

Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments (recast) (Text with EEA relevance)

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ANNEX I

ESSENTIAL REQUIREMENTS

DEFINITIONS

ESSENTIAL REQUIREMENTS

1. Allowable Errors
 - 1.1. Under rated operating conditions and in the absence of a...
 - 1.2. Under rated operating conditions and in the presence of a...
 - 1.3. The manufacturer shall specify the climatic, mechanical and electromagnetic environments...
 - 1.3.1. Climatic environments
 - 1.3.2. Mechanical environments are classified into classes M1 to M3 as...
 - 1.3.3. Electromagnetic environments are classified into classes E1, E2 or E3...
 - 1.3.4. Other influence quantities to be considered, where appropriate, are:
 - 1.4. When carrying out the tests as envisaged in this Directive,...
 - 1.4.1. Basic rules for testing and the determination of errors
 - 1.4.2. Ambient humidity
2. Reproducibility
3. Repeatability
4. Discrimination and Sensitivity
5. Durability
6. Reliability
7. Suitability
 - 7.1. A measuring instrument shall have no feature likely to facilitate...
 - 7.2. A measuring instrument shall be suitable for its intended use...
 - 7.3. The errors of a utility measuring instrument at flows or...
 - 7.4. Where a measuring instrument is designed for the measurement of...
 - 7.5. A measuring instrument shall be robust and its materials of...
 - 7.6. A measuring instrument shall be designed so as to allow...
8. Protection against corruption
 - 8.1. The metrological characteristics of a measuring instrument shall not be...
 - 8.2. A hardware component that is critical for metrological characteristics shall...
 - 8.3. Software that is critical for metrological characteristics shall be identified...
 - 8.4. Measurement data, software that is critical for measurement characteristics and...
 - 8.5. For utility measuring instruments the display of the total quantity...
9. Information to be borne by and to accompany the instrument...
 - 9.1. A measuring instrument shall bear the following inscriptions:
 - 9.2. An instrument of dimensions too small or of too sensitive...
 - 9.3. The instrument shall be accompanied by information on its operation,...
 - 9.4. Groups of identical measuring instruments used in the same location...

- 9.5. Unless specified otherwise in an instrument-specific annex, the scale interval...
- 9.6. A material measure shall be marked with a nominal value...
- 9.7. The units of measurement used and their symbols shall be...
- 9.8. All marks and inscriptions required under any requirement shall be...
- 10. Indication of result
 - 10.1. Indication of the result shall be by means of a...
 - 10.2. The indication of any result shall be clear and unambiguous...
 - 10.3. In the case of hard copy the print or record...
 - 10.4. A measuring instrument for direct sales trading transactions shall be...
 - 10.5. Whether or not a measuring instrument intended for utility measurement...
- 11. Further processing of data to conclude the trading transaction
 - 11.1. A measuring instrument other than a utility measuring instrument shall...
 - 11.2. Additionally, a durable proof of the measurement result and the...
- 12. Conformity evaluation

ANNEX II

MODULE A INTERNAL PRODUCTION CONTROL

- 1. 'Internal production control' is the conformity assessment procedure whereby the...
- 2. Technical documentation
- 3. Manufacturing
- 4. Conformity marking and EU declaration of conformity
 - 4.1. The manufacturer shall affix the CE marking and the supplementary...
 - 4.2. The manufacturer shall draw up a written EU declaration of...
- 5. Authorised representative

MODULE B INTERNAL PRODUCTION CONTROL PLUS SUPERVISED INSTRUMENT CHECKS AT RANDOM INTERVALS...

- 1. Internal production control plus supervised instrument checks at random intervals...
- 2. Technical documentation
- 3. Manufacturing
- 4. Instrument checks
- 5. Conformity marking and EU declaration of conformity
 - 5.1. The manufacturer shall affix the CE marking and the supplementary...
 - 5.2. The manufacturer shall draw up a written EU declaration of...
- 6. Authorised representative

MODULE C EU-TYPE EXAMINATION

- 1. 'EU-type examination' is the part of a conformity assessment procedure...
- 2. EU-type examination may be carried out in either of the...
- 3. The manufacturer shall lodge an application for EU-type examination with...
- 4. The notified body shall:
- 5. The notified body shall draw up an evaluation report that...
- 6. Where the type meets the requirements of this Directive, the...
- 7. The notified body shall keep itself apprised of any changes...
- 8. The manufacturer shall inform the notified body that holds the...

