】 Increased radio capacity up to 10 dBm
- 】 Possible to change from C-mode to S-mode

Transmission behaviour

Q walk-by	Q AMR ⁽¹⁾
every 112 seconds	every 7.5 minutes
10 hours per day (8 am - 6 pm)	24 hours per day
365 days per year	365 days per year
current consumption values 13 Statistical values	current consumption values

(1) OMS-conform data telegrams

Radio (wireless) features S-mode

- 】 Increased radio capacity
- 】 Radio system – parallel transmission of Q walk-by and Q AMR data telegrams
- 】 Q walk-by: 48 days per year, 10 hours per day
- 】 Q AMR: every 4 hours, 24 hours per day
- 】 Transmission delay (offset) or transmission-free days can be parameterized for Q walk-by
- 】 Possible to change from S-mode to C-mode

Transmission behaviour

Q walk-by	Q AMR
every 128 seconds	every 4 hours
10 hours per day (8 am - 6 pm)	24 hours per day
monthly: 4 readout days from the first of each month	7 days per week
annually: 48 hours after due date	365 days per year
current consumption values 13 Statistical values	Data telegrams only or statistics and consumption values

Technical data

General device data

Battery service life (depending on the battery load)	1 year storage, 10 years radio operation, 1 year reserve
Rated voltage	DC 3 V
Data transmission according to	EN 13757-4
Frequency band S Mode C Mode	868.3 MHz 868.95 MHz
Transmission power	Typically 10 dBm
Duty cycle	< 1 % (50ms/128s)
Permissible ambient temperature during transport (2K3) on the basis of EN 60721-3-2:1997; during storage (1K3) on the basis of EN 60721-3-1:1997; in operation (3K4) on the basis of EN 60721-3-3:1997;	-25 °C to max. +70 °C -5 °C to +45 °C +5 °C to +55 °C

Standards and norms

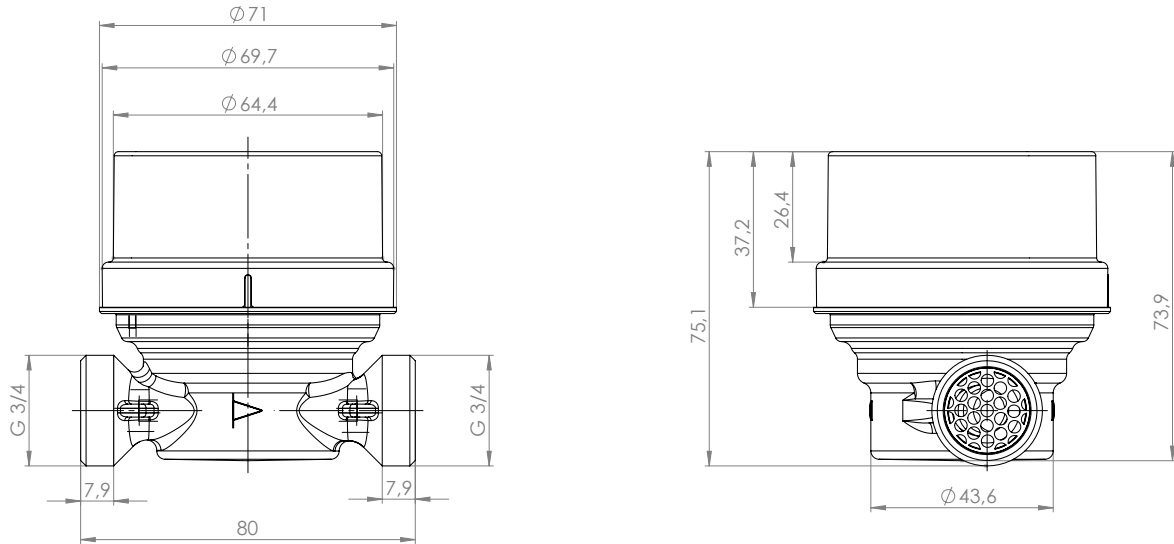
CE conformity	2014/32/EU Measuring Instruments Directive: EN 14154:2005+A2:2011, EN 14154-1+A2:2011-04, EN 14154-2+A2:2011-04, EN 14154-3+A2:2011-04 2014/53/EU Radio Equipment Directive (RED) 2011/65/EU Restriction of the use of certain hazardous substances (RoHS): EN 50581:2012-09
Protection rating	IP 65 / IP 68 ^(*)
Protection class	III according to EN 61140
Radio	EN 300 220-1 V2.4.1:2012-05 EN 300 220-2 V2.4.1:2012-05
Electromagnetic compatibility	EN 301489-3 V1.6.1:2013-08 EN 301489-1 V1.9.2:2011-09 EN 60950-1: 2006 + A2:2013
Information technology equipment – Safety	EN 60950-1

