

Directive 2004/22/EC of the European Parliament and of the Council of
31 March 2004 on measuring instruments (Text with EEA relevance) (repealed)

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ANNEX I

ESSENTIAL REQUIREMENTS

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DEFINITIONS

REQUIREMENTS

1. Allowable Errors
 - 1.1.
 - 1.2.
 - 1.3.
 - 1.3.1. Climatic environments

Status: EU Directives are published on this site to aid cross referencing from UK legislation. Since IP completion day (31 December 2020 11.00 p.m.) no amendments have been applied to this version.

- 1.3.2.
- 1.3.3.
- 1.3.4.
- 1.4.
 - 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.
 - 7.2.
 - 7.3.
 - 7.4.
 - 7.5.
 - 7.6.
- 8. Protection against corruption
 - 8.1.
 - 8.2.
 - 8.3.
 - 8.4.
 - 8.5.
- 9. Information to be borne by and to accompany the instrument...
 - 9.1.
 - 9.2.
 - 9.3.
 - 9.4.
 - 9.5.
 - 9.6.
 - 9.7.
 - 9.8.
- 10. Indication of result
 - 10.1.
 - 10.2.
 - 10.3.
 - 10.4.
 - 10.5.
- 11. Further processing of data to conclude the trading transaction
 - 11.1.
 - 11.2.
- 12. Conformity evaluation

ANNEX A

DECLARATION OF CONFORMITY BASED ON INTERNAL PRODUCTION CONTROL

1.

Technical documentation

2.

- 3.
- Manufacturing
- 4.
- Written declaration of conformity
- 5.1.
- 5.2.
- Authorised representative
- 6.

ANNEX A1

DECLARATION OF CONFORMITY BASED ON INTERNAL PRODUCTION CONTROL PLUS PRODUCT TESTING BY A NOTIFIED BODY

- 1.
- Technical documentation
- 2.
- 3.
- Manufacturing
- 4.
- Product checks
- 5.
- Written declaration of conformity
- 6.1.
- 6.2.
- Authorised representative
- 7.

ANNEX B

TYPE EXAMINATION

- 1.
- 2.
- 3.
- 4.
- 5.1.
- 5.2.

- 5.3.
- 6.
- 7.
- 8.
- 9.

ANNEX C

DECLARATION OF CONFORMITY TO TYPE
BASED ON INTERNAL PRODUCTION CONTROL

- 1.
- Manufacturing
- 2.
- Written declaration of conformity
- 3.1.
- 3.2.
- Authorised representative
- 4.

ANNEX C1

DECLARATION OF CONFORMITY TO TYPE BASED ON INTERNAL
PRODUCTION CONTROL PLUS PRODUCT TESTING BY A NOTIFIED BODY

- 1.
- Manufacturing
- 2.
- Product checks
- 3.
- Written declaration of conformity
- 4.1.
- 4.2.
- Authorised representative
- 5.

ANNEX D

DECLARATION OF CONFORMITY TO TYPE BASED ON QUALITY ASSURANCE OF THE PRODUCTION PROCESS

1.

Manufacturing

2.

Quality system

3.1.

3.2.

3.3.

3.4.

3.5.

Surveillance under the responsibility of the notified body

4.1.

4.2.

4.3.

4.4.

Written declaration of conformity

5.1.

5.2.

6.

7.

Authorised representative

8.

ANNEX D1

DECLARATION OF CONFORMITY BASED ON QUALITY ASSURANCE OF THE PRODUCTION PROCESS

1.

Technical documentation

2.

3.

Manufacturing

4.

Quality system

5.1.

5.2.

5.3.

5.4.

5.5.

Surveillance under the responsibility of the notified body

- 6.1.
- 6.2.
- 6.3.
- 6.4.

Written declaration of conformity

- 7.1.
- 7.2.
- 8.
- 9.

Authorised representative

- 10.

ANNEX E

DECLARATION OF CONFORMITY TO TYPE BASED ON QUALITY ASSURANCE OF FINAL PRODUCT INSPECTION AND TESTING

- 1.