9. Each notified body shall inform its notifying authority concerning the...
10. The manufacturer shall keep a copy of the EU-type examination...
11. The manufacturer's authorised representative may lodge the application referred to...

MODULE CONFORMITY TO TYPE BASED ON INTERNAL PRODUCTION CONTROL

1. Conformity to type based on internal production control is the...
2. Manufacturing
3. Conformity marking and EU declaration of conformity
 - 3.1. The manufacturer shall affix the CE marking and the supplementary...
 - 3.2. The manufacturer shall draw up a written EU declaration of...
4. Authorised representative

MODULE CONFORMITY TO TYPE BASED ON INTERNAL PRODUCTION CONTROL PLUS SUPERVISED...

1. Conformity to type based on internal production control plus supervised...
2. Manufacturing
3. Instrument checks
4. Conformity marking and EU declaration of conformity
 - 4.1. The manufacturer shall affix the CE marking, and the supplementary...
 - 4.2. The manufacturer shall draw up a written EU declaration of...
5. Authorised representative

MODULE CONFORMITY TO TYPE BASED ON QUALITY ASSURANCE OF THE PRODUCTION...

1. Conformity to type based on quality assurance of the production...
2. Manufacturing
3. Quality system
 - 3.1. The manufacturer shall lodge an application for assessment of his...
 - 3.2. The quality system shall ensure that the measuring instruments are...
 - 3.3. The notified body shall assess the quality system to determine...
 - 3.4. The manufacturer shall undertake to fulfil the obligations arising out...
 - 3.5. The manufacturer shall keep the notified body that has approved...
4. Surveillance under the responsibility of the notified body
 - 4.1. The purpose of surveillance is to make sure that the...
 - 4.2. The manufacturer shall, for assessment purposes, allow the notified body...
 - 4.3. The notified body shall carry out periodic audits to make...
 - 4.4. In addition, the notified body may pay unexpected visits to...
5. Conformity marking and EU declaration of conformity
 - 5.1. The manufacturer shall affix the CE marking and the supplementary...
 - 5.2. The manufacturer shall draw up a written EU declaration of...
6. The manufacturer shall, for a period ending 10 years after...
7. Each notified body shall inform its notifying authority of quality...
8. Authorised representative

MODULE QUALITY ASSURANCE OF THE PRODUCTION PROCESS

1. Quality assurance of the production process is the conformity assessment...
2. Technical documentation
3. The manufacturer shall keep the technical documentation at the disposal...
4. Manufacturing
5. Quality system
 - 5.1. The manufacturer shall lodge an application for assessment of his...

- 5.2. The quality system shall ensure compliance of the measuring instruments...
- 5.3. The notified body shall assess the quality system to determine...
- 5.4. The manufacturer shall undertake to fulfil the obligations arising out...
- 5.5. The manufacturer shall keep the notified body that has approved...
6. Surveillance under the responsibility of the notified body
 - 6.1. The purpose of surveillance is to make sure that the...
 - 6.2. The manufacturer shall, for assessment purposes, allow the notified body...
 - 6.3. The notified body shall carry out periodic audits to make...
 - 6.4. In addition, the notified body may pay unexpected visits to...
7. Conformity marking and EU declaration of conformity
 - 7.1. The manufacturer shall affix the CE marking, the supplementary metrology...
 - 7.2. The manufacturer shall draw up a written EU declaration of...
8. The manufacturer shall, for a period ending 10 years after...
9. Each notified body shall inform its notifying authority of quality...
10. Authorised representative

MODULE CONFORMITY TO TYPE BASED ON INSTRUMENT QUALITY ASSURANCE

1. Conformity to type based on instrument quality assurance is that...
2. Manufacturing
3. Quality system
 - 3.1. The manufacturer shall lodge an application for assessment of his...
 - 3.2. The quality system shall ensure compliance of the measuring instruments...
 - 3.3. The notified body shall assess the quality system to determine...
 - 3.4. The manufacturer shall undertake to fulfil the obligations arising out...
 - 3.5. The manufacturer shall keep the notified body that has approved...
4. Surveillance under the responsibility of the notified body
 - 4.1. The purpose of surveillance is to make sure that the...
 - 4.2. The manufacturer shall, for assessment purposes, allow the notified body...
 - 4.3. The notified body shall carry out periodic audits to make...
 - 4.4. In addition, the notified body may pay unexpected visits to...
5. Conformity marking and EU declaration of conformity
 - 5.1. The manufacturer shall affix the CE marking, the supplementary metrology...
 - 5.2. The manufacturer shall draw up a written EU declaration of...
6. The manufacturer shall, for a period ending 10 years after...
7. Each notified body shall inform its notifying authority of quality...
8. Authorised representative

