

# Water Metering

## EW150

### Electronic water meter

#### Application

This electronic MID-conform EW150 water meter is designed for determining water consumption in water supply systems as a compact, single jet dry running meter for nominal flows of Q3 2.5 m<sup>3</sup>/h and Q3 4.0 m<sup>3</sup>/h.

The EW150 water meter stores the cumulated consumption value on a selectable due date and indicates this on the display for recording consumption costs.

The EW150 transmits the consumption values permanently by means of a radio signal via the integrated radio module to the Resideo remote meter read-out systems AMR (Automatic Metering Readout) and Walk-By in C-Mode.

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

Water meters are used to record the consumption of drinking water and are exclusively intended for this purpose. Any other use of the device is considered to be improper. Changes to the unit must be approved.

The main areas of application are in water supply systems where the water is outputted individually to different consumers.

Resideo is recommending to use check valves into the hydraulic system to avoid negative counting affects on the water meter.

This is meaningful in:

- Apartment buildings
- Offices and administration buildings

Typical users are:

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

#### Approvals

- CE
- European Measuring Instruments Directive (MID) 2014/32/EU



#### Special Features

- 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)

## Technical Data

Medium	
Medium:	Only use water without chemical additives as the medium for this device (heat and cold meter). Glycol additives or sodium chloride NaCl (common salt) are expressly not permitted!
Pressure values	
Operating pressure:	16 bar
Norms and standards	
CE conformity:	2014/32/EU Measuring Instruments Directive: EN14154:2005+A2:2011, EN 14154-1+A2:2011-04, EN14154-2+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:	IP65 / IP68*
Protection class:	III according to EN 61140

\*Tested according to manufacturer's specifications

Norms and standards	
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
Mechanical class:	M1
Permissible ambient conditions:	EN60721-3-1/2/3
OMS data transmission according to:	EN 13757-4
Radio	
Battery life:	1 year storage, 10 years radio operation, 1 year reserve
Rated voltage:	DC 3 V
Radio Frequency:	C-Mode: 868.95 MHz
Transmission power:	Typically 10 dBm
Duty Cycle:	< 1 % (50 ms/128 s)

## Construction

Overview	Components	Material/Comment	
	1	Inlet with external thread	
	2	LCD	
	3	Specifications	
	4	Front housing	Plastic
	5	2D barcode with meter specifications	Barcode containing of: • Serialnumber (heating) • Item No. • Datecode
	6	Outlet with external thread	-

## Transportation and Storage

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	Clean and dust free
Min. ambient temperature:	
Storage	-5 °C
Transport	-25 °C
Operation	+5 °C
Max. ambient temperature:	
Storage	+45 °C
Transport	+70 °C
Operation	+55 °C
Min. ambient relative humidity:	0 %*
Max. ambient relative humidity:	95 %*

\* non condensing

## Technical Characteristics

### 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.

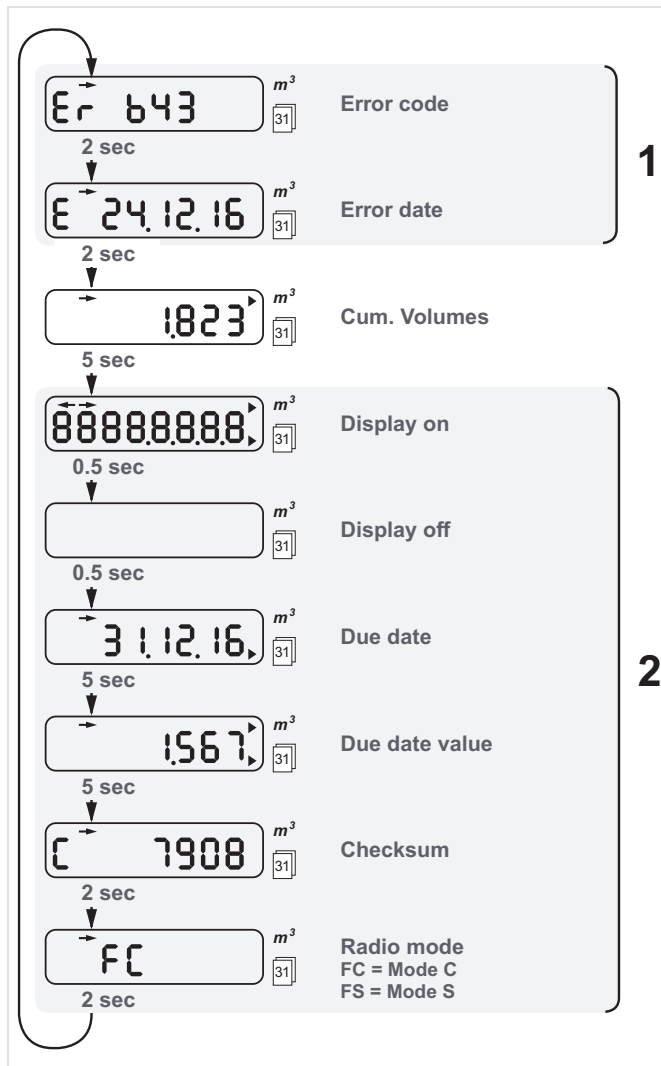
When the annual consumption is stored, the water meter calculates a checksum. Those who read the meter themselves must communicate this checksum together with the due date value read off to the evaluation office. It is used to check that the display has been read off correctly. The stored due date value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



