STATUTORY INSTRUMENTS

2016 No. 1153

WEIGHTS AND MEASURES

The Measuring Instruments Regulations 2016

| Made | 29th November 2016 |
|------------------------|--------------------|
| Laid before Parliament | 6th December 2016 |
| Coming into force | 28th December 2016 |

THE MEASURING INSTRUMENTS REGULATIONS 2016

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Document Generated: 2024-06-07 Changes to legislation: The Measuring Instruments Regulations 2016 is up to date with all changes known to be in force on or before 07 June 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

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SCHEDULE 1A — ESSENTIAL REQUIREMENTS (Annex I to the Directive)

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- 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 The manufacturer shall specify the upper temperature limit...
- 1.3.2 (a) Mechanical environments are classified into classes M1 to M3...
- 1.3.3 (a) Electromagnetic environments are classified into classes E1, E2 or...
- 1.3.4 Other influence quantities to be considered, where appropriate, are: —...
- 1.4 When carrying out the tests as envisaged in these Regulations,...
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- 1.4.2 Ambient humidity (a) According to the climatic operating environment in...
 - 2. Reproducibility
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- 5. Durability
- 6. Reliability
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- 7.1 A regulated measuring instrument shall have no feature likely to...
- 7.2 A regulated measuring instrument shall be suitable for its intended...
- 7.3 The errors of a utility measuring instrument at flows or...
- 7.4 Where a regulated measuring instrument is designed for the measurement...
- 7.5 A regulated measuring instrument shall be robust and its materials...
- 7.6 A regulated measuring instrument shall be designed so as to...
- 8. Protection against corruption
- 8.1 The metrological characteristics of a regulated measuring instrument shall not...
- 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 regulated 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 regulated measuring instruments used in the same...
- 9.5 Unless specified otherwise in an instrument-specific Schedule, 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 regulated measuring instrument for direct sales trading transactions shall...
- 10.5 Whether or not a regulated measuring instrument intended for utility...
- 11. Further processing of data to conclude the trading transaction
- 11.1 A regulated measuring instrument other than a utility measuring instrument...
- 11.2 Additionally, a durable proof of the measurement result and the...
- 12. Conformity evaluation

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

- 6. Authorised representative
- MODULE B TYPE EXAMINATION
- 1. 'Type examination' is the part of a conformity assessment procedure...
- 2. Type examination may be carried out in either of the...
- 3. The manufacturer shall lodge an application for type examination with...
- 4. The approved body shall: For the instrument:
- 4.1 examine the technical documentation and supporting evidence to assess the...
- 4.2 verify that the specimen(s) have been manufactured in conformity with...
- 4.3 carry out appropriate examinations and tests, or have them carried...
- 4.4 carry out appropriate examinations and tests, or have them carried...
- 4.5 agree with the manufacturer on the location where the examinations...
- 4.6 examine the technical documentation and supporting evidence to assess the...
- 5. The approved body shall draw up an evaluation report that...
- 6. Where the type meets the requirements of these Regulations, the...
- 7. The approved body shall keep itself apprised of any changes...
- 8. The manufacturer shall inform the approved body that holds the...
- 9. Each approved body shall inform the Secretary of State concerning...
- 10. The manufacturer shall keep a copy of the type examination...
- 11. The manufacturer's authorised representative may lodge the application referred to...

MODULE D: — CONFORMITY TO TYPE BASED ON QUALITY ASSURANCE OF THE PRODUCTION PROCESS

- 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 regulated measuring instruments...
- 3.3 The approved 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 approved body that has approved...
- 4. Surveillance under the responsibility of the approved body
- 4.1 The purpose of surveillance is to make sure that the...
- 4.2 The manufacturer shall, for assessment purposes, allow the approved body...
- 4.3 The approved body shall carry out periodic audits to make...
- 4.4 In addition, the approved body may pay unexpected visits to...
- 5. Conformity marking and declaration of conformity
- 5.1 The manufacturer shall affix the UK marking and the M...
- 5.2 The manufacturer shall draw up a written declaration of conformity...
- 6. The manufacturer shall, for a period ending 10 years after...
- 7. Each approved body shall inform the Secretary of State of...
- 8. Authorised representative