MODULE QUALITY ASSURANCE OF FINAL INSTRUMENT INSPECTION AND TESTING

1. Quality assurance of final instrument inspection and testing is the...
2. Technical documentation
3. The manufacturer shall keep the technical documentation at the disposal...
4. Manufacturing
5. Quality system
 - 5.1. The manufacturer shall lodge an application for assessment of his...
 - 5.2. The quality system shall ensure compliance of the measuring instruments...
 - 5.3. The notified body shall assess the quality system to determine...

- 5.4. The manufacturer shall undertake to fulfil the obligations arising out...
- 5.5. The manufacturer shall keep the notified body that has approved...
6. Surveillance under the responsibility of the notified body
 - 6.1. The purpose of surveillance is to make sure that the...
 - 6.2. The manufacturer shall, for assessment purposes, allow the notified body...
 - 6.3. The notified body shall carry out periodic audits to make...
 - 6.4. In addition, the notified body may pay unexpected visits to...
7. Conformity marking and EU declaration of conformity
 - 7.1. The manufacturer shall affix the CE marking, the supplementary metrology...
 - 7.2. The manufacturer shall draw up a written EU declaration of...
8. The manufacturer shall, for a period ending 10 years after...
9. Each notified body shall inform its notifying authority of quality...
10. Authorised representative

MODULE CONFORMITY TO TYPE BASED ON PRODUCT VERIFICATION

1. Conformity to type based on product verification is the part...
2. Manufacturing
3. Verification
4. Verification of conformity by examination and testing of every instrument...
 - 4.1. All measuring instruments shall be individually examined and appropriate tests...
 - 4.2. The notified body shall issue a certificate of conformity in...
5. Statistical verification of conformity
 - 5.1. The manufacturer shall take all measures necessary so that the...
 - 5.2. A random sample shall be taken from each lot according...
 - 5.3. The statistical procedure shall meet the following requirements:
 - 5.4. If a lot is accepted, all measuring instruments of the...
 - 5.5. If a lot is rejected, the notified body shall take...
6. Conformity marking and EU declaration of conformity
 - 6.1. The manufacturer shall affix the CE marking and the supplementary...
 - 6.2. The manufacturer shall draw up a written EU declaration of...
7. If the notified body agrees and under its responsibility, the...
8. Authorised representative

MODULE CONFORMITY BASED ON PRODUCT VERIFICATION

1. Conformity based on product verification is the conformity assessment procedure...
2. Technical documentation
3. Manufacturing
4. Verification
5. Verification of conformity by examination and testing of every instrument...
 - 5.1. All measuring instruments shall be individually examined and appropriate tests,...
 - 5.2. The notified body shall issue a certificate of conformity in...
6. Statistical verification of conformity
 - 6.1. The manufacturer shall take all measures necessary so that the...
 - 6.2. A random sample shall be taken from each lot according...
 - 6.3. All measuring instruments in the sample shall be individually examined...
 - 6.4. The statistical procedure shall meet the following requirements:
 - 6.5. If a lot is accepted, all measuring instruments of the...

7. Conformity marking and EU declaration of conformity
 - 7.1. The manufacturer shall affix the CE marking and the supplementary...
 - 7.2. The manufacturer shall draw up a written EU declaration of...
8. If the notified body agrees and under its responsibility, the...
9. Authorised representative

MODULE CONFORMITY BASED ON UNIT VERIFICATION

1. Conformity based on unit verification is the conformity assessment procedure...
2. Technical documentation
3. Manufacturing
4. Verification
5. Conformity marking and EU declaration of conformity
 - 5.1. The manufacturer shall affix the CE marking and the supplementary...
 - 5.2. The manufacturer shall draw up a written EU declaration of...
6. Authorised representative