Manufacturing

- 2.

Quality system

- 3.1.
- 3.2.
- 3.3.
- 3.4.
- 3.5.

Surveillance under the responsibility of the notified body

- 4.1.
- 4.2.
- 4.3.
- 4.4.

Written declaration of conformity

- 5.1.
- 5.2.
- 6.
- 7.

Authorised representative

- 8.

ANNEX E1

DECLARATION OF CONFORMITY BASED ON QUALITY ASSURANCE OF FINAL PRODUCT INSPECTION AND TESTING

1.

Technical documentation

2.

3.

Manufacturing

4.

Quality system

5.1.

5.2.

5.3.

5.4.

5.5.

Surveillance under the responsibility of the notified body

6.1.

6.2.

6.3.

6.4.

Written declaration of conformity

7.1.

7.2.

8.

9.

Authorised representative

10.

ANNEX F

DECLARATION OF CONFORMITY TO TYPE BASED ON PRODUCT VERIFICATION

1.

Manufacturing

2.

Verification

3.

4. Verification of conformity with the metrological requirements by examination and...

4.1.

4.2.

5. Statistical verification of conformity with the metrological requirements.

5.1.

- 5.2.
- 5.3.
- 5.4.
- 5.5.

Written declaration of conformity

- 6.1.
- 6.2.
- 7.

Authorised representative

- 8.

ANNEX F1

DECLARATION OF CONFORMITY BASED ON PRODUCT VERIFICATION

- 1.

Technical documentation

- 2.
- 3.

Manufacturing

- 4.

Verification

- 5.
- 6. Verification of conformity with the metrological requirements by examination and...
 - 6.1.
 - 6.2.
- 7. Statistical verification of conformity with the metrological requirements.
 - 7.1.
 - 7.2.
 - 7.3.
 - 7.4.
 - 7.5.

Written declaration of conformity

- 8.1.
- 8.2.
- 9.

Authorised representative

- 10.

ANNEX G

DECLARATION OF CONFORMITY BASED ON UNIT VERIFICATION

- 1.

Technical documentation
2.

Manufacturing
3.

Verification
4.

Written declaration of conformity
5.1.
5.2.

Authorised representative
6.

ANNEX H

DECLARATION OF CONFORMITY BASED ON FULL QUALITY ASSURANCE

1.

Manufacturing
2.

Quality system
3.1.
3.2.
3.3.
3.4.
3.5.

Surveillance under the responsibility of the notified body
4.1.
4.2.
4.3.
4.4.

Written declaration of conformity
5.1.
5.2.
6.
7.

Authorised representative
8.

ANNEX H1

DECLARATION OF CONFORMITY BASED ON FULL QUALITY ASSURANCE PLUS DESIGN EXAMINATION

1.

Manufacturing

2.

Quality system

3.1.

3.2.

3.3.

3.4.

3.5.

3.6.

Design examination

4.1.

4.2.

4.3.

4.3.1.

4.3.2.

4.3.3.

4.4.

4.5.

4.6.

Surveillance under the responsibility of the notified body

5.1.

5.2.

5.3.

5.4.

Written declaration of conformity

6.1.

6.2.

7.

Authorised representative

8.

ANNEX MI-001

WATER METERS

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DEFINITIONS

SPECIFIC REQUIREMENTS

Rated Operating Conditions

- 1.
- 2.
- 3.
- 4.
- MPE
- 5.
- 6.
- 6a.
- Permissible Effect of Disturbances
- 7.1. Electromagnetic immunity
 - 7.1.1.
 - 7.1.2.
 - 7.1.3.
- 7.2. Durability
 - 7.2.1.
 - 7.2.2.
- Suitability
- 8.1.
- 8.2.
- Units of Measurement
- 9.
- Putting into Use
- 10.

