

Annex to application for conformity assessment of Water meters in accordance with MID

This is Annex No. 1

Dated:

To application dated:

Company

Signed

Documentation required (to be completed by applicant) for testing of a Water meter

Note: All documentation must be equipped with date and or revision, which is to be updated in case of a new version.

Rated operating conditions (MI-001)

<u>Documentation</u>	<u>Reference</u>	<u>RISE note</u>
Minimum flowrate Q1		
Transitional flowrate Q2		
Permanent flowrate Q3		
Overload flowrate Q4		
Temperature range of water		
Pressure range of water		
Nominal value of AC voltage supply		
Limits of DC supply		
Installation orientation		
Is the water meter designed for reverse flow?		
Behaviour of the water meter outside the flow range?		

Environment conditions

<u>Documentation</u>	<u>Reference</u>	<u>RISE note</u>
Climate environments (1.3.1 of annex I) Upper temperature limit (30, 40, 55 or 70 °C)		
Lower temperature limit (5, -10, -25 or -40 °C)		
Condensing/non condensing humidity		
Open or closed location		
Mechanical environment (1.3.2 of annex I) M1, M2 or M3		
Electromagnetic environment E1, E2 or E3 (1.3.3 of annex I)		

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Usage and design

<u>Documentation according to to MID article 18</u>	<u>Reference</u>	<u>RISE note</u>
General description of the instrument (clause 3a); base configuration and variants		
Description of technical characteristics and principle of operation		
Hydraulic flow chart including all variations/limitations		
Component list		
User manual (installation practices or operation constraints, configuration, programming, access to metrological software identification, adjustment instruction etc)		
Assembly drawings, material specification and data for hydraulic components		
Block diagram for the complete electronics, showing the function of the electronic devices		
Functional description, assembly drawing, circuit diagram and part list for electronic parts		
Power supply wiring diagram		
Software, including specification of the metrological part (see Welmec Guide 7.2)		
Photos of the water meter to be included in the EC- type examination certificate		
Condition for compatibility with interfaces (clause 5)		
Results of design calculations, examinations, etc (clause 3h)		
Drawings of markings or equivalent information (clause 4)		
Estimated durability period (clause 3i and clause 5 of annex I)		

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Sutability and protection

<u>Documentation</u>	<u>Reference</u>	<u>RISE note</u>
Description of how protection against corruption is solved including sealing (clause 8 of annex I)		
Has the Welmec guide 7.2 (software guide) been applied?		
Software documentation, see note		
Programmable constants		
Adequate analysis and assessment of the risk(s) (MID module B, 3c)		

Note:

To facilitate an evaluate of the software according to Welmec Guide 7.2 prepare the following:

The test object should be made available to the evaluator. A comprehensible review of the instrument should be addressed by the developer and a demonstration of its functions should also be carried out.

When motivated the communication between the measuring instrument and external units should be demonstrated with suitably specified parameters.

The structure of the program code should be presented with information concerning the development and the operating platform. Information related to the aspects listed below, should be accessible:

- a) Measuring principle
- b) Microprocessor(s) : type (s), programming language
- c) Real-time-clock
- d) Securing of legally-relevant software components and parameters
- e) Securing of measurement data
- f) Monitoring of program execution (watchdog, check of memory ranges, indication of system failure)
- g) Cold start operation, when applicable
- h) Securing components, interfaces, software and preset controls to which access or adjustment is prohibited

The microcontroller functions should also be considered. An overall walk through of the microcontroller software should be carried out. Critical aspects should be identified.

The documents that are required by the WELMEC Guide 7.2 shall be provided.

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Other documents

<u>Documentation according to MID, article 18</u>	<u>Reference</u>	<u>RISE note</u>
A list of the standards and/or normative documents referred to in Article 14 of MID, applied in full or in part (clause 3f)		
Description of the solutions adopted to meet the essential requirements where the standards and/or normative documents referred to in article 14 have not been applied (clause 3g)		
The EC-type examination certificates or EC design examination certificates in respect of instruments containing parts identical to those in the design. (clause 3j)		
Appropriate test report from notified bodies or accredited third-party test laboratories (clause 3i)		
A list of the standards and/or normative documents referred to in Article 14 of MID, applied in full or in part (clause 3f)		
Description of the solutions adopted to meet the essential requirements where the standards and/or normative documents referred to in article 14 have not been applied (clause 3g)		