MODULE CONFORMITY BASED ON FULL QUALITY ASSURANCE

1. Conformity based on full quality assurance is the conformity assessment...
2. Manufacturing
3. Quality system
 - 3.1. The manufacturer shall lodge an application for assessment of his...
 - 3.2. The quality system shall ensure compliance of the measuring instruments...
 - 3.3. The notified body shall assess the quality system to determine...
 - 3.4. The manufacturer shall undertake to fulfil the obligations arising out...
 - 3.5. The manufacturer shall keep the notified body that has approved...
4. Surveillance under the responsibility of the notified body
 - 4.1. The purpose of surveillance is to make sure that the...
 - 4.2. The manufacturer shall, for assessment purposes, allow the notified body...
 - 4.3. The notified body shall carry out periodic audits to make...
 - 4.4. In addition, the notified body may pay unexpected visits to...
5. Conformity marking and EU declaration of conformity
 - 5.1. The manufacturer shall affix the CE marking, the supplementary metrology...
 - 5.2. The manufacturer shall draw up a written EU declaration of...
6. The manufacturer shall, for a period ending 10 years after...
7. Each notified body shall inform its notifying authority of quality...
8. Authorised representative

MODULE CONFORMITY BASED ON FULL QUALITY ASSURANCE PLUS DESIGN EXAMINATION

1. Conformity based on full quality assurance plus design examination is...
2. Manufacturing
3. Quality system
 - 3.1. The manufacturer shall lodge an application for assessment of the...
 - 3.2. The quality system shall ensure compliance of the measuring instruments...
 - 3.3. The notified body shall assess the quality system to determine...
 - 3.4. The manufacturer shall undertake to fulfil the obligations arising out...
 - 3.5. The manufacturer shall keep the notified body that has approved...
 - 3.6. Each notified body shall inform its notifying authority of quality...
4. Design examination

- 4.1. The manufacturer shall lodge an application for examination of the...
- 4.2. The application shall make it possible to understand the design,...
- 4.3. The notified body shall examine the application, and where the...
- 4.4. The notified body shall keep itself apprised of any changes...
- 4.5. Each notified body shall inform its notifying authority of the...
- 4.6. The manufacturer shall keep a copy of the EU design...
5. Surveillance under the responsibility of the notified body
 - 5.1. The purpose of surveillance is to make sure that the...
 - 5.2. The manufacturer shall, for assessment purposes, allow the notified body...
 - 5.3. The notified body shall carry out periodic audits to make...
 - 5.4. In addition, the notified body may pay unexpected visits to...
6. Conformity marking and EU declaration of conformity
 - 6.1. The manufacturer shall affix the CE marking and the supplementary...
 - 6.2. The manufacturer shall draw up a written EU declaration of...
7. The manufacturer shall, for a period ending 10 years after...
8. Authorised representative

ANNEX III

WATER METERS (MI-001)

DEFINITIONS

SPECIFIC REQUIREMENTS

Rated Operating Conditions

MPE

5. The MPE, positive or negative, on volumes delivered at flowrates...
6. The MPE, positive or negative, on volumes delivered at flowrates...

Permissible Effect of Disturbances

7.1. Electromagnetic immunity

7.1.1. The effect of an electromagnetic disturbance on a water meter...

7.1.2. After undergoing an electromagnetic disturbance the water meter shall:

7.1.3. The critical change value is the smaller of the two...

7.2. Durability

Suitability

- 8.1. The meter shall be able to be installed to operate...
- 8.2. The manufacturer shall specify whether the meter is designed to...

Units of Measurement

9. Metered volume shall be displayed in cubic metres.

Putting into Use

10. The Member State shall ensure that the requirements under points...

CONFORMITY ASSESSMENT

ANNEX IV

GAS METERS AND VOLUME CONVERSION DEVICES (MI-002)

