

MID Certified



ELIS PLZEŇ a.s.



**ULTRASONIC WATER METERS FLOMIC FL5024, FL5025
FLOMIC FL5044, FL5045**

FLOMIC FL5024, FL5025, FL5044, FL5045

The battery-powered **FLOMIC FL5024, FL5025 and FLOMIC FL5044, FL5045 ultrasonic water meters** are intended for operational and invoicing measurements of instantaneous flow rate, pressure and consumption in water piping in observance of standard EN 14154 in water works, water distribution systems and other industrial applications. These water meters are in compact or remote design with the IP 68 protection class. They are characterised by high measurement accuracy and long-term stability over a wide range of measured values. The meters do not need any external power supply, do not include any moving parts and, have significantly lower hydraulic losses. The technical parameters and other features of the FLOMIC water meters make them suitable not only for water consumption measurements, but also for water-leak tracking and monitoring of the general condition of water-supply networks, where the meter output signals can be connected via data transfer systems to remote computer control stations. The measurement method utilised by these meters is a single-beam (FL5024, FL5025) or dual-beam (FL5044, FL5045) transit-time pulse method based on evaluation of the time needed for an ultrasonic signal to cross the distance between two measuring transducers. In the standard version, the meter measures instantaneous flow rate (in m³/hour) and the total volume of water passed through the meter (in m³) in the given flow direction. The measured data are converted into passive pulse output signals.

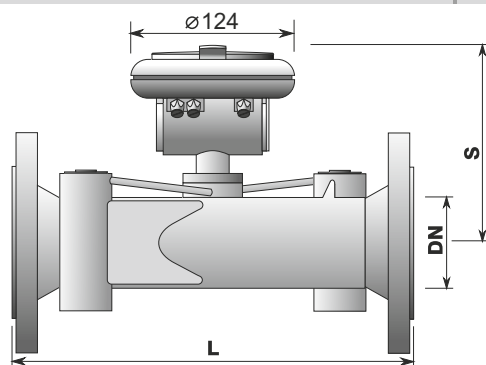
OPTIONAL METER ACCESSORIES:

- bi-directional flow rate and volume measurements with visual and electronic indication of the actual flow rate direction
- measurement and display of instantaneous water pressure values within the range of 1 to 16 bar
- using a passive current output signal 4 to 20 mA, monitoring the instantaneous flow rate or flow pressure values
- measured data storage with user-selectable sampling period of 1 minute to 1 year
- actual and stored data reading via the USB or RS 232 interface
- connection to a remote data transfer system by means of a GSM module
- use of alternative measurement units (Gal/min, or litre/sec)
- application of the meter within drinking-water supply systems
- power supply via the 4 to 20 mA current line

FLOMIC FL5044, FL5045

TECHNICAL PARAMETERS

| TECHNICAL PARAMETERS | | | FLOMIC FL5024, FL5025 | | | | | | | | |
|---|--------------|--|--|-------|-------|-------|-------|-------|-------|-------|-------|
| nominal diameter | | | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| overload flowrate Q ₄ [m³/h] | | | 12.5 | 20 | 31.25 | 50 | 78.75 | 125 | 200 | 312.5 | 500 |
| permanent flowrate Q ₃ [m³/h] | | | 10 | 16 | 25 | 40 | 63 | 100 | 160 | 250 | 400 |
| minimum flowrate Q ₁ [m³/h] | FL502x | | 0.04 | 0.064 | 0.1 | 0.16 | 0.200 | 0.317 | 0.508 | 0.794 | 1.270 |
| | FL504x | | | | | 0.127 | 0.157 | 0.25 | 0.4 | 0.625 | 1.0 |
| pulse output constant k _i [litres/pulse] | | | 10 | 10 | 25 | 50 | 50 | 100 | 100 | 100 | 250 |
| flowrate ratio Q ₃ /Q ₁ for T30 | FL502x | | 250 | 250 | 250 | 250 | 315 | 315 | 315 | 315 | 315 |
| | FL504x | | | | | 315 | 400 | 400 | 400 | 400 | 400 |
| water pressure class | | | MAP 16 | | | | | | | | |
| temperature class | | | T50 (FL5024, FL5044), T90 (FL5025, FL5045) | | | | | | | | |
| flow-profile | before meter | | U5 (FL5044, FL5045), U10 (FL5024, FL5025) | | | | | | | | |
| sensitivity class | after meter | | D3 (FL5044, FL5045), D5 (FL5024, FL5025) | | | | | | | | |
| pressure loss class | | | ΔP 25 | | | | | | | | |
| climatic and mechanical resistance class | | | B (optional O) | | | | | | | | |
| electromagnetic environment | | | E1, E2 | | | | | | | | |
| flowrate sampling period | | | 1 sec | | | | | | | | |
| display unit | | | single-line 8 character LC display | | | | | | | | |
| power supply | | | Li battery 3.6 V/19 Ah - lifetime 8 years in standard meter version | | | | | | | | |
| protection class | | | IP 68 | | | | | | | | |
| output (insulated) | | | measured flow-rate values indicated in the form of passive pulse output U = 3 to 30 V, I = 0.002 to 10 mA, t _{imp} = 30 ms | | | | | | | | |
| optional accessories | | | passive current output 4 to 20 mA, U = 10 to 24 V | | | | | | | | |
| bi-directional flow-rate measurement | | | + passive pulse output, U = 3 to 30 V, I = 0.002 to 10 mA, t _{imp} = 30 ms – passive pulse output, U = 3 to 30 V, I = 0.002 to 10 mA, t _{imp} = 30 ms | | | | | | | | |
| | | | passive current output 4 to 20 mA, U = 10 to 24 V, in combination with passive electric contact for indication of the actual flow-rate direction | | | | | | | | |
| | | | optically isolated interfaces USB, RS 232 or RS 232 + USB converter GSM module | | | | | | | | |
| | | | | | | | | | | | |



**FL5024 (compact version), FL5025 (remote version)
FL5044 (compact version), FL5045 (remote version)**

BASIC DIMENSION AND WEIGHT

| | | | | | | | | | |
|---------------|-----|-----|-----|-----|-----|------|------|-----|------|
| diameter [mm] | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| L [mm] | 260 | 300 | 300 | 300 | 350 | 350 | 350 | 350 | 350 |
| S [mm] | 140 | 145 | 150 | 155 | 160 | 165 | 180 | 190 | 205 |
| weight [kg] | 4.5 | 7 | 10 | 11 | 15 | 17.5 | 22.5 | 26 | 36.5 |

Certified according to MID (TCM 142/11 - 4817)
Certified according to OIML R49



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