MODULE D1: — 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 regulated measuring...
- 5.3 The approved 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 approved body that has approved...
- 6. Surveillance under the responsibility of the approved body
- 6.1 The purpose of surveillance is to make sure that the...
- 6.2 The manufacturer shall, for assessment purposes, allow the approved body...
- 6.3 The approved body shall carry out periodic audits to make...
- 6.4 In addition, the approved body may pay unexpected visits to...
- 7. Conformity marking and declaration of conformity
- 7.1 The manufacturer shall affix the UK marking, the M marking...
- 7.2 The manufacturer shall draw up a written declaration of conformity...
- 8. The manufacturer shall, for a period ending 10 years after...
- 9. Each approved body shall inform the Secretary of State of...
- 10. Authorised representative

MODULE E: — 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 regulated measuring...
- 3.3 The approved 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 approved body that has approved...
- 4. Surveillance under the responsibility of the approved body
- 4.1 The purpose of surveillance is to make sure that the...
- 4.2 The manufacturer shall, for assessment purposes, allow the approved body...
- 4.3 The approved body shall carry out periodic audits to make...
- 4.4 In addition, the approved body may pay unexpected visits to...
- 5. Conformity marking and declaration of conformity
- 5.1 The manufacturer shall affix the UK marking, the M marking...
- 5.2 The manufacturer shall draw up a written declaration of conformity...
- 6. The manufacturer shall, for a period ending 10 years after...
- 7. Each approved body shall inform the Secretary of State of...
- 8. Authorised representative

MODULE E1: — 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 regulated measuring...
- 5.3 The approved 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 approved body that has approved...
- 6. Surveillance under the responsibility of the approved body
- 6.1 The purpose of surveillance is to make sure that the...
- 6.2 The manufacturer shall, for assessment purposes, allow the approved body...
- 6.3 The approved body shall carry out periodic audits to make...

- 6.4 In addition, the approved body may pay unexpected visits to...
- 7. Conformity marking and declaration of conformity
- 7.1 The manufacturer shall affix the UK marking, the M marking...
- 7.2 The manufacturer shall draw up a written declaration of conformity...
- 8. The manufacturer shall, for a period ending 10 years after...
- 9. Each approved body shall inform the Secretary of State of...
- 10. Authorised representative MODULE F: — 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 regulated measuring instruments shall be individually examined and appropriate...
- 4.2 The approved 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: The statistical...
- 5.4 If a lot is accepted, all regulated measuring instruments of...
- 5.5 If a lot is rejected, the approved body shall take...
- 6. Conformity marking and declaration of conformity
- 6.1 The manufacturer shall affix the UK marking and the M...
- 6.2 The manufacturer shall draw up a written declaration of conformity...
- 7. If the approved body agrees and under its responsibility, the...
- 8. Authorised representative
 - MODULE F1: 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 regulated measuring instruments shall be individually examined and appropriate...
- 5.2 The approved 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 regulated measuring instruments in the sample shall be individually...
- 6.4 The statistical procedure shall meet the following requirements: The statistical...
- 6.5 If a lot is accepted, all regulated measuring instruments of...
- 7. Conformity marking and declaration of conformity
- 7.1 The manufacturer shall affix the UK marking and the M...
- 7.2 The manufacturer shall draw up a written declaration of conformity...
- 8. If the approved body agrees and under its responsibility, the...
- 9. Authorised representative The manufacturer's obligations may be fulfilled by his...

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- 1. Conformity based on unit verification is the conformity assessment procedure...
- 2. Technical documentation
- 3. Manufacturing
- 4. Verification
- 5. Conformity marking and declaration of conformity
- 5.1 The manufacturer shall affix the UK marking and the M...
- 5.2 The manufacturer shall draw up a written declaration of conformity...
- 6. Authorised representative
 - MODULE H: 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 regulated measuring...
- 3.3 The approved 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 approved body that has approved...
- 4. Surveillance under the responsibility of the approved body
- 4.1 The purpose of surveillance is to make sure that the...
- 4.2 The manufacturer shall, for assessment purposes, allow the approved body...
- 4.3 The approved body shall carry out periodic audits to make...
- 4.4 In addition, the approved body may pay unexpected visits to...
- 5. Conformity marking and declaration of conformity
- 5.1 The manufacturer shall affix the UK marking, the M marking...
- 5.2 The manufacturer shall draw up a written declaration of conformity...
- 6. The manufacturer shall, for a period ending 10 years after...
- 7. Each approved body shall inform the Secretary of State of...
- 8. Authorised representative
- MODULE H1: 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 regulated measuring...
- 3.3 The approved 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 approved body that has approved...
- 3.6 Each approved body shall inform the Secretary of State of...
- 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 approved body shall examine the application, and where the...
- 4.4 The approved body shall keep itself apprised of any changes...
- 4.5 Each approved body shall inform the Secretary of State of...
- 4.6 The manufacturer shall keep a copy of the design examination...
- 5. Surveillance under the responsibility of the approved body
- 5.1 The purpose of surveillance is to make sure that the...
- 5.2 The manufacturer shall, for assessment purposes, allow the approved body...
- 5.3 The approved body shall carry out periodic audits to make...