DEFINITIONS

PART I

SPECIFIC REQUIREMENTS

1. Rated operating conditions
 - 1.1. The flowrate range of the gas shall fulfil at least...
 - 1.2. The temperature range of the gas, with a minimum range...
 - 1.3. The fuel/gas related conditions
 - 1.4. A minimum temperature range of 50 °C for the climatic environment....
 - 1.5. The nominal value of the AC voltage supply and/or the...
2. Maximum permissible error (MPEs)
 - 2.1. Gas meter indicating the volume at metering conditions or mass...
 - 2.2. For a gas meter with temperature conversion, which only indicates...
3. Permissible effect of disturbances
 - 3.1. Electromagnetic immunity
 - 3.1.1. The effect of an electromagnetic disturbance on a gas meter...
 - 3.1.2. After undergoing a disturbance, the gas meter shall:
 - 3.1.3. The critical change value is the smaller of the two...
 - 3.2. Effect of upstream-downstream flow disturbances
4. Durability
 - 4.1. Class 1,5 \$3
 - 4.1.1. The variation of the measurement result after the durability test...
 - 4.1.2. The error of indication after the durability test shall not...
 - 4.2. Class 1,0 \$3
 - 4.2.1. The variation of the measurement result after the durability test...
 - 4.2.2. The error of indication after the durability test shall not...
5. Suitability
 - 5.1. A gas meter powered from the mains (AC or DC)...
 - 5.2. A dedicated power source shall have a lifetime of at...
 - 5.3. An indicating device shall have a sufficient number of digits...
 - 5.4. The gas meter shall be able to be installed to...
 - 5.5. The gas meter shall have a test element, which shall...
 - 5.6. The gas meter shall respect the MPE in any flow...
6. Units

PART II

SPECIFIC REQUIREMENTS

7. Base conditions for converted quantities
8. MPE
Note:
9. Suitability

- 9.1. An electronic conversion device shall be capable of detecting when...
- 9.2. An electronic conversion device shall be capable to display all...

PART III

PUTTING INTO USE AND CONFORMITY ASSESSMENT

Putting into use

10. Where a Member State imposes measurement of residential use, it...

CONFORMITY ASSESSMENT

ANNEX V

ACTIVE ELECTRICAL ENERGY METERS (MI-003)

Note:

DEFINITIONS

SPECIFIC REQUIREMENTS

1. Accuracy
2. Rated operating conditions
3. MPEs
4. Permissible effect of disturbances
 - 4.1. General
 - 4.2. Effect of disturbances of long duration
 - 4.3. Permissible effect of transient electromagnetic phenomena
 - 4.3.1. The effect of an electromagnetic disturbance on an electrical energy...
 - 4.3.2. For overcurrent the critical change value is 1,5 %.
5. Suitability
 - 5.1. Below the rated operating voltage the positive error of the...
 - 5.2. The display of the total energy shall have a sufficient...
 - 5.3. In the event of loss of electricity in the circuit,...
 - 5.4. Running with no load
 - 5.5. Starting
6. Units
7. Putting into use
 - (a) Where a Member State imposes measurement of residential use, it...
 - (b) Where a Member State imposes measurement of commercial and/or light...
 - (c) The Member State shall ensure that the current range be...

CONFORMITY ASSESSMENT

ANNEX VI

THERMAL ENERGY METERS (MI-004)

DEFINITIONS

SPECIFIC REQUIREMENTS

1. Rated operating conditions
2. Accuracy classes
3. MPEs applicable to complete thermal energy meters
4. Permissible influences of electromagnetic disturbances
 - 4.1. The instrument shall not be influenced by static magnetic fields...
 - 4.2. The influence of an electromagnetic disturbance shall be such that...
 - 4.3. The critical change value for a complete thermal energy meter...
5. Durability
6. Inscriptions on a thermal energy meter
7. Sub-assemblies
 - 7.1. The relative MPE of the flow sensor, expressed in %,...
 - 7.2. The relative MPE of the temperature sensor pair, expressed in...
 - 7.3. The relative MPE of the calculator, expressed in %:
 - 7.4. The critical change value for a sub-assembly of a thermal...
 - 7.5. Inscriptions on the sub-assemblies

PUTTING INTO USE

8. Where a Member State imposes measurement of residential use, it...

CONFORMITY ASSESSMENT

ANNEX VII

MEASURING SYSTEMS FOR THE CONTINUOUS AND DYNAMIC MEASUREMENT OF QUANTITIES...

DEFINITIONS

SPECIFIC REQUIREMENTS

1. Rated operating conditions
 - 1.1. The flowrate range
 - 1.2. The properties of the liquid to be measured by the...
 - 1.3. The nominal value of the AC voltage supply and/or limits...
 - 1.4. The base conditions for converted values.

Note:
2. Accuracy classification and maximum permissible errors (MPEs)
 - 2.1. For quantities equal to or greater than 2 litres the...
 - 2.2. For quantities less than two litres the MPE on indications...
 - 2.3. However, no matter what the measured quantity may be, the...
 - 2.4.1. For minimum measured quantities greater than or equal to 2...
 - 2.4.2. For minimum measured quantities of less than two litres, the...
 - 2.5. Converted indication
 - 2.6. Conversion devices
 - (a) Calculator
 - (b) Associated measuring instruments
 - (c) Accuracy for calculating function
 - 2.7. The requirement (a) in point 2.6 applies to any calculation,...
 - 2.8. The measuring system shall not exploit the MPEs or systematically...