CONFORMITY ASSESSMENT

ANNEX MI-002

GAS METERS AND VOLUME CONVERSION DEVICES

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DEFINITIONS

PART I —

SPECIFIC REQUIREMENTS — GAS METERS

- 1. Rated operating conditions
 - 1.1.
 - 1.2.
 - 1.3. The fuel/gas related conditions
 - 1.4.
 - 1.5.
- 2. Maximum permissible error (MPEs)
 - 2.1. Gas meter indicating the volume at metering conditions or mass...
 - 2.2.
- 3. Permissible effect of disturbances
 - 3.1. Electromagnetic immunity
 - 3.1.1.
 - 3.1.2.

- 3.1.3.
- 3.2. Effect of upstream-downstream flow disturbances
- 4. Durability
 - 4.1. Class 1,5 meters
 - 4.1.1.
 - 4.1.2.
 - 4.2. Class 1,0 meters
 - 4.2.1.
 - 4.2.2.
- 5. Suitability
 - 5.1.
 - 5.2.
 - 5.3.
 - 5.4.
 - 5.5.
 - 5.6.
- 6. Units

PART II —

SPECIFIC REQUIREMENTS — VOLUME CONVERSION DEVICES

- 7. Base conditions for converted quantities
- 8. MPE
- 9. Suitability
 - 9.1.
 - 9.2.

PART III —

PUTTING INTO USE AND CONFORMITY ASSESSMENT

- Putting into use
- 10.

CONFORMITY ASSESSMENT

ANNEX MI-003

ACTIVE ELECTRICAL ENERGY METERS

.....

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.
 - 4.3.2.
- 5. Suitability
 - 5.1.
 - 5.2.
 - 5.3.
 - 5.4. Running with no load
 - 5.5. Starting
- 6. Units
- 7. Putting into use

CONFORMITY ASSESSMENT

ANNEX MI-004

HEAT METERS

.....

DEFINITIONS

SPECIFIC REQUIREMENTS

- 1. Rated operating conditions
 - 1.1.
 - 1.2.
 - 1.3.
 - 1.4.
- 2. Accuracy classes
- 3. MPEs applicable to complete heat meters
- 4. Permissible influences of electromagnetic disturbances
 - 4.1.
 - 4.2.
 - 4.3.
- 5. Durability
 - 5.1.
 - 5.2.
- 6. Inscriptions on a heat meter
- 7. Sub-assemblies
 - 7.1.
 - 7.2.
 - 7.3.
 - 7.4.
 - 7.5.

PUTTING INTO USE

- 8.

CONFORMITY ASSESSMENT

ANNEX MI-005

MEASURING SYSTEMS FOR THE CONTINUOUS AND DYNAMIC
MEASUREMENT OF QUANTITIES OF LIQUIDS OTHER THAN WATER

.....

DEFINITIONS

SPECIFIC REQUIREMENTS

1. Rated operating conditions
 - 1.1.
 - 1.2.
 - 1.3.
 - 1.4.
2. Accuracy classification and maximum permissible errors (MPEs)
 - 2.1.
 - 2.2.
 - 2.3.
 - 2.4.1.
 - 2.4.2.
 - 2.5. Converted indication
 - 2.6. Conversion devices
 - 2.7.
 - 2.8.
3. Maximum permissible effect of disturbances
 - 3.1.
 - 3.2.
4. Durability
5. Suitability
 - 5.1.
 - 5.2.
 - 5.3.
 - 5.4. Instruments for direct sales
 - 5.4.1.
 - 5.4.2.
 - 5.4.3.
 - 5.4.4.
 - 5.5. Fuel Dispensers
 - 5.5.1.
 - 5.5.2.
 - 5.5.3.
6. Power supply failure
7. Putting into use
8. Units of measurement

CONFORMITY ASSESSMENT

ANNEX MI-006

AUTOMATIC WEIGHING INSTRUMENTS

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DEFINITIONS

SPECIFIC REQUIREMENTS

CHAPTER I —

Requirements common to all types of automatic weighing instruments

1. Rated Operating Conditions
 - 1.1.
 - 1.2.
 - 1.3.
 - 1.4.
2. Permissible effect of disturbances - Electromagnetic environment
3. Suitability
 - 3.1.
 - 3.2.
 - 3.3.
 - 3.4.
 - 3.5.
 - 3.6.
4. Conformity assessment

CHAPTER II —

Automatic Catchweighers

1. Accuracy Classes
 - 1.1.
 - 1.2.
2. Category X Instruments
 - 2.1.
 - 2.2.
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.
 - 6.2.
7. Performance Under Influence Factors And Electromagnetic Disturbances
 - 7.1.
 - 7.1.1.
 - 7.1.2.
 - 7.2.
 - 7.3.