- 5.4 In addition, the approved body may pay unexpected visits to...
- 6. Conformity marking and declaration of conformity
- 6.1 The manufacturer shall affix the UK marking and the M...
- 6.2 The manufacturer shall draw up a written declaration of conformity...
- 7. The manufacturer shall, for a period ending 10 years after...
- 8. Authorised representative

SCHEDULE 1C — WATER METERS (MI-001) (Annex III to the Directive) The relevant requirements of Schedule 1A, the specific requirements of... DEFINITIONS Minimum Flowrate (Q 1) The lowest flowrate at... SPECIFIC REQUIREMENTS Rated Operating Conditions

- 1. The flowrate range of the water. The values for the...
- 2. The temperature range of the water. The values for the...
- 3. The relative pressure range of the water, the range being...
- 4. For the power supply: the nominal value of the AC...
- 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
- 7.2.1 The variation of the measurement result after the durability test,...
- 7.2.2 The error of indication for the volume metered after the...
 - 8.1 Suitability
 - 8.2 The manufacturer shall specify whether the meter is designed to...
 - 9. Units of Measurement
 - 10. Putting into Use
 - SCHEDULE 1D GAS METERS (MI-002) (Annex IV to the Directive) The relevant requirements of Schedule 1A, the specific requirements of... DEFINITIONS Minimum flowrate (Q min) The lowest flowrate at... PART I — SPECIFIC REQUIREMENTS GAS METERS
 - 1. Rated operating conditions The manufacturer shall specify the rated operating...
 - 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...
 - 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: recover...
- 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 Gas Meters
- 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 Gas Meters
- 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 — PUTTING INTO USE AND CONFORMITY ASSESSMENT

7. Putting into use (a) The measurement of residential use must...

SCHEDULE 1E — ACTIVE ELECTRICAL ENERGY METERS (MI-003) (Annex V to the Directive)

The relevant requirements of Schedule 1A, the specific requirements of... Note:

Electrical energy meters may be used in combination with external... DEFINITIONS

An active electrical energy meter is a device which measures... SPECIFIC REQUIREMENTS

- 1. Accuracy
- 2. Rated operating conditions
- 3. MPEs
- 4. Permissible effect of disturbances
- 4.1 General As electrical energy meters are directly connected to the...
- 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

SCHEDULE 1F — MEASURING SYSTEMS FOR THE CONTINUOUS AND DYNAMIC MEASUREMENT OF QUANTITIES OF LIQUIDS OTHER THAN WATER (MI-005) (Annex VII to the Directive) The relevant essential requirements of Schedule 1A, the specific

requirements... DEFINITIONS Meter An instrument designed to measure continuously, memorise and... 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. This is without prejudice...
- 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
 - 2.7 The requirement (a) in paragraph 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

SCHEDULE 1G — AUTOMATIC WEIGHING INSTRUMENTS (MI-006) (Annex VIII to the Directive)

The relevant essential requirements of Schedule 1A, the specific requirements... DEFINITIONS Automatic weighing instrument An instrument that determines the mass... SPECIFIC REQUIREMENTS

CHAPTER I

Requirements common to all types of automatic weighing instruments

- 1. Rated Operating Conditions
- 1.1 For the measurand: The measuring range in terms of its...
- 1.2 For the electrical supply influence quantities: In case of AC...
- 1.3 For the mechanical and climatic influence quantities: The minimum temperature...
- 1.4 For other influence quantities (if applicable): The rate(s) of operation....

- 2. Permissible effect of disturbances Electromagnetic environment The required performance...
- 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. These categories are divided into four accuracy classes: Y(I), Y(II),...
- 2. MPE
- 2.1 MPE Category Y instruments Table 1 Net Load (m) in...
- 2.2 Verification scale interval single interval instruments
- 2.3 Verification scale interval multi-interval instruments
- 3. Measurement Range
- 4. Dynamic Setting
- 4.1 The dynamic setting facility shall operate within a load range...
- 4.2 When fitted, a dynamic setting facility that compensates for the...
- 5. Performance Under Influence Factors And Electromagnetic Disturbances
- 5.1 The MPEs due to influence factors are:
- 5.1.1 For category Y instruments For each load in automatic...
- 5.1.2 The critical change value due to a disturbance is one...
- 5.2 Temperature range: For class Y(I) the minimum range is...