3. Maximum permissible effect of disturbances
 - 3.1. The effect of an electromagnetic disturbance on a measuring system...
 - 3.2. The critical change value is the greater of MPE/5 for...
4. Durability
5. Suitability
 - 5.1. For any measured quantity relating to the same measurement, the...
 - 5.2. It shall not be possible to divert the measured quantity...
 - 5.3. Any percentage of air or gas not easily detectable in...
 - 5.4. Instruments for direct sales
 - 5.4.1. A measuring system for direct sales shall be provided with...
 - 5.4.2. The display of the quantity on which the transaction is...
 - 5.4.3. Measuring systems for direct sales shall be interruptible.
 - 5.4.4. Any percentage of air or gas in the liquid shall...
 - 5.5. Fuel Dispensers
 - 5.5.1. Displays on fuel dispensers shall not be capable of being...
 - 5.5.2. The start of a new measurement shall be inhibited until...
 - 5.5.3. Where a measuring system is fitted with a price display,...
6. Power supply failure
7. Putting into use
8. Units of measurement

CONFORMITY ASSESSMENT

ANNEX VIII

AUTOMATIC WEIGHING INSTRUMENTS (MI-006)

DEFINITIONS

SPECIFIC REQUIREMENTS

CHAPTER I

Requirements common to all types of automatic weighing instruments

1. Rated Operating Conditions
2. Permissible effect of disturbances — Electromagnetic environment
3. Suitability
 - 3.1. Means shall be provided to limit the effects of tilt,...
 - 3.2. Adequate material handling facilities shall be provided to enable the...
 - 3.3. Any operator control interface shall be clear and effective.
 - 3.4. The integrity of the display (where present) shall be verifiable...
 - 3.5. Adequate zero setting capability shall be provided to enable the...
 - 3.6. Any result outside the measurement range shall be identified as...
4. Conformity assessment

CHAPTER II

Automatic Catchweighers

1. Accuracy Classes

- 1.1. Instruments are divided into primary categories designated by:
- 1.2. These primary categories are further divided into four accuracy classes:...
2. Category X Instruments
 - 2.1. Category X applies to instruments used to check prepackages made...
 - 2.2. The accuracy classes are supplemented by a factor (x) that...
3. Category Y Instruments
4. MPE
 - 4.1. Mean error Category X/MPE Category Y instruments
 - 4.2. Standard deviation
 - 4.3. Verification scale interval — single interval instruments
 - 4.4. Verification scale interval — multi-interval instruments
5. Measurement Range
6. Dynamic Setting
 - 6.1. The dynamic setting facility shall operate within a load range...
 - 6.2. When fitted, a dynamic setting facility that compensates for the...
7. Performance Under Influence Factors And Electromagnetic Disturbances
 - 7.1. The MPEs due to influence factors are:
 - 7.1.1. For category X instruments:
 - 7.1.2. For category Y instruments
 - 7.2. The critical change value due to a disturbance is one...
 - 7.3. Temperature range:

CHAPTER III

Automatic Gravimetric Filling Instruments

1. Accuracy classes
 - 1.1. The manufacturer shall specify both the reference accuracy class Ref(x)...
 - 1.2. An instrument type is designated a reference accuracy class, Ref(x),...
 - 1.3. The reference accuracy class, Ref(x) is applicable for static loads....
 - 1.4. For the operational accuracy class X(x), X is a regime...
2. MPE
 - 2.1. Static weighing error
 - 2.1.1. For static loads under rated operating conditions, the MPE for...
 - 2.1.2. For instruments where the fill may be made up from...
 - 2.2. Deviation from average fill

Note:
 - 2.3. Error relative to pre-set value (setting error)
3. Performance Under Influence Factor And Electromagnetic Disturbance
 - 3.1. The MPE due to influence factors shall be as specified...
 - 3.2. The critical change value due to a disturbance is a...
 - 3.3. The manufacturer shall specify the value of the rated minimum...

