NATIONAL WEIGHTS AND MEASURES LABORATORY

Member State of OIML
United Kingdom of Great Britain
and Northern Ireland

OIML Certificate No
R49/2006-GB1-11.02

OIML CERTIFICATE OF CONFORMITY

Issuing authority

Name:	**National Weights and Measures Laboratory**
Address:	**Stanton Avenue** **Teddington** **Middlesex** **TW11 0JZ** **United Kingdom**
Person responsible:	**Paul Dixon - Product Certification Manager**

Applicant

Name:	**ABB Limited**
Address:	**Oldends Lane** **Stonehouse** **Gloucestershire** **GL10 3TA** **United Kingdom**

Manufacturer of the certified pattern is the Applicant.

Identification of the certified pattern:

	Family of cold-water meters named AquaMaster 3 with Battery powering, utilising a common, electromagnetic principle. Further characteristics see page 2
Type Designation:	**MM/GA & FER2, Battery or Renewable Powered**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML:	**R49**
Edition:	**2006 (E)**
Accuracy class:	**1 & 2**

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

The conformity was established by tests included in the R49 Evaluation Checklist filed in T23/0017/9/0004 having 49 pages and test report TR0569 having 27 pages, test report TR0593 having 20 pages and the associated pattern evaluation checklist TRIM file TS02/0001/3/0004.

Issuing authority

Mr P R Dixon
for NWML

CIML member

Mr P Mason

Date 25 March 2011
Ref: T23/0017

Characteristics:

AquaMaster Battery OIML Class 1 Spec						
DN	**Q4**	**Q3**	**$Q_{0.5\%}$**	**Q2**	**Q1**	**R**
	(m3/h)	**(m3/h)**	**(m3/h)**	**(m3/h)**	**(m3/h)**	
*** 40**	**31**	**25**	**1.5**	**0.25**	**0.16**	**160**
*** 50**	**50**	**40**	**2.4**	**0.4**	**0.25**	**160**
*** 80**	**125**	**100**	**5.9**	**1**	**0.63**	**160**
100	**200**	**160**	**9.4**	**1.6**	**1**	**160**
125	**200**	**160**	**9.4**	**1.6**	**1**	**160**
150	**500**	**400**	**23.5**	**4**	**2.5**	**160**
200	**788**	**630**	**37**	**6.3**	**3.9**	**160**
250	**1,250**	**1,000**	**60**	**10**	**6.3**	**160**
300	**2,000**	**1,600**	**90**	**16**	**10**	**160**

AquaMaster Battery OIML Class 2 Spec						
DN	**Q4**	**Q3**	**$Q_{0.5\%}$**	**Q2**	**Q1**	**R**
	(m3/h)	**(m3/h)**	**(m3/h)**	**(m3/h)**	**(m3/h)**	
40	**31**	**25**	**1.5**	**0.16**	**0.1**	**250**
50	**50**	**40**	**2.4**	**0.26**	**0.16**	**250**
80	**125**	**100**	**5.9**	**0.64**	**0.4**	**250**
100	**200**	**160**	**9.4**	**1.0**	**0.63**	**250**
125	**200**	**160**	**9.4**	**1.0**	**0.63**	**250**
150	**500**	**400**	**23.5**	**2.56**	**1.6**	**250**
200	**788**	**630**	**37**	**4.0**	**2.5**	**250**
250	**1,250**	**1,000**	**60**	**6.4**	**4**	**250**
300	**2,000**	**1,600**	**90**	**10**	**6.3**	**250**

Note: * OIML R49-1 allows Class 1 only for meters with Q3>= 100m3/h, although the meters were tested to class 1 accuracy and passed the requirements.

Measuring principle:	Electromagnetic
Accuracy Class:	1 & 2
Q_2/Q_1	1.6
Q_3/Q_1	Class 1 = 160, Class 2 = 250
Environmental class:	T50 (0.1C to 50C)
Environmental class:	C
Electromagnetic environment:	E2
Maximum admissible temperature:	50 °C
Maximum admissible pressure:	1.6 Mpa (16 bar)
Pressure Loss Class	0.63 bar

Installation details

Connection type	Flange
Minimum straight length of inlet pipe:	0D (0)
Minimum straight length of outlet pipe:	0D (0)
Flow conditioner (details if required):	None

Mounting

Orientation:	Can be installed in any position

Power Supply

ABB Supplied Battery Pack	U_{max} Main Pack = 10V DC U_{min}: Main Pack = 4.5V DC
Renewable power	Solar or wind Input voltage: 6 to 22 V DC

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 or of the associated test report is not permitted, though they may be reproduced in full.