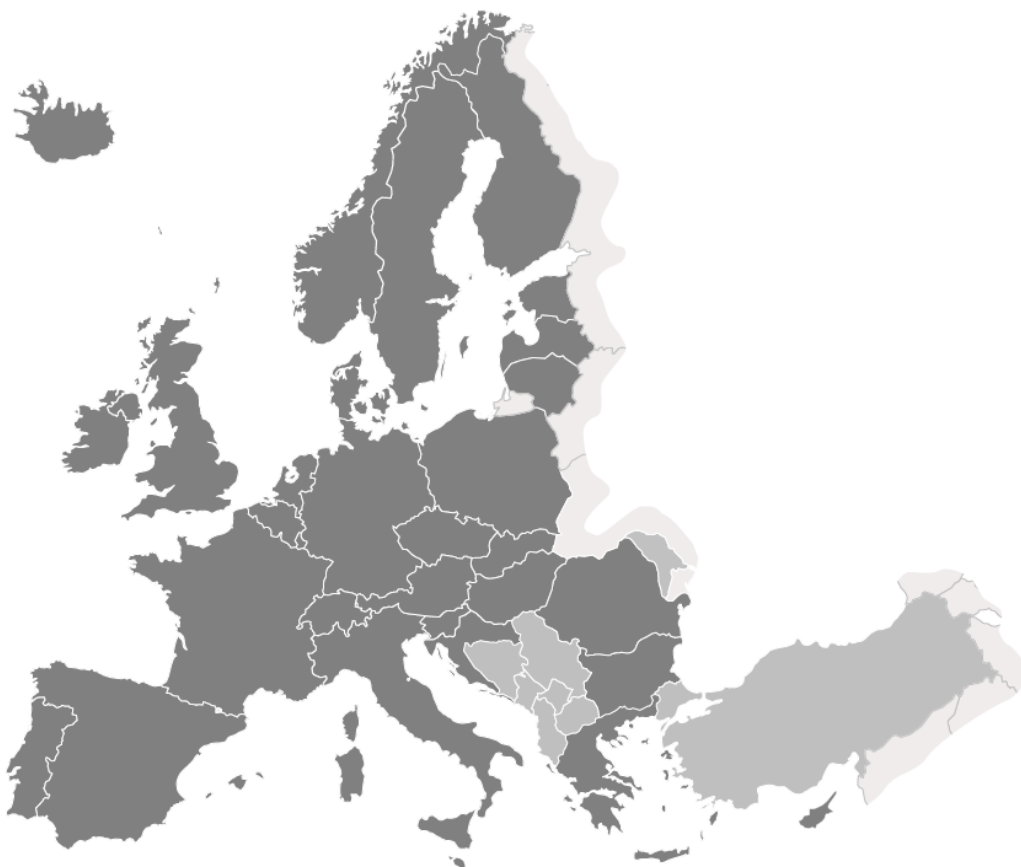


WELMEC

European Cooperation in Legal Metrology

Guide on Terms and Definitions in MID and their Relation to Terms defined in other International Metrologically relevant Documents



For information:

This guide is available to the Working Group Measuring Instruments for future reference on the Europa Website.

WELMEC

European Cooperation in Legal Metrology

WELMEC is a cooperation between the legal metrology authorities of the Member States of the European Union and EFTA.

This document is one of a number of Guides published by WELMEC to provide guidance to manufacturers of measuring instruments and to Notified Bodies responsible for conformity assessment of their products.

The Guides are purely advisory and do not themselves impose any restrictions or additional technical requirements beyond those contained in relevant EU Directives.

Alternative approaches may be acceptable, but the guidance provided in this document represents the considered view of WELMEC as to the best practice to be followed.

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Foreword

According to the terms of reference of WG8, it has been decided to draft an inventory of terms and expressions with metrological relevance in the English version of the Measuring Instrument Directive (2014/32/EU) and compare these terms and expressions with those used in other relevant documents like OIML documents, the VIM, and relevant international and European standards. In particular the “closest synonyms” will be referred to.