CHAPTER IV

Discontinuous Totalisers

1. Accuracy Classes
2. MPEs
3. Totalisation scale interval

4. Minimum Totalised Load (Σ_{min})
5. Zero Setting
6. Operator Interface
7. Printout
8. Performance under influence factors and electromagnetic disturbances
 - 8.1. The MPEs due to influence factors shall be as specified...
 - 8.2. The critical change value due to a disturbance is one...

CHAPTER V

Continuous Totalisers

1. Accuracy classes
2. Measurement Range
 - 2.1. The manufacturer shall specify the measurement range, the ratio between...
 - 2.2. The minimum totalised load Σ_{min} shall not be less than...
3. MPE
4. Speed of the belt
5. General Totalisation Device
6. Performance under influence factors and electromagnetic disturbances
 - 6.1. The MPE due to influence factor, for a load not...
 - 6.2. The critical change value due to a disturbance shall be...

CHAPTER VI

Automatic Rail Weighbridges

1. Accuracy classes
2. MPE
 - 2.1. The MPEs for weighing-in-motion of a single wagon or a...
 - 2.2. The MPEs for the weight of coupled or uncoupled wagons...
 - 2.3. The MPEs for the weight of train weighing-in-motion shall be...
 - 2.4. When weighing coupled wagons; the errors of not more than...
3. Scale interval (d)
4. Measurement range
 - 4.1. The minimum capacity shall not be less than 1 t, and...
 - 4.2. The minimum wagon weight shall not be less than 50...
5. Performance under influence factor and electromagnetic disturbance
 - 5.1. The MPE due to an influence factor shall be as...
 - 5.2. The critical change value due to a disturbance is one...

ANNEX IX

TAXIMETERS (MI-007)

DEFINITIONS

- Taximeter
- Fare
- Cross-over speed
- Normal calculation mode S (single application of tariff)

Normal calculation mode D (double application of tariff)
Operating position

DESIGN REQUIREMENTS

1. The taximeter shall be designed to calculate the distance and...
2. The taximeter shall be designed to calculate and display the...
3. A taximeter shall be able to apply the normal calculation...
4. A taximeter shall be able to supply the following data...
5. If relevant, it shall be possible to adjust a taximeter...

RATED OPERATING CONDITIONS

- 6.1. The mechanical environment class that applies is M3.
- 6.2. The manufacturer shall specify the rated operating conditions for the...

MAXIMUM PERMISSIBLE ERRORS (MPEs)

7. The MPE, excluding any errors due to application of the...

PERMISSIBLE EFFECT OF DISTURBANCES

8. Electromagnetic immunity
 - 8.1. The electromagnetic class that applies is E3.
 - 8.2. The MPE laid down in point 7 shall also be...

POWER SUPPLY FAILURE

9. In case of a reduction of the voltage supply to...

OTHER REQUIREMENTS

10. The conditions for the compatibility between the taximeter and the...
11. If there is a supplement charge for an extra service,...
12. If the fare is calculated according to calculation mode D...
13. All values displayed for the passenger shall be suitably identified....
- 14.1. If the fare to be paid or the measures to...
- 14.2. The securing possibilities available in a taximeter shall be such...
- 14.3. The provisions in point 8.3 of Annex I apply also...
- 15.1. A taximeter shall be fitted with non-resettable totalisers for all...
- 15.2. If disconnected from power, a taximeter shall allow the totalised...
- 15.3. Adequate measures shall be taken to prevent the display of...
16. Automatic change of tariffs is allowed due to the:
17. If properties of the taxi are important for the correctness...
18. For the purpose of testing after installation, the taximeter shall...
19. A taximeter and its installation instructions specified by the manufacturer...
20. The general essential requirement dealing with fraudulent use shall be...
21. A taximeter shall be designed so that it can respect...
22. The taximeter shall be equipped with a real-timeclock by means...
23. The values of distance travelled and time elapsed, when displayed...

CONFORMITY ASSESSMENT

ANNEX X MATERIAL MEASURES (MI-008)

CHAPTER I

Material measures of length

DEFINITIONS

SPECIFIC REQUIREMENTS

Reference Conditions

- 1.1. For tapes of length equal to or greater than 5...
- 1.2. The reference temperature is 20 °C unless otherwise specified by the...

MPEs

2. The MPE, positive or negative in mm, between two non-consecutive...

Materials

- 3.1. Materials used for material measures shall be such that length...
- 3.2. Measures made from material whose dimensions may alter materially when...