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
 - 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...

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CHAPTER IV

Discontinuous Totalisers

- 1. Accuracy Classes Instruments are divided into four accuracy classes as...
- 2. MPEs Table 5 Accuracy class MPE of totalised load 0.2...
- 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

- 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...
- 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,...
- 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...

 SCHEDULE 1H — TAXIMETERS (MI-007) (Annex IX to the Directive) The relevant requirements of Schedule 1A, the specific requirements of... DEFINITIONS Appropriate Licensing Authority Within this Schedule, "appropriate licensing authority " means –... Taximeter A device that works together with a signal generator to...

This device measures duration, calculates distance on the basis of... Fare

The total amount of money due for a trip based...

Cross-over speed

The speed value found by division of a time tariff...

Normal calculation mode S (single application of tariff)

Fare calculation based on application of the time tariff below...

Normal calculation mode D (double application of tariff)

Fare calculation based on simultaneous application of time tariff and... Operating position

The different modes in which a taximeter fulfils the different... 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...
- 6.1 The mechanical environment class that applies is M3.
- 6.2 The manufacturer shall specify the rated operating conditions for the...
- 7. The MPE, excluding any errors due to application of the...
- 8. Electromagnetic immunity
- 8.1 The electromagnetic class that applies is E3.
- 8.2 The MPE laid down in paragraph 7 shall also be...
- 9. In case of a reduction of the voltage supply to...
- 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 paragraph 8.3 of Schedule 1A 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-time clock by...
- 23. The values of distance travelled and time elapsed, when displayed...

SCHEDULE 1I — MATERIAL MEASURES (MI-008) (Annex X to the Directive) — CHAPTER 1 Material measures of length The relevant essential requirements...

CHAPTER 1

Material measures of length

The relevant essential requirements of Schedule 1A, the specific requirements...

SPECIFIC REQUIREMENTS

- 1.1 Reference Conditions
- 1.2 The reference temperature is 20 °C unless otherwise specified by...
- 2. MPEs
- 3.1 Materials
- 3.2 Measures made from material whose dimensions may alter materially when...
- 4. Markings

CHAPTER II

Capacity serving measures

The relevant essential requirements of Schedule 1A, and the specific... DEFINITIONS

SPECIFIC REQUIREMENTS

- 1. Reference Conditions
- 1.1 Temperature: the reference temperature for measurement of capacity is 20...
- 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...

SCHEDULE 1J — EXHAUST GAS ANALYSERS (MI-010) (Annex XII to the Directive)

The relevant requirements of Schedule 1A, the specific requirements of... The volume fractions of the exhaust gas components are expressed...

The content of HC has to be expressed as concentration...

DEFINITIONS Lambda Lambda is a dimensionless value representative of the...

SPECIFIC REQUIREMENTS

- 1. Instrument Classes
- 2. Rated operating conditions
- 2.1 For the climatic and mechanical influence quantities: a minimum...
- 2.2 For the electrical power influence quantities: the voltage and...
- 2.3 For the ambient pressure: the minimum and the maximum...
- 3. Maximum permissible errors (MPEs)
- 3.1 For each of the fractions measured, the maximum error value...
- 3.2 The MPE on lambda calculation is 0.3 %. The conventional...
- 4. Permissible effect of disturbances
- 5. The effect of an electromagnetic disturbance shall be such that:...

- 6. Other requirements
- 8. For measuring CO, CO 2 and HC, the instrument, including...
- 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...

SCHEDULE 1K — Declaration of Conformity

- 1. Declaration of Conformity (No. XXXX)
- 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 the instrument allowing traceability;...
- 5. The object of the declaration described above is in conformity...
- 6. References to the relevant designated standards or normative documents used...
- 7. The approved body (name, number) performed ... (description of intervention)...
- 8. Additional information: Signed for and on behalf of: (place and...