A first edition of this guide was published in 2006. In 2019, it was decided to update the references in the document. In addition, for the sake of simplification, it was decided to delete the definitions specific to each category of measuring instruments. These definitions can then be handled by the Welmec working groups in charge of each of these categories.

Remarks

- Words/expressions marked in *Italic* are separately in the column “Term in MID”.
- Mostly, the terms in the list below are in the singular form, with the first letter in uppercase.
- An overview of the documents referred to in the 4th column, is given in Annex I.
- Items marked (*) are listed in both Part 1 and Part 2
- Text in **bold face** in the 1st, 2nd and 3rd column denotes a definition (or text that can clearly be seen as a definition) in the MID or its annexes.

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1 Part 1 - Terms (words and expressions)

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Accuracy	Annex I MI-002 MI-003 MI-005 MI-006 MI-007 MI-008		VIM 2.13: measurement accuracy closeness of agreement between a measured quantity value and a true quantity value of a measurand	
Accuracy class	Article 7, 32, 47 MI-004 MI-005 MI-006 MI-008 MI-009		VIM 4.25: accuracy class class of measuring instruments or measuring systems that meet stated metrological requirements that are intended to keep measurement errors or instrumental measurement uncertainties within specified limits under specified operating conditions	
Approved design	Annex II module H1			
Assessment	Several articles and annexes			<i>See: Assessment of the quality system and conformity assessment</i>

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Assessment of the quality system	Module H1			
Assessment visit	Module D, D1, E, E1, H, H1			
Audit	Module D, D1, E, E1, H, H1		<p>ISO/IEC 17000 4.4: audit systematic, independent and documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements (3.1) are fulfilled</p> <p>ISO 9000, 3.13.1: audit systematic, independent and documented process (3.4.1) for obtaining objective evidence (3.8.3) and evaluating it objectively to determine the extent to which audit criteria (3.13.7) are fulfilled</p>	
Audit report	Module D, D1, E, E1, H, H1			
Auditing team	Module D, D1, E, E1, H, H1		<p>ISO 9000, 3.13.14: audit team one or more persons conducting an audit (3.13.1), supported if needed by technical experts (3.13.16)</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Authorised representative	Articles 4(9), 9, 22 Module A-H1	Article 4 (9) 'authorised representative' means a natural or legal person who is established within the Union who has received a written mandate from a manufacturer to act on his behalf in relation to specified tasks.	The 'Blue Guide' 3.2 on the implementation of EU products rules 2016 (OJ 2016/C 272/01)	
Calibration	Module D, D1, E, E1, H, H1 MI-010		VIM, 2.39: Calibration: operation that, under specified conditions, in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication	
Calibration data	Module D, D1, E, E1, H, H1			
Category (of a measuring instrument)	Article 27(6) Module D, D1, E, E1, H, H1 MI-006			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
CE marking	Article 4, 8, 10, 11, 20-22, 45	Article 4 (22) ‘CE marking’ means a marking by which the manufacturer indicates that the measuring instrument is in conformity with the applicable requirements set out in Union harmonisation legislation providing for its affixing	“Blue Guide”, 4.5.1.1 Definition and role of the CE marking <i>The CE marking indicates the conformity of the product with the Union legislation applying to the product and providing for CE marking.</i> <i>The CE marking is affixed on products that will be placed on the EEA and Turkish market, whether they are manufactured in the EEA, in Turkey or in another country.</i>	
Certificate	Several articles Annex I Several modules			In this Annex: <i>EU design examination Certificate</i>
Circuit	Article 18 Annex 1, MI-003 MI-004			
Class	Article 7, 22, 47, Annex I MI-002 - MI-010			<i>See: Environmental class and Accuracy class</i>