CHAPTER III —

Automatic Gravimetric Filling Instruments

1. Accuracy classes
 - 1.1.
 - 1.2.
 - 1.3.
 - 1.4.
2. MPE
 - 2.1. Static weighing error
 - 2.1.1.
 - 2.1.2.
 - 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.
 - 3.2.
 - 3.3.

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.
 - 8.2.

CHAPTER V —

Continuous Totalisers

1. Accuracy classes
2. Measurement Range
 - 2.1.
 - 2.2.
3. MPE
4. Speed of the belt
5. General Totalisation Device
6. Performance under influence factors and electromagnetic disturbances
 - 6.1.
 - 6.2.

CHAPTER VI —

Automatic Rail Weighbridges

1. Accuracy classes
2. MPE
 - 2.1.
 - 2.2.
 - 2.3.
 - 2.4.
3. Scale interval (d)
4. Measurement range
 - 4.1.
 - 4.2.
5. Performance under influence factor and electromagnetic disturbance
 - 5.1.
 - 5.2.

ANNEX MI-007

TAXIMETERS

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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.
2.
3.
4.
5.

RATED OPERATING CONDITIONS

- 6.1.
- 6.2.

MAXIMUM PERMISSIBLE ERRORS (MPEs)

7.

PERMISSIBLE EFFECT OF DISTURBANCES

8. Electromagnetic immunity
 - 8.1.
 - 8.2.

POWER SUPPLY FAILURE

Status: EU Directives are published on this site to aid cross referencing from UK legislation. Since IP completion day (31 December 2020 11.00 p.m.) no amendments have been applied to this version.

9.

OTHER REQUIREMENTS

- 10.
- 11.
- 12.
- 13.
- 14.1.
- 14.2.
- 14.3.
- 15.1.
- 15.2.
- 15.3.
- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.
- 23.

CONFORMITY ASSESSMENT

ANNEX MI-008

MATERIAL MEASURES

CHAPTER I —

Material measures of length

DEFINITIONS

SPECIFIC REQUIREMENTS

Reference Conditions

- 1.1.
- 1.2.

MPEs

- 2.

Materials

- 3.1.
- 3.2.

Markings

- 4.

CONFORMITY ASSESSMENT

CHAPTER II —

Capacity serving measures

DEFINITIONS

SPECIFIC REQUIREMENTS

- 1. Reference Conditions
 - 1.1.
 - 1.2.
- 2. MPEs
- 3. Materials
- 4. Shape
 - 4.1.
 - 4.2.
- 5. Marking
 - 5.1.
 - 5.2.
 - 5.3.

CONFORMITY ASSESSMENT

ANNEX MI-009

DIMENSIONAL MEASURING INSTRUMENTS

.....

DEFINITIONS

CHAPTER I —

Equirements common to all dimensional measuring instruments

Electromagnetic immunity

- 1.
- 2.

CONFORMITY ASSESSMENT

CHAPTER II —

Length measuring instruments

Characteristics of the product to be measured

- 1.

Operating conditions

- 2.1. Range
- 2.2.
- 2.3.

MPEs

- 3. Instrument

Other requirements

- 4.

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 MI-010

EXHAUST GAS ANALYSERS

.....

DEFINITIONS

SPECIFIC REQUIREMENTS

Instrument Classes

- 1.

Rated operating conditions

- 2.
 - 2.1.
 - 2.2.
 - 2.3.

Maximum permissible errors (MPEs)

- 3.
 - 3.1.

3.2.

Permissible effect of disturbances

4.

5.

Other requirements

6.

7.

8.

9.

10.

11.

12.

13.

14.

CONFORMITY ASSESSMENT