

OIML Member State
The Netherlands

Number R49/2013-NL1-17.03
Project number 1901371
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Issuing authority Person responsible: NMI Certin B.V.
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Applicant and Manufacturer: Toshiba corporation Fuchu Complex
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Identification of the certified type: An electromagnetic **water meter**
Type: WF11x / WF12x

Characteristics: See page 2 and further

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**
23 August 2017



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

- No. NMI-122000249-02 that includes 74 pages (including annexes);
- No. 130601097/NMI/Toshiba DN50 & DN65 – R1 that includes 38 pages (including annexes).

Characteristics of the measuring instrument

In Table 1 the general characteristics of the water meter type WF11x (Measurement sensor) / WF12x (calculator / indicating device) are presented.

Note: x indicates the construction of the water meter, with:
x = 0 indicating combined type and
x = 2 indicating separate type.

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

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 intended to measure reverse flow
Pressure loss class	Δp 25 (0,25 bar)
Power supply	Replaceable battery (3,5 – 3,7 V)

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Table 2 General characteristics of the family of instruments

Meter size	Flow rates [m ³ /h]				Ratio Q3/Q1	
	Minimum Q1	Transitional Q2	Permanent Q3	Overload Q4	Forward flow	Reverse flow
DN50	0,315	0,504	63	78,75	200	50
DN65	0,5	0,8	100	125	200	50
DN80	0,5	0,8	100	125	200	50
DN100	0,8	1,28	160	200	200	50
DN125	1,25	2	250	312,5	200	50
DN150	2	3,2	400	500	200	50
DN200	3,15	5,04	630	787,5	200	50
DN250	5	8	1000	1250	200	50
DN300	5	8	1000	1250	200	50
DN350	5	8	1000	1250	200	50

Table 3 General characteristics of the indicating device

Meter size	Indicating range [m ³]	Verification scale interval [m ³]
DN50; DN65; DN80; DN100; DN125	999999,999	0,001
DN150; DN200; DN250; DN300; DN350	9999999,99	0,01