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Climatic environment	Annex I MI-002 MI-007 MI-010	Annex I, Definitions: Climatic environments Climatic environments are the conditions in which measuring instruments may be used. To cope with climatic differences between the Member States, a range of temperature limits has been defined.		
Climatic operating environment	Annex I			See: <i>Climatic environment</i>
Commercial and/or light industrial <u>use</u>	MI-002 MI-003 MI-004			See: <i>Residential, commercial and light industrial</i>
Commercial and/or light industrial <u>use</u>	MI-002 MI-003 MI-004			
Competent national authority	Article 8 - 10			
Component	Article 18 Annex I, 8.2 MI-010			
Conformity	several articles and annexes		ISO 9000, 3.6.11: conformity fulfilment of a requirement (3.1.2)	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Conformity assessment	Article 4 (19) , all annexes	'conformity assessment' means the process demonstrating whether the essential requirements of this Directive relating to a measuring instrument have been fulfilled	ISO/IEC 17000 2.1 conformity Demonstration that specific requirements (3.1) relating to a product (3.3), process, system, person or body are fulfilled.	
Conformity assessment body	Article 4 , 25, 27, 28, 31, 32	4 (18) conformity assessment body: a body that performs conformity assessment activities including calibration, testing, certification and inspection	ISO/IEC 17000 2.5 conformity assessment body body that performs conformity assessment services <i>Note</i> An accreditation body (2.6) is not a conformity assessment body.	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Conformity assessment module	Article 31, 32		<p>“Blue Guide” 5.1.2</p> <p><i>In Union harmonisation legislation, conformity assessment procedures cover both design and production phases. They are composed of one or two modules. Some modules cover both phases. In other cases, distinct modules are used for each phase.</i></p> <p>5.1.4</p> <p><i>There are eight modules. Some of them have variants.</i></p> <p>5.1.5</p> <p><i>In some cases the conformity assessment procedure is in two steps: — first examination of the conformity of a specimen or the design of the concerned product, — then, determination of the conformity of the manufactured products against the approved specimen</i></p> <p>5.1.6</p> <p><i>— The use of quality assurance systems for the purpose of conformity assessment in the Union harmonisation legislation is described in modules D, E and H and their variants.</i></p> <p>5.1.7 Overview of modules</p>	
Conformity assessment procedure	Article 8, 10, 17, 27, 36, Annex II Annex III- XIV			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Conformity evaluation	Annex I			
Conformity marking	Article 20 Annex A, A1, C, D, D1, F, F1, G. H and H1		<p>VIML, 2.19: Marking affixing of one or more marks</p> <p><i>Note 1</i> Examples of marks include: verification, rejection, sealing and type approval marks (as described in 3.05, 3.06, and 3.07).</p> <p><i>Note 2</i> Verification and sealing marks may be combined.</p> <p><i>Note 3</i> The manufacturer may be authorized to apply other marks</p>	
Conformity based on full quality assurance	Module H	Conformity based on full quality assurance is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2 and 5, and ensures and declares on his sole responsibility that the measuring instruments concerned satisfy the requirements of this Directive that apply to them.		See Conformity assessment module
Conformity based on full quality assurance plus design examination	Module H1	Conformity based on full quality assurance plus design examination is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2 and 6, and ensures and declares on his sole responsibility that the measuring instruments concerned satisfy the requirements of this Directive that apply to them.		

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Conformity to type based on instrument quality assurance	Module E	Module E: Conformity to type based on instrument quality assurance is that part of a conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2 and 5, and ensures and declares on his sole responsibility that the measuring instruments concerned are in conformity with the type described in the EU-type examination certificate and satisfy the requirements of this Directive that apply to them.		See Conformity assessment module
Conformity to type based on internal production control	Module C	Module C: Conformity to type based on internal production control is the part of a conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2 and 3, and ensures and declares that the measuring instruments concerned are in conformity with the type described in the EU-type examination certificate and satisfy the requirements of this Directive that apply to them.		See Conformity assessment module

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Conformity to type based on internal production control plus supervised instrument checks at random intervals	Module C2	Conformity to type based on internal production control plus supervised instrument checks at random intervals is the part of a conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3 and 4, and ensures and declares on his sole responsibility that the measuring instruments concerned are in conformity with the type described in the EU-type examination certificate and satisfy the requirements of this Directive that apply to them.		See Conformity assessment module
Conformity to type based on product verification	Module F	Module F: Conformity to type based on product verification is the part of a conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 5.1 and 6, and ensures and declares on his sole responsibility that the measuring instruments concerned, which have been subject to the provisions of point 3, are in conformity with the type described in the EU-type examination certificate and satisfy the requirements of this Directive that apply to them.		See Conformity assessment module

