

# Water Metering

## EW105 Series

### Singlejet Pulse Out Dry Water Meters

DN15 - 20 for drinking water applications

**Application**

EW105 singlejet pulse out dry water meters are used for measurement of water consumption in residential applications.

The EW105 meter are suitable for installation in the horizontal hoses (pipelines) with the counter directed upwards (H) and in vertical or horizontal hoses with the counter directed sideways (V).

They are available in DN15...20 and have a mechanical roller counter attached to a singlejet flow sensor. They are fitted with a pulse out cable for remote readout applications.

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.

**Approvals**

- MID (Approval number: TCM 142/11 - 4832)
- CE

**Special Features**

- Fully resistant to external magnetic fields
- Robust singlejet flow sensor
- Pulse output as standard
- Pulse transmitter with 2 m cable
- Antimagnetic protection SN
- Hermetic counter (with increased tightness) resistant to steaming
- Counter mechanism with blockade against multiple rotating, at rotation angle more than 360°
- Protection against mechanical tampering



**Technical Data**

| Media                         |                                                               |
|-------------------------------|---------------------------------------------------------------|
| Medium:                       | Cold or warm drinking water                                   |
| Connections/Sizes             |                                                               |
| Nominal sizes:                | DN15 - DN20                                                   |
| Nominal flow Q <sub>n</sub> : | 2.5 - 4 m³/h                                                  |
| Operating temperatures        |                                                               |
| Medium temperature:           | EW1050 (0.1 - 30 °C)<br>EW1051 (0.1 - 90 °C)                  |
| Specifications                |                                                               |
| Operating pressure:           | PN 16 bar                                                     |
| Pressure loss class:          | Δ P63 (max. 63kPa @ Q3)                                       |
| Environmental class:          | B                                                             |
| Electromagnetic class:        | E1                                                            |
| Mechanical class:             | C                                                             |
| Protection class:             | IP65                                                          |
| Interface:                    | Pulse out                                                     |
| Measuring process:            | Mechanical dry dial counter with singlejet volume measurement |
| Installation position:        | H, V (horizontal, vertical)                                   |
| Display:                      | Roller counter, 5-digit                                       |
| Display unit:                 | m³                                                            |

## Flow Data

| Nominal size diameter:                           | DN                |            | 15           | 20           | 15           | 20           |
|--------------------------------------------------|-------------------|------------|--------------|--------------|--------------|--------------|
| Item No.                                         |                   |            | EW1050AP1200 | EW1050AP2000 | EW1051AP1200 | EW1051AP2000 |
| Minimum (Q <sub>1</sub> ):                       | l/h               | horizontal | 25           | 40           | 31.25        | 50           |
|                                                  |                   | vertical   | 50           | 80           | 62.5         | 100          |
| Transition (Q <sub>2</sub> ):                    | l/h               | horizontal | 40           | 64           | 50           | 80           |
|                                                  |                   | vertical   | 80           | 128          | 100          | 160          |
| Permanent (Q <sub>3</sub> ):                     | m <sup>3</sup> /h |            | 2.5          | 4            | 2.5          | 4            |
| Overload (Q <sub>4</sub> ):                      | m <sup>3</sup> /h |            | 3.125        | 5            | 3.125        | 5            |
| Dynamic range (Q <sub>3</sub> /Q <sub>1</sub> ): |                   | horizontal | R100         | R100         | R80          | R80          |
|                                                  |                   | vertical   | R50          | R50          | R40          | R40          |
| Additional flow data                             |                   |            |              |              |              |              |
| Starting flow:                                   | l/h               |            | 8            | 15           | 8            | 15           |
| Temperature class:                               |                   |            | T30          | T30          | T90          | T90          |
| Pulse value:                                     | l/pulse           |            | 10           | 10           | 10           | 10           |

## Construction

| Overview                                                                           | Components                                                                          | Materials |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
|  | 1 Flow sensor housing with external threads according to ISO228 on inlet and outlet | Brass     |
|                                                                                    | <b>Not depicted components:</b>                                                     |           |
|                                                                                    | Singlejet flow sensor with magnetic clutch                                          | -         |
|                                                                                    | Non removable clamp between housing and flow sensor                                 | -         |
|                                                                                    | Mechanical roller counter with 5 digits in metal housing                            | -         |

## Method of Operation

### Counter

- The meter is equipped with a mechanical roller counter for volume metering of cold or warm drinking water. It has a five digit display. Counter and flow sensor are secured by a permanently fixed and sealed clamp

### Flow Sensor

- The singlejet technology of the flow sensor combines high measuring accuracy with long term stability and low starting volume

### Interfaces

- EW105 water meters are equipped with a pulse transmitter and a 2 m cable. The signal value is 10 liter/pulse

## 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, dry and dust free |
| Min. ambient temperature:       | 1 °C                     |
| Max. ambient temperature:       | 55 °C                    |
| Min. ambient relative humidity: | 5 % *                    |
| Max. ambient relative humidity: | 95 % *                   |

