

OIML Member State
The Netherlands

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Project number 3646819
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Issuing authority
Person responsible: NMi Certin B.V.
M.Ph.D. Schmidt

Applicant and
Manufacturer: KROHNE Altometer
Kerkeplaat 12
3313 LC Dordrecht
The Netherlands

Identification of the
certified type: An electromagnetic **water meter**
Type: WATERFLUX 3070

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: 1 and 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.

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

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**
12 June 2023

Certification Board

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This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability.

The notification of NMi Certin B.V. as Issuing Authority can be verified at www.oiml.org

This document is digitally signed and sealed. The digital signature can be verified in the blue ribbon at the top of the electronic version of this certificate.



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The conformity was established by the results of tests and examinations provided in the associated reports:

- No. R49-1/2006-NL1-09.01 dated 16 September 2009 that includes 41 pages and 14 annexes;
- No. R49-1/2006-NL1-10.01 dated 9 April 2010 that includes 40 pages and 3 annexes;
- No. R49-1/2006-NL1-11.01 dated 2 May 2011 that includes 40 pages and 4 annexes;
- No. R49-1/2006-NL1-12.01 dated 28 March 2012 that includes 40 pages and 3 annexes;
- No. NMI-13200194-01 dated 18 July 2013 that includes 2 pages and 1 annex;
- No. NMI-13200159-01 dated 18 March 2015 that includes 6 pages and 1 annex;
- No. NMI-15200645-01 dated 30 March 2016 that includes 21 pages and 4 annexes;
- No. NMI-2224507-01 dated 30 December 2020 that includes 27 pages and 4 annexes.

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. T10201-11.

Table 1 General characteristics

Measuring principle	Electromagnetic
Accuracy class	1 and 2
Environmental class	M2 O (installed outdoors) for software version 5.0.1_ or higher B (installed in a building) for software version 4.3.1_ or lower
Electromagnetic environment	E2
Temperature range ambient	-25 °C / +55 °C for software version 5.0.1_ or higher -10 °C / +55 °C for software version 4.3.1_ or lower
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 designed to measure reverse flow
Pressure loss class	Δp 63 (0,63 bar)
Power supply	3,6 Volts D-cell Lithium replaceable battery; or Flexpower for software version 5.0.1_ or higher: <ul style="list-style-type: none"> - 3,6 Volts D-cell Lithium battery (non-replaceable battery) - 9 ... 30 VDC - 100...230 VAC / 50-60Hz (+/- 2 %)

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Software identification	Software versions	CRC checksum
	4.0.4_, 4.0.10_, 4.0.11_, 4.0.12_, 4.2.2_, 4.2.4_, 4.2.5_, 4.2.6_, 4.3.0_, 4.3.1_	Not applicable
	5.0.1_	4Cb5
	5.0.2_	71d5
	5.0.3_	CFF7
	5.0.5_	dCAb
	5.1.0_	Ab62

Note: In case of software version 4.3.1_ or lower the Field Current can only be set to 16 mA.
For software version 5.0.1_ or higher the different Field Currents can be selected and shall be set to 16 mA.

Table 2 General characteristics of the family of instruments

Meter size	Accuracy class	Flow rates [m ³ /h]				Ratio Q3/Q1
		Minimum Q1	Transitional Q2	Permanent Q3	Overload Q4	
DN25	2	0,025	0,04	10	12,5	400
		0,04	0,064	16	20	
DN40	2	0,0625	0,1	25	31,25	400
		0,1	0,16	40	50	
DN50	2	0,1	0,16	40	50	400
		0,1575	0,252	63	78,75	
DN65	2	0,1575	0,252	63	78,75	400
		0,25	0,4	100	125	
	1	0,4	0,64	100	125	250
DN80	2	0,25	0,4	100	125	400
		0,4	0,64	160	200	
	1	0,625	1	100	125	160
		0,64	1,024	160	200	250

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Meter size	Accuracy class	Flow rates [m ³ /h]				Ratio Q3/Q1
		Minimum Q1	Transitional Q2	Permanent Q3	Overload Q4	
DN100	2	0,4	0,64	160	200	400
		0,625	1	250	312,5	
	1	1	1,6	160	200	160
		1	1,6	250	312,5	250
DN125	2	0,625	1	250	312,5	400
		1	1,6	400	500	
	1	1,5625	2,5	250	312,5	160
		1,6	2,56	400	500	250
DN150	2	1	1,6	400	500	400
		1,575	2,52	630	787,5	
	+1	2,5	4	400	500	160
		2,52	4,032	630	787,5	250
DN200	2	1,575	2,52	630	787,5	400
	1	3,9375	6,3	630	787,5	160
DN250	2	2,5	4	1000	1250	400
	1	6,25	10	1000	1250	160
DN300	2	4	6,4	1600	2000	400
	1	10	16	1600	2000	160
DN350	1 or 2	15,625	25	2500	3125	160
DN400	1 or 2	25	40	4000	5000	160
DN450	1 or 2	25	40	4000	5000	160
DN500	1 or 2	39,375	63	6300	7875	160
DN600	1 or 2	63	100,8	6300	7875	100

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Table 3 General characteristics of the indicating device

Meter size	Indicating range (minimum value) [m ³]	Verification scale interval (maximum value) [m ³]
DN25, DN40 and DN50	99.999.999	0,0001
DN65, DN80, DN100, DN125 and DN150	99.999.999	0,001
DN200, DN250, DN300, DN350, DN400 and DN450	99.999.999	0,01
DN500 and DN600	99.999.999	0,1

Certificate history:

This revision replaces the previous version.

Revision	Date	Description of the modification
Initial	26 January 2021	-
1	3 May 2022	Added alternative Modbus PCB components
2	12 June 2023	Added Alternative Micro Controller Unit (MCU)