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Conformity based on product verification	Module F1	Module F1: Conformity based on product verification is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3, 6.1 and 7 and ensures and declares on his sole responsibility that the measuring instruments concerned which have been subject to the provisions of point 4, are in conformity with the requirements of this Directive that apply to them.		See Conformity assessment module
Conformity to type based on quality assurance of the production process	Module D	Module D: Conformity to type based on quality assurance of the production process is the part of a conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2 and 5, and ensures and declares on his sole responsibility that the measuring instruments concerned are in conformity with the type described in the EU-type examination certificate and satisfy the requirements of this Directive that apply to them.		See Conformity assessment module
Conformity based on unit verification	Module G	Module G: Conformity based on unit verification is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3 and 5 and ensures and declares on his sole responsibility that the instrument concerned, which has been subject to the provisions of point 4, is in conformity with the requirements of this Directive that apply to it.		See Conformity assessment module

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Consumer	Article 3, 4 Annex I			
Critical change value	Article 47 Annex I	Annex I, definitions: critical change value The critical change value is the value at which the change in the measurement result is considered undesirable.	OIML D 11, 3.12: Significant fault fault exceeding the applicable fault limit value OIML D 11, 3.10: Fault difference between the error of indication and the intrinsic error of a measuring instrument	CCV corresponds to significant fault with the editorial difference that CCV is a limit where SF corresponds to all errors beyond the limit.
Declaration	All Annexes A - H1			<i>See: Declaration of conformity</i>
Declaration of conformity	Article 8-11, 19, 45 modules A - H1 Annex XIII		ISO/IEC 17000 5.2: declaration (of conformity): first-party attestation	
Design control	Module H, H1			
Design examination	Module H1			
Design examination certificate	Module H1			
Design verification techniques	Module H, H1			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Device	Article 2, 3, 18, 22, Annex I, MI-002, MI-003, MI-005, MI-006, MI-007, MI-010		<p>D 11 3.3 Device</p> <p>identifiable instrument or part of an instrument or of a family of instruments that performs a specific function or functions</p> <p><i>Note:</i> A device may be a stand-alone and complete measuring instrument (for example: counter scale, electricity meter) or a part of a measuring instrument (for example: printer, indicator).</p>	
Direct sales trading transactions	Annex I			
Direct sales	Annex I MI-005	<p>Annex I, Definitions: Direct sales</p> <p>A trading transaction is direct sales if:</p> <ul style="list-style-type: none"> the measurement result serves as the basis for the price to pay and; at least one of the parties involved in the transaction related to measurement is a consumer or any other party requiring a similar level of protection and; all the parties in the transaction accept the measurement result at that time and place. 		
Discrimination	Annex I		<p>VIM, 4.16 discrimination threshold largest change in a value of a quantity being measured that causes no detectable change in the corresponding indication</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Disturbance	Article 18, 47 Annex I MI-001 – MI-010	Annex I, Definitions: Disturbance An influence quantity having a value within the limits specified in the appropriate requirement but outside the specified rated operating conditions of the measuring instrument. An influence quantity is a disturbance if for that influence quantity the rated operating conditions are not specified.	VIML 5.19 Disturbance influence quantity having a value within the limits specified in the relevant Recommendation, but outside the specified rated operating conditions of a measuring instrument D 11, 3.15.1 Disturbance Reference to VIML	
Durability	Article 18 Annex I MI-001- MI-005		VIML 5.15 Durability ability of the measuring instrument to maintain its performance characteristics over a period of use OIML D 11, 3.18 Durability Reference to VIML	
Electromagnetic disturbance	Annex I MI-001 – MI-010			See disturbance