- 1 These segments only appear when a device error has occurred.
- 2 These segments can be switched on and off individually via the software Suite 5.

**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 Walk-By and AMR data telegrams
- Walk-By: 365 days per year, 10 hours per day
- AMR: every 7.5 minutes, 24 hours per day
- Increased radio capacity up to 10 dBm

**Transmission behaviour**

Walk-By	AMR*
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	Current consumption values
13 Statistical values	

\*RF AMR/Walk-By C-Mode according to OMS conform data telegrams

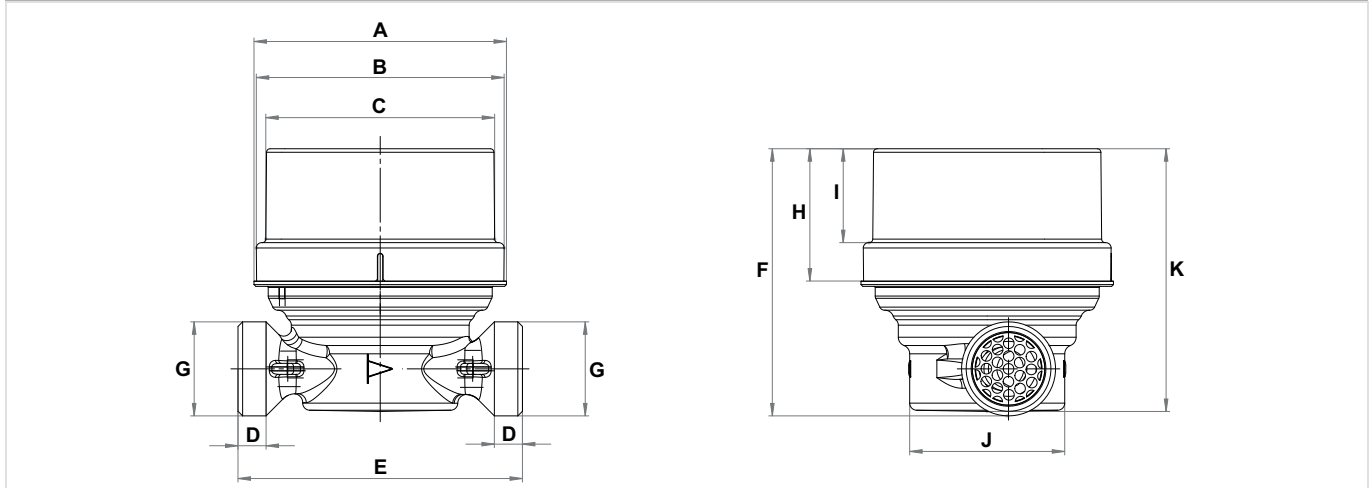
**Flow Data**

Type		EW1500AF0155C/EW1501AF0155C EW1500AF1255C/EW1501AF1255C	EW1500AF2055C/ EW1501AF2055C