SCHEDULE 2 — MEASURING INSTRUMENT WHICH MAY CONTINUE TO BE PUT INTO USE

- 1. Cold water meters
- 2. A cold-water meter— (a) in respect of a pattern of...
- 3. Gas meters
- 4. A gas meter for use for trade—
- 5. Active electrical energy meters
- 6. An active electrical energy meter for use for trade which...
- 7. An active electricity meter for use for trade—
- 8. Automatic Weighing instruments
- 9. Measuring systems for the measurement of liquid fuel and lubricants
- 10. (1) A measuring system for use for trade in the...
- 11. Measuring systems used for deliveries from road tankers
- 12. (1) A measuring system for use for trade in the...
- 13. Taximeters
- 14. Material measures of length
- 15. (1) A material measure of length— (a) in respect of...
- 16. Exhaust gas analyser

SCHEDULE 3 — REVOCATIONS AND TRANSITIONAL AND CONSEQUENTIAL PROVISIONS

- 1. Instruments revoked
- 2. Transitional provisions
- 2A Transitional provisions relating to UK withdrawal from the EU
- 3. Amendments to the Consumer Rights Act 2015
- 4. Modifications to the application of the Gas Act 1986
- 5. Modifications to the application of the Gas (Northern Ireland) Order 1996
- 6. Modifications to the application of the Electricity Act 1989
- 7. Modifications to the application of the Electricity (Northern Ireland) Order 1992

SCHEDULE 4 — OPERATIONAL OBLIGATIONS OF APPROVED BODIES

- 1. Conformity assessment must be carried out in a proportionate manner,...
- 2. Conformity assessment bodies must perform their activities taking due account...
- 3. Where an approved body finds that the essential requirements have...
- 4. Where in the course of the monitoring of conformity following...
- 5. Where corrective measures are not taken or do not have...
- 6. Where a person is aggrieved at a decision taken by...
- 7. Approved bodies must inform the Secretary of State of the...
- 8. Approved bodies must provide other bodies approved approved under these...
- 9. Approved bodies must— (a) when requested by the Secretary of...

SCHEDULE 5 — REQUIREMENTS RELATED TO APPROVED BODIES

- 1. (1) A conformity assessment body must have legal personality and...
- 2. A conformity assessment body must be independent of the organisation...
- 3. (1) A conformity assessment body, its top level management and...
- 4. Conformity assessment bodies and their personnel must-
- 5. (1) A conformity assessment body must be capable of carrying...
- 6. The personnel responsible for carrying out conformity assessment tasks must...
- 7. (1) The impartiality of the conformity assessment bodies, their top...
- 8. (1) Conformity assessment bodies must take out liability insurance.
- 9. (1) The personnel of a conformity assessment body must observe...
- 10. Conformity assessment bodies must participate in, or ensure that their...

SCHEDULE 6 — IN SERVICE REQUIREMENTS FOR CERTAIN REGULATED MEASURING INSTRUMENTS IN GREAT BRITAIN

- PART 1 INTRODUCTORY
- 1. (1) This Schedule applies to the use for trade of... PART 2 — COLD WATER METERS
- 2. Requirements for use for trade
- 3. Maximum permissible error
- 4. (1) Where a cold water meter is marked with—
- PART 3 LIQUID FUEL AND LUBRICANTS
- 5. Requirements for use for trade
- 6. No person may use for trade a measuring system unless-...
- 7. Maximum permissible error
- 8. Manner of use

PART 4 — LIQUID FUEL DELIVERED FROM ROAD TANKERS

- 9. Requirements for use for trade
- 10. No person shall use for trade a measuring system unless-...
- 11. Maximum permissible error
- 12. Manner of use
- 13. Minimum measured quantity
 - PART 5 AUTOMATIC CATCHWEIGHERS
- 14. Interpretation of Part
- 15. Requirements for use for trade of automatic catchweighers
- 16. Maximum permissible error
- 17. Manner of use
- 18. Where an automatic catchweigher is marked with a measurement range,...
- 19. No person may use for trade an automatic catchweigher other...
- 20. (1) Where an automatic catchweigher is marked with a temperature...

21. Manner of erection and installation

PART 6 — AUTOMATIC GRAVIMETRIC FILLING INSTRUMENTS

- 22. (1) No person may use for trade an automatic gravimetric...
- 23. Maximum permissible error
- 24. Manner of use
- 25. Automatic gravimetric filling instruments to be set to zero
- 26. Manner of erection and installation PART 7 — AUTOMATIC DISCONTINOUS TOTALISERS
- 27. Requirements for use for trade
- 28. Manner of use
- 29. Manner of erection and installation

PART 8 — AUTOMATIC RAIL WEIGHBRIDGES

- 30. Requirements for use for trade
- 31. Manner of erection and installation
- 32. Maximum permissible error and accuracy class
- 33. Manner of use PART 9 — BELTWEIGHERS
- 34. Requirements for use for trade
- 35. Manner of use
- 36. Position of the operator
- 37. Manner of erection and installation
 - PART 10 MATERIAL MEASURES OF LENGTH
- 38. Requirements for use for trade
- 39. Manner of use