(*) Tested according to manufacturer's specifications

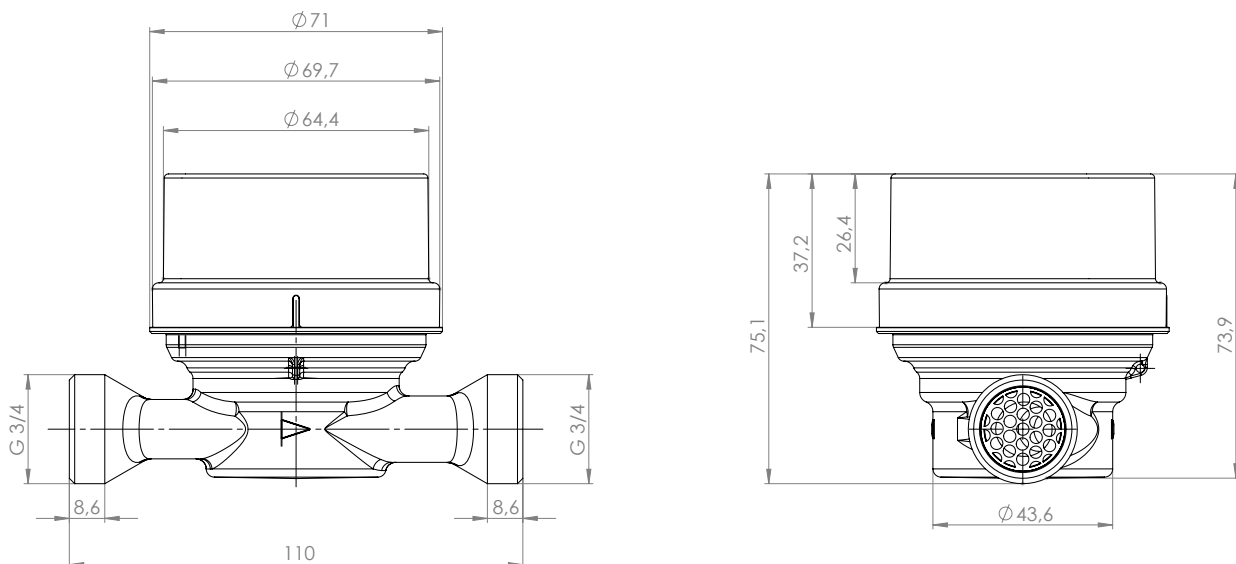
Technical data

Meter type	WME5 xxxx 0	WME5 xxxx 1	WME5 xxxx 2
Meter size / permanent flowrate Q_3 m ³ /h	2.5		4
corresponds to previous nominal size Q_n m ³ /h	1.5		2.5
Suitable for EAT	Q_3 2.5 m ³ /h	Q_3 2.5 m ³ /h	Q_3 4.0 m ³ /h
Connection thread	G 3/4"	G 3/4"	G 1"
Performance data			
Overload flowrate Q_4 l/h	3,125		5,000
Transitional flowrate Q_2 (H/V) l/h	50/100		80/160
Minimum flowrate Q_1 (H/V) l/h	31.25/62.5		50/100
Measuring range (MID) Q_3/Q_1 (H/V)	R80/R40		R80/R40
Permanent flowrate Q_3 l/h	2,500		4,000
Temperature class MAT °C	Cold water T30		Hot water T30/T90
Perm. operating pressure MAP bar			16
Mechanical class			M1
Inflow/outflow zone			U0/D0

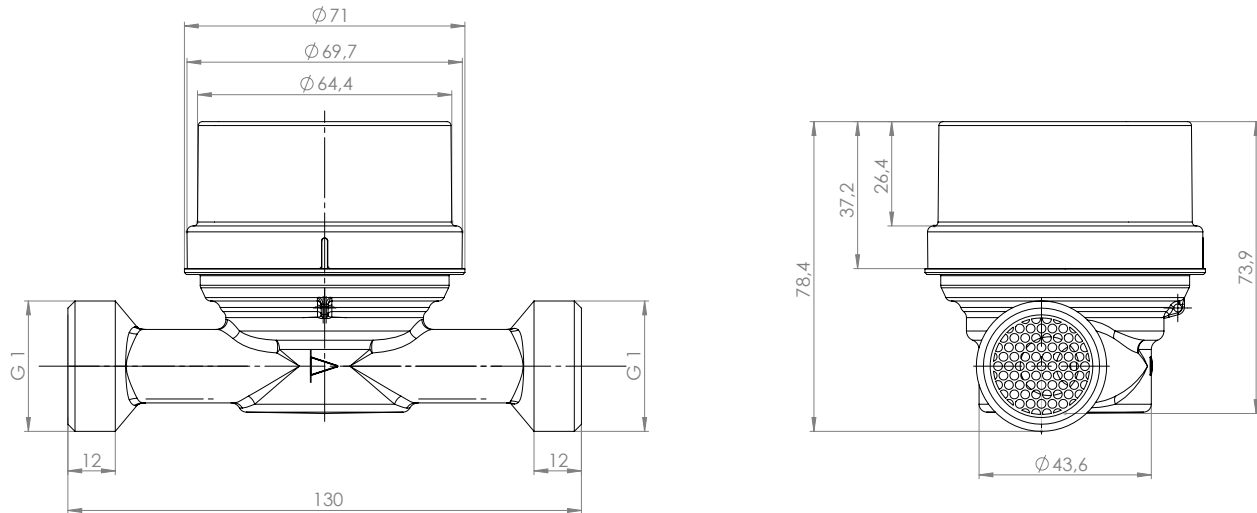
Dimensional drawing type Q₃ 2.5 m³/h - connection thread G 3/4" - DN 15



Dimensional drawing type Q₃ 2.5 m³/h - connection thread G 3/4" - DN 15



Dimensional drawing type Q₃ 4.0 m³/h - connection thread G 1" - DN 20



✉ **QUNDIS GmbH**

Sonnentor 2

D-99098 Erfurt

☎ +49 (0) 361 26 280-0

☎ +49 (0) 361 26 280-175

✉ info@qundis.com

www.qundis.com

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