Meter size:	m <sup>3</sup> /h	2.5	4.0
Nominal sizes:	m <sup>3</sup> /h	1.5	2.5
Suitable for EAT:	m <sup>3</sup> /h	2.5	4.0
Connection thread:	G	3/4"	1"
Performance data			
Overload flow rate:	l/h	3.125	5.000
Transitional flow rate:	l/h	50/100	80/60
Minimum flow rate:	l/h	31.25/62.5	50/100
Measuring range (MID):		R80/R40	R80/R40
Permanent flow rate:	l/h	2.500	4.000
Temperature class:	°C	Cold water T30	Hot water T30/T90
Inflow/outflow zone:		U0/D0	U0/D0

**Dimensions**

**EW1500AF0155C/EW1501AF0155C**

**Overview**

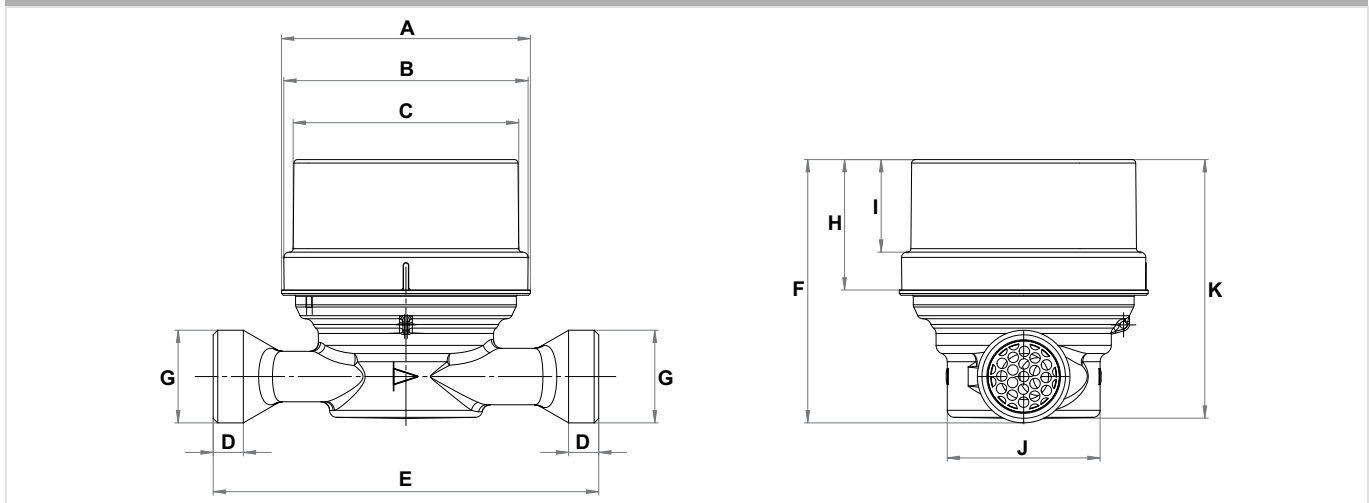


Values	A	B	C	D	E	F	G	H	I	J	K
Dimensions:	Ø 71	Ø 69.7	Ø 64.4	7.9	80	75.1	G 3/4"	37.2	26.4	Ø 43.6	73.9