Markings

4. The nominal value shall be marked on the measure. Millimetre...

CONFORMITY ASSESSMENT

CHAPTER II

Capacity serving measures

DEFINITIONS

SPECIFIC REQUIREMENTS

1. Reference Conditions

- 1.1. Temperature: the reference temperature for measurement of capacity is 20 °C....
- 1.2. Position for correct indication: free standing on a level surface....

2. MPEs

3. Materials

4. Shape

- 4.1. Transfer measures shall be designed so that a change of...
- 4.2. Transfer measures shall be designed so that the complete discharge...

5. Marking

- 5.1. The nominal capacity declared shall be clearly and indelibly marked...
- 5.2. Capacity serving measures may also be marked with up to...
- 5.3. All filling marks shall be sufficiently clear and durable to...

CONFORMITY ASSESSMENT

ANNEX XI

DIMENSIONAL MEASURING INSTRUMENTS (MI-009)

DEFINITIONS

CHAPTER I

Requirements common to all dimensional measuring instruments

Electromagnetic immunity

1. The effect of an electromagnetic disturbance on a dimensional measuring...
2. The critical change value is equal to one scale interval....

CONFORMITY ASSESSMENT

CHAPTER II

Length measuring instruments

Characteristics of the product to be measured

1. Textiles are characterised by the characteristic factor K. This factor...

Operating conditions

- 2.1. Range
- 2.2. Where the measured object is not transported by the measuring...
- 2.3. If the measurement result depends on the thickness, the surface...

MPEs

3. Instrument

Other requirements

4. The instruments must ensure that the product is measured unstretched...

CHAPTER III

Area measuring instruments

Operating conditions

- 1.1. Range
- 1.2. Condition of the product

MPEs

2. Instrument

Other requirements

3. Presentation of the product
4. Scale interval

CHAPTER IV

Multidimensional measuring instruments

Operating conditions

- 1.1. Range
- 1.2. Minimum dimension
- 1.3. Speed of the product

MPE

2. Instrument:

ANNEX XII

EXHAUST GAS ANALYSERS (MI-010)

DEFINITIONS

SPECIFIC REQUIREMENTS

Instrument Classes

1. Two classes (0 and I) are being defined for exhaust...

Rated operating conditions

2. The values of the operating conditions shall be specified by...

Maximum permissible errors (MPEs)

3. The MPEs are defined as follows:

Permissible effect of disturbances

4. For each of the volume fractions measured by the instrument,...

5. The effect of an electromagnetic disturbance shall be such that:...

Other requirements

6. The resolution shall be equal to or of one order...

7. The standard deviation of 20 measurements shall not be greater...

8. For measuring CO, CO₂ and HC, the instrument, including the...

9. The components in the exhaust gas, other than the components...

10. An exhaust gas analyser shall have an adjustment facility that...

11. For automatic or semi-automatic adjustment facilities, the instrument shall be...

12. An exhaust gas analyser shall detect hydrocarbon residues in the...

13. An exhaust gas analyser shall have a device for automatically...

14. If the exhaust gas analyser is capable to operate with...

CONFORMITY ASSESSMENT

ANNEX XIII

EU DECLARATION OF CONFORMITY (No XXXX)

1. Instrument model/Instrument (product, type, batch or serial number):
2. Name and address of the manufacturer and, where applicable, his...
3. This declaration of conformity is issued under the sole responsibility...
4. Object of the declaration (identification of instrument allowing traceability; it...
5. The object of the declaration described above is in conformity...
6. References to the relevant harmonised standards or normative documents used...
7. Where applicable, the notified body ... (name, number) performed

8. Additional information:

ANNEX XIV

PART A

PART B

ANNEX XV

Signature

- (1) [OJ C 181, 21.6.2012, p. 105.](#)
- (2) Position of the European Parliament of 5 February 2014 (not yet published in the Official Journal) and decision of the Council of 20 February 2014.
- (3) [OJ L 135, 30.4.2004, p. 1.](#)
- (4) See Annex XIV, Part A.
- (5) [OJ L 218, 13.8.2008, p. 30.](#)
- (6) [OJ L 218, 13.8.2008, p. 82.](#)
- (7) [OJ L 390, 31.12.2004, p. 24.](#)
- (8) [OJ L 316, 14.11.2012, p. 12.](#)
- (9) [OJ L 55, 28.2.2011, p. 13.](#)