\*non condensing

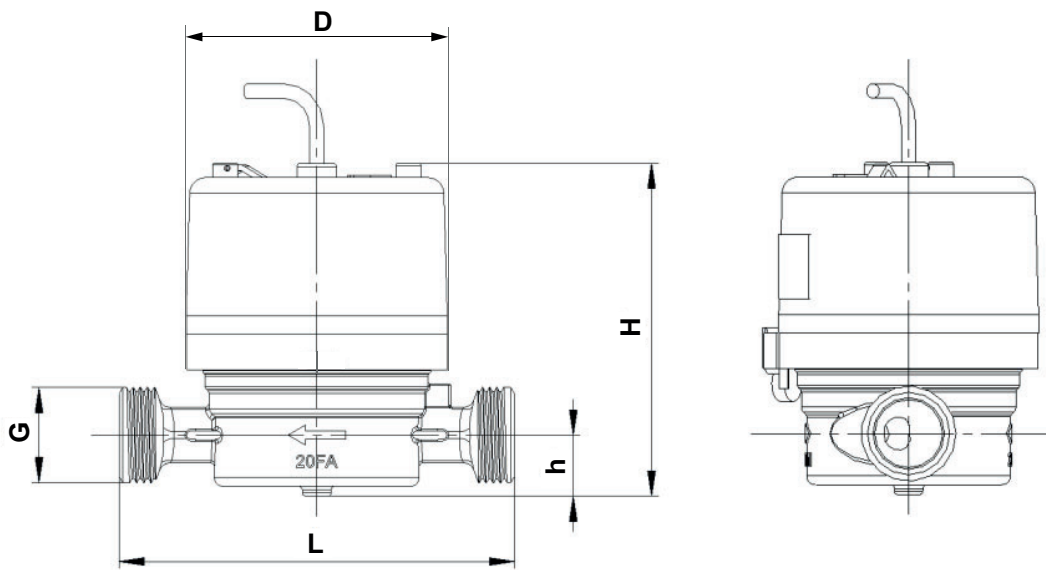
## Installation Guidelines

### Setup requirements

- Calming legs before or after EW105 Series water meters are not required
- A distance of 5 x DN before and 3 x DN behind the meter is required from pumps, T-pieces or self acting valves
- All types may be installed in horizontal or vertical position, with counter facing upwards or sideways
- Avoid installation at highest point of system as air may be trapped in the meter
- It is recommended to place a ball valve before and after the meter for easy replacement
- During measurement the meter must be completely filled with water

## Dimensions

### Overview



| Parameter              |      | Values                          |      |                                 |      |
|------------------------|------|---------------------------------|------|---------------------------------|------|
| Nominal size diameter: | DN   | 15                              | 20   | 15                              | 20   |
| Weight:                | kg   | 0.65                            | 0.75 | 0.65                            | 0.75 |
| Dimensions:            | L    | 110                             | 130  | 110                             | 130  |
|                        | H    | 93                              |      |                                 |      |
|                        | h    | 17                              |      |                                 |      |
|                        | Ø D  | 72                              |      |                                 |      |
| Meter thread:          | Inch | G <sup>3</sup> / <sub>4</sub> " | G1"  | G <sup>3</sup> / <sub>4</sub> " | G1"  |

Note: All dimensions in mm unless stated otherwise.

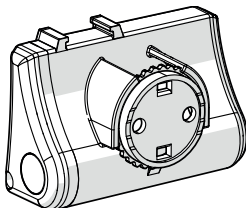
## Ordering Information

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

### Options

| Item                                            | DN | Nominal flow qp m <sup>3</sup> /h | Pulse value | EAN Code         | Item No.     |
|-------------------------------------------------|----|-----------------------------------|-------------|------------------|--------------|
| EW105 dry cold and warm water with pulse output | 15 | 2.5                               | 10 liter    | 40 29289 07601 4 | EW1050AP1200 |
|                                                 | 20 | 4.0                               | 10 liter    | 40 29289 07602 1 | EW1050AP2000 |
|                                                 | 15 | 2.5                               | 10 liter    | 40 29289 07603 8 | EW1051AP1200 |
|                                                 | 20 | 4.0                               | 10 liter    | 40 29289 07604 5 | EW1051AP2000 |

### Accessories

|                                                                                     | Description      | EAN Code                                                                                                  | Item No.                    |
|-------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------|
|    | <b>EWA1500xx</b> | <b>Set of union nuts, sealings and externally threaded brass tailpieces (one pack per meter required)</b> |                             |
|                                                                                     |                  | For DN15, 1/2" x 3/4"                                                                                     | 40 29289 07276 4 EWA1500035 |
|                                                                                     |                  | For DN20, 3/4" x 1"                                                                                       | 40 29289 05121 9 EWA1500042 |
|                                                                                     |                  | For DN25 and DN32, 1" x 1 1/2"                                                                            | 40 29289 07978 7 EWA1500067 |
|                                                                                     |                  | For DN40, 1 1/2" x 2"                                                                                     | 40 29289 07279 5 EWA1500072 |
|    | <b>EW535</b>     | <b>Modules</b>                                                                                            |                             |
|                                                                                     | EW535M0056       | Pulse to M-Bus Module                                                                                     | 40 29289 05449 4            |
|  | <b>EW9200</b>    | <b>Module to connect to RF System</b>                                                                     |                             |
|                                                                                     | EW9200AGZ055     | EXTERNAL PULSE TO RF MODULE - C-Mode                                                                      | 50 59087 02243 1            |
|                                                                                     | EW9200AGZ-KIT    | EXTERNAL PULSE TO RF MODULE - KIT                                                                         | 50 59087 02244 8            |

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