Note: All dimensions in mm unless stated otherwise

**EW1500AF1255C/EW1501AF1255C**

**Overview**

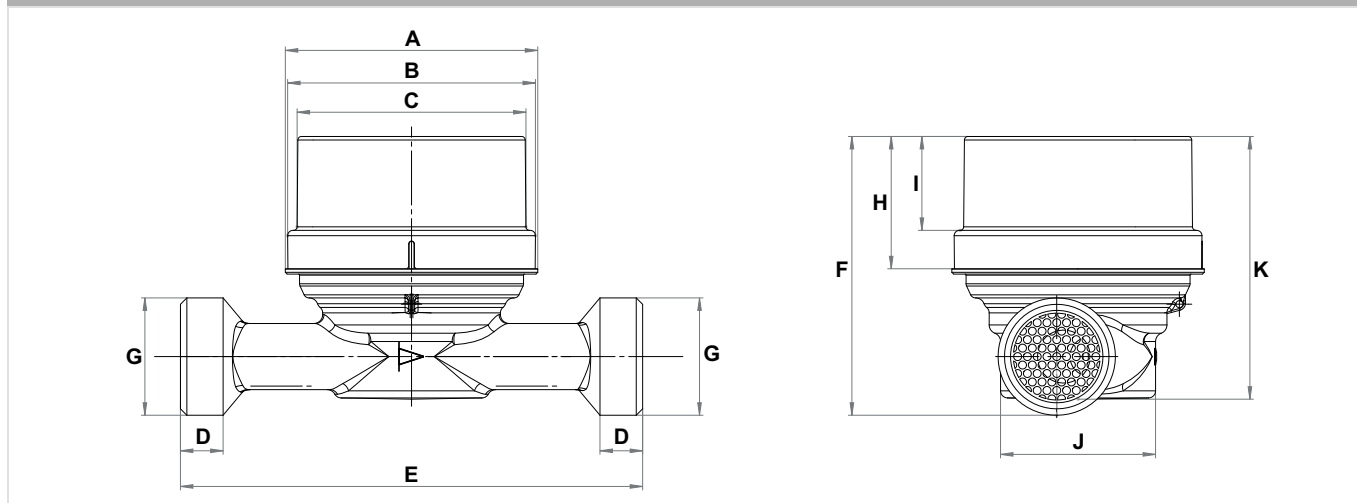


Values	A	B	C	D	E	F	G	H	I	J	K
Dimensions:	Ø 71	Ø 69.7	Ø 64.4	8.6	110	75.1	G 3/4"	37.2	26.4	Ø 43.6	73.9

Note: All dimensions in mm unless stated otherwise

## EW1500AF2055C/EW1501AF2055C

## Overview



Values	A	B	C	D	E	F	G	H	I	J	K
Dimensions:	Ø 71	Ø 69.7	Ø 64.4	12	130	78.4	G 1"	37.2	26.4	Ø 43.6	73.9

Note: All dimensions in mm unless stated otherwise

## Ordering Information

## Options

The following tables contain all the information you need to make an order of an item of your choice.

When ordering, please always state the ordering number.

Item No.	Description	EAN Code
EW1500AF0155C	SJ EL water MTR Q3 = 2.5, DN15, max. 30 °C, 80 mm, C 5.5	50 59087 02212 7
EW1500AF1255C	SJ EL water MTR Q3 = 2.5, DN15, max. 30 °C, 110 mm, C 5.5	50 59087 02207 3
EW1500AF2055C	SJ EL water MTR Q3 = 4.0, DN15, max. 30 °C, 130 mm, C 5.5	50 59087 02208 0
EW1501AF0155C	SJ EL water MTR Q3 = 2.5, DN15, max. 90 °C, 80 mm, C 5.5	50 59087 02209 7
EW1501AF1255C	SJ EL water MTR Q3 = 2.5, DN15, max. 90 °C, 110 mm, C 5.5	50 59087 02210 3
EW1501AF2055C	SJ EL water MTR Q3 = 4.0, DN15, max. 90 °C, 130 mm, C 5.5	50 59087 02211 0

## Accessories

	Item No.	Description	EAN Code
	<b>EWA1500xx</b>	<b>Set of union nuts, sealings and externally threaded brass tailpieces (one pack per meter required)</b>	
	EWA1500035	For DN15, 1/2" x 3/4"	40 29289 07276 4
	EWA1500042	For DN20, 3/4" x 1"	40 29289 05121 9
	<b>EWAxx</b>	<b>Tailpiece for direct connection of supply temperature sensor</b> Temperature sensor installation kit required	
	EWA087HY003	R 1/2" external thread, M10x1 sensor thread	40 29289 05390 9
	EWA354830	G 1/4" external thread, M10x1 sensor thread	40 29289 06217 8
	<b>EWA087HYxxx</b>	<b>Ball valve with internal threads</b>	
	EWA087HY004	For DN15, G 1/2" internal threads	40 29289 05391 6
	EWA087HY005	For DN20, G 3/4" internal threads	40 29289 05392 3

**resideo**

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Subject to change.  
EN0H-0461GE23 R1023  
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