

INFORMATION

Revision of R 46

**Active electrical energy meters.
Part 3: Test report format**

Draft submitted for CIML online ballot on 2013.01.10

Voting closes on 2013.04.12



ORGANISATION INTERNATIONALE
DE MÉTROLOGIE LÉGALE

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Compiled Comments and Secretariat Responses		OIML TC 12
OIML R 46-3, CD2	Active Energy Electricity Meters, Part 3: Test Report Format	12 December 2012

Country Code	Clause/paragraph/table	gen./edit./techn.	COMMENTS	PROPOSED CHANGE	Secretariat Responses
Secretariat note 12 positive votes and no negative votes were received on committee draft 2 of OIML R 46-3. The secretariat has made some changes in response to comments provided below, and has produced a Draft Recommendation.					
NL	general		Congratulations for the excellent job done		Thank you all for the valuable contributions
NL	general style	edit.	In several clauses for example in most of clause 3 the report is written in a style as if it concerns a procedure containing instructions. For example 3.6.2 <i>"Specify software identification and means of identification"</i>	One would expect a report to state: <i>"Specification of software identification and means of identification"</i>	[No change] Given that the wording comes under the heading of requirements, the secretariat believes the wording is acceptable.
UK	All pages	ed	Document footer refers to 1CD	Since this is a 2CD correct in footer accordingly.	[Change] Will be updated.
CZ	1	Gen.	Part: Direction of energy flow/registers – it is not clear, if 2 possibilities can be marked. For instance, the same meter model can be parameterized as "single-register, bi-directional" or "single-register, positive direction only". Should it be tested as 2 independent meters?	Somewhere in document should be explanatory notes.	[No change] Explanatory notes to deal with meters capable of being configured in different ways would be content for R 46-1, and may be considered for future revisions. In the example given, the secretariat would suggest negative flow testing for the bi-directional "meter" and reverse flow testing for the positive direction only "meter". Depending on the design of the meter, there may be no reason to repeat positive direction testing and influences and disturbances in general for each configuration.

Country Code	Clause/ paragraph/ table	gen./ edit./ techn.	COMMENTS	PROPOSED CHANGE	Secretariat Responses
UK	1.1	tech	In the first block of cells under the title ‘1.1 Meter Specification’, meter model and meter type appear to have similar meanings. Is meter type supposed to denote if it is either induction or static?	Amend such that it is made clear- suggested as follows- ‘Meter type (induction/static)’. Or maybe delete ‘Meter Model’ and leave ‘Meter Type’.	[Change] Clarified meter type with: “(electromechanical/static)”
NL	2.1 (3.7.1)	edit.	third line “Any decimal fractions are clearly indicated” Sometimes not native speakers interpret the word “any” as just the opposite of what is meant.	Deleting “Any” would avoid such confusion	[Change] Wording changed to: “All decimal fractions are clearly indicated”.
Japan	2.2 Timing requirements for interval and multi-tariff meters(3.4)	Edit.	This comment might be out of the scope of the present inquiry on R46-3. IEC62054-21 is described in clause 3.4 of R46-1(DR). However, this standard is not found in Annex B: Bibliography of R46-1&2 (DR).	Please add IEC62054-21 to Annex B: Bibliography of R46-1&2.	[No change] This would appear to have to be considered for future revision of R 46 part 1 & 2.
Japan	2.4 Meter Markings (3.5)	Edit.	The clause 3.5 (Meter Marking) of R46-1 describes the information blow: <ul style="list-style-type: none"> • Impulse voltage protection information • f_{nom} • The connection mode(s) for which the meter is specified • Connection terminals uniquely identified to distinguish between terminals. However, these items are not found in the format in this clause.	Please add the check items blow: <ul style="list-style-type: none"> • Impulse voltage protection information • f_{nom} • The connection mode(s) for which the meter is specified • Connection terminals uniquely identified to distinguish between terminals. 	[Change] Corrected as proposed.
Serbia	4.1 (6.2.1)	Techn.	For Positive energy flow, is written: I_{min} , Power Factor unity, most inductive, most capacitive, should be measured. In accordance with Draft R46 from the date 2012.03.12. clause 6.2.1 Table 10, for Positive energy flow, Mandatory testpoint for I_{min} , is only Power Factor unity. Mandatory testpoint are not most inductive, most capacitive, for I_{min} .	Should be deleted testpoints I_{min} , Power Factor most inductive, most capacitive.	[Change] Corrected as proposed.
Japan	4.4 Starting current (6.2.3)	Edit.	This comment might be out of the scope of the present inquiry on R46-3. The formula of the expected time between pulses () in this clause is correct. However, the formula in the clause 6.2.3 of R46-2 (DR) is miswritten.	Replace the formula for the expected time, , between two pulses with the one below: $\tau = 3600 \times 1000 / (m \cdot U_{nom} \cdot I_{st} \cdot k) \text{ seconds:}$	[No change] The formula was incorrect in the DR, but has been corrected in the FDR (Final Draft Recommendation) of R 46 parts 1 & 2.

Country Code	Clause/ paragraph/ table	gen./ edit./ techn.	COMMENTS	PROPOSED CHANGE	Secretariat Responses
NL	5.14	techn.	Here there may be a problem, which we seem to have overlooked. (Triggered by the column “Antenna”) During the development of the draft there has been a change in the IEC 61000-4-3. Originally this standard was not restricted to only performing measurements in anechoic rooms. Also other facilities which could be applied to generate a calculable EM field were covered by this standard. However in the mean time, due to the fact that for other than anechoic facilities new standards were produced these were no longer referred to in IEC 61000-4-3 but covered by 61000-4-20 and 61000-4-21. Concerning the relative small electrical energy meters especially the GTEM cell, now covered by the 61000-4-20 is a very adequate facility to generate fields up to 6 GHz at sufficient level and by far less expensive. (The 61000-4-21 facility is less adequate for El. energy meters.)	However 6.3.15.1 misses the reference to the IEC 61000-4-20. But that is the only thing that should have been added. The rest of 6.3.15.1 applies to both standardized methods To include in R 46-3 (5.14) it would mean only to change the column “Antenna” to “antenna/facility”	[Change] Clause 5.14 changed as proposed.
Japan	6.9 Short-time overcurrent(6.4.9) a)Check for significant fault	Edit.	The column title “ Initial error ” is miswritten. It should be “ Intrinsic error ”.	Please replace “ Initial error ” with “ Intrinsic error ” in the table” a) <i>Check for significant fault</i> ”.	[Change] Corrected as proposed.
ESMIG submitted no comments on R 46-3, but re-submitted the same comments previously submitted regarding OIML R 46 parts 1 & 2. Responses to these comments have already been provided.					