PART 11 — CAPACITY SERVING MEASURES

- 40. Requirements for use for trade
- 41. Manner of use

SCHEDULE 7 — MONETARY PENALTIES

- 1. Introduction
- 2. Procedure
- 3. Appeals
- 4. Interest and recovery

Explanatory Note

Changes to legislation:

The Measuring Instruments Regulations 2016 is up to date with all changes known to be in force on or before 07 June 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. View outstanding changes

Changes and effects yet to be applied to :

- Sch. 3 para. 2A(4) omitted by S.I. 2024/696 reg. 18(5)(a)
- Sch. 3 para. 2A(8) omitted by S.I. 2024/696 reg. 18(5)(a)
- Sch. 3 para. 2A(9) omitted by S.I. 2024/696 reg. 18(5)(a)
- Sch. 3 para. 2A(7)(c) word substituted by S.I. 2024/696 reg. 18(5)(b)
- reg. 2(1) words omitted by S.I. 2020/1112 Sch. 14 para. 2(1)(g) (This amendment not applied to legislation.gov.uk. Sch. 14 para. 2(1)(g) omitted immediately before IP completion day by virtue of S.I. 2020/1486, regs. 1(3), 3(c)(iii))
- reg. 2(1) words omitted by S.I. 2024/696 reg. 18(2)
- reg. 2(1) words substituted by S.I. 2019/696 Sch. 27 para. 2(2)(bb)(ii) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 2(2)(bb)(ii) substituted immediately before IP completion day by S.I. 2020/676, regs. 1(1), 4(15)(b))
- reg. 2(1) words substituted by S.I. 2019/696 Sch. 27 para. 2(2)(d) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 2(2)(d) omitted immediately before IP completion day by virtue of S.I. 2020/1460, reg. 1(4), Sch. 3 para. 3)
- reg. 2(1) words substituted by S.I. 2019/696 Sch. 27 para. 2(2)(t)(ii) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 2(2)(t)(ii) substituted immediately before IP completion day by S.I. 2020/676, regs. 1(1), 4(15)(a))
- reg. 2(1) words substituted by S.I. 2020/1112 Sch. 14 para. 2(1)(e)(i) (This amendment not applied to legislation.gov.uk. Sch. 14 para. 2(1)(e) substituted immediately before IP completion day by virtue of S.I. 2020/1486, regs. 1(3), 3(c) (i))
- reg. 2(1) words substituted by S.I. 2020/1112 Sch. 14 para. 2(1)(e)(ii) (This amendment not applied to legislation.gov.uk. Sch. 14 para. 2(1)(e) substituted immediately before IP completion day by virtue of S.I. 2020/1486, regs. 1(3), 3(c) (i))
- reg. 2(1) words substituted in earlier amending provision S.I. 2019/696, Sch. 27 para. 2(2)(d) by S.I. 2020/852 reg. 4(2)Sch. 1 para. 1(p)(i) (This amendment not applied to legislation.gov.uk. Sch. 1 para. 1(p)(i) omitted immediately before it comes into force by virtue of S.I. 2020/1460, regs. 1(3), Sch. 4 para. 1(3))
- reg. 7(d) word substituted by S.I. 2019/696 Sch. 27 para. 5(a) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 5 substituted immediately before IP completion day by virtue of S.I. 2020/1460, reg. 1(4), Sch. 3 para. 19(3))
- reg. 7(e)(i) word substituted by S.I. 2019/696 Sch. 27 para. 5(b) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 5 substituted immediately before IP completion day by virtue of S.I. 2020/1460, reg. 1(4), Sch. 3 para. 19(3))
- reg. 33A(8)(e) word omitted by S.I. 2024/696 reg. 18(3)
- reg. 33C substituted by S.I. 2024/696 reg. 18(4)
- reg. 63(9) words substituted by S.I. 2019/696 Sch. 27 para. 39(d) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 39(d) substituted immediately before IP completion day by S.I. 2019/1246, regs. 1(3), 15(a))
- reg. 63(10)(f)(ii) word substituted by S.I. 2019/696 Sch. 27 para. 39(e) (This amendment not applied to legislation.gov.uk. Sch. 27 para. 39(e) substituted immediately before IP completion day by S.I. 2019/1246, regs. 1(3), 15(b))