

OIML Member State
The Netherlands

Number R49/2013-A-NL1-22.01 revision 0
Project number 2652375
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Issuing authority
Person responsible: NMI Certin B.V.
M.Ph.D. Schmidt

Applicant and
Manufacturer: Euromag International S.r.l.
Via della Tecnica 20
35035 Mestrino (PD)
Italy

Identification of the
certified type: An electromagnetic **water meter**
Type: MUT7000

Characteristics: See page 2 and further

This OIML Certificate is issued under scheme A.

This Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML Type Evaluation Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R 49-1 (2013) "Water meters intended for the metering of cold potable water and hot water"

Accuracy class: 2

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation identified above. This Certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Type Evaluation Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority: **NMI Certin B.V., OIML Issuing Authority NL1**
24 May 2022

Certification Board

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The conformity was established by the results of tests and examinations provided in the associated report(s):

- No. NMI-2652375-01 dated 24 May 2022 that includes 29 pages.

Characteristics of the measuring instrument

In Table 1 the general characteristics of the measuring instrument are presented.

Table 2 gives an overview of the general characteristics of the family of instruments.

The construction of the measuring instrument is recorded in the Documentation folder no. T12283-1.

Table 1 General characteristics

| | |
|-----------------------------------|--|
| Measuring principle | Electromagnetic |
| Accuracy class | 2 |
| Environmental class | M1 / O (installed outdoors) |
| Electromagnetic environment | E1 |
| Temperature range ambient | -25 °C / +55 °C |
| Water temperature class | T50 (+0,1 °C / +50 °C) |
| Maximum admissible pressure (MAP) | 1,6 MPa (16 bar) |
| Orientation | All positions (Horizontal, vertical or diagonal) |
| Flow profile sensitivity class | U0 and D0 (0 x DN upstream and 0 x DN downstream) |
| Reverse flow | The sensor is also designed to measure reverse flow. The reverse flow is recorded on a separate volume totalization. Also for reverse flow another pulse output is used. |
| Pressure loss class | Δp 16 (0,16 bar) |
| Power supply | The water meter is powered by means of: - A replaceable battery of 3,6 V (operating range: 2,9 3,7 V); - DC mains 10,8 – 13,2 V. |

Table 2 Software identification

| Identification | Software versions | CRC Checksum(*) | Remarks |
|---------------------------|-------------------|-----------------|---------|
| Bootloader | 1.06 | b4F9C9Ab | - |
| Legally relevant firmware | 1.08 | AC406F7C | - |

Note: (*) The checksum is stated as a hexadecimal value.

The software version and checksum are shown after powering up the device or can be check by bringing the magnet close to the reed for 5 seconds. Bootloader and firmware version are shown as the third and fourth screen after entering the menu system of the meter.

Table 3 General characteristics of the family of instruments

| Meter size | Ø in- and outlet [mm] | Flow rates [m ³ /h] | | | | Ratio Q3/Q1 |
|------------|-----------------------|--------------------------------|-----------------|--------------|-------------|-------------|
| | | Minimum Q1 | Transitional Q2 | Permanent Q3 | Overload Q4 | |
| DN80/3" | 80 | 0,25 | 0,4 | 100 | 125 | 400 |
| DN100/4" | 100 | 0,4 | 0,64 | 160 | 200 | 400 |

Please note that the flow rates Q1, Q2, Q3 and Q4 can be freely chosen as long as:

- Values Q3 and ratio Q3/Q1 are selected from paragraph 4.1 of OIML R49-1: 2013(E);
- Values mentioned for Q1 and Q2 are minimum values and the ratio Q2/Q1 = 1,6;
- Values mentioned for Q3 and Q4 are maximum values and the ratio Q4/Q3 = 1,25;
- The ratio Q3/Q1 is at least 40.

Table 4 General characteristics of the indicating device

| Meter size | Indicating range (minimum value) [m ³] | Verification scale interval (minimum resolution) [m ³] |
|-------------|--|--|
| DN80; DN100 | 999999,999 | 0,00001 |

Certificate history:

| Revision | Date | Description |
|----------|-------------|-----------------|
| Initial | 24 May 2022 | Initial release |
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