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
<p>Electromagnetic environment</p>	<p>Annex I MI-003 MI-006</p>	<p>Annex I, 1.3.3 (b)</p> <p>The following influence quantities shall be considered in relation with electromagnetic environments:</p> <p>Voltage interruptions, Short voltage reductions, Voltage transients on supply lines and/or signal lines, Electrostatic discharges, Radio frequency electromagnetic fields, Conducted radio frequency electromagnetic fields on supply lines and/or signal lines, Surges on supply lines and/or signal lines.</p> <p>1.3.4</p> <p>Other influence quantities to be considered, where appropriate, are:</p> <p>Voltage variation, Mains frequency variation, Power frequency magnetic fields, Any other quantity likely to influence in a significant way the accuracy of the instrument</p>		

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Electronic device	Article 18		<p>OIML D 11, 3.1 electronic measuring instrument instrument intended to measure an electrical or non-electrical quantity using electronic means and/or equipped with electronic devices</p> <p>Note: For the purpose of this Document, auxiliary equipment, provided that it is subject to metrological control, is considered to be a part of the measuring instrument.</p>	
Environmental disturbances	Article 18			
Error	Article 47 Annex I MI-002 - MI-010		<p>VIM 2.16 measurement error measured quantity value minus a reference quantity value</p>	
Error of indication	MI-001 MI-002		<p>VIML 0.04 error of indication indication minus a reference quantity value</p> <p>Note This reference value is sometimes referred to as a (conventional) true quantity value. See, however, also OIML V2-200:2012, 2.12, Note 1)</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Essential requirement	Several articles Annex I Module B, H, H1 MI-002 MI-004 MI-005 MI-006 MI-007 MI-008 MI-009			
EU design examination certificate	Article 18 Annex I Annex H1			
EU-type examination	Module B	Module B: EU-type examination' is the part of a conformity assessment procedure in which a notified body examines the technical design of an instrument and verifies and attests that the technical design of the instrument meets the requirements of this Directive that apply to it.		See Conformity assessment module

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
EU-type examination certificate	Article 18 Annex I Modules B, C, C1, D, E, F			See also: <i>Type examination</i>
Evaluate	Article 43 Annex I Annex B, D, D1, E, E1, H, H1 MI-003			See: <i>Evaluation</i>
Evaluation	Article 42 - 44 Annex I Annex B, D, D1, E, E1,, H1		VIML, 2.04 type (pattern) evaluation conformity assessment procedure on one or more specimens of an identified type (pattern) of measuring instruments which results in an evaluation report and / or an evaluation certificate <i>Note</i> "Pattern" is used in legal metrology with the same meaning as "type"; in the entries below, only "type" is used.	The word "evaluation" is used here in 2 meanings: <i>evaluation</i> of the <i>instrument</i> <i>evaluation</i> of the <i>manufacturer</i> by the <i>notified body (audit)</i>
Evaluation report	Modules B, H1			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Examination	Article 16, 18, 44, Annex I Modules B, C, C1, D, D1, E, E1, F, F1, G, H, H1			
Final product inspection	Module D, D1, E, E1, H, H1			
Full quality assurance	Module H, H1		EN-ISO 9000, 3.3.6: quality assurance part of quality management (3.3.4) focused on providing confidence that quality requirements (3.6.25) will be fulfilled	
Group (of measuring instruments)	Annex I			See: <i>Type</i> (in the sense of <i>category</i>)
Harmonised standard	Article 4 , Several articles Modules A2, B, C2, D, D1, E, E1, F, F1, G, H, H1	Article 4 (14) harmonised standard: as defined in point (c) of point 1 of Article 2 of Regulation (EU) No 1025/2012		
Inaccurate measurement result	Annex I			
Industrial buildings	Annex 1			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Influence quantity	Annex I	Annex I, Definitions: Influence quantity An influence quantity is a quantity that is not the measurand but that affects the result of measurement	VIM 2.52 , VIML 0.07, and OIML D 11, 3.13: Influence quantity quantity that, in a direct measurement , does not affect the quantity that is actually measured, but affects the relation between the indication and the measurement result	
In-service control	Modules B, H1			
Inspection	Module D, D1, E, E1, F, F1, H, H1 MI-010		EN-ISO 9000 3.11.7 inspection <i>determination (3.11.1) of conformity (3.6.11) to specified requirements (3.6.4)</i> Note 1 to entry: If the result of an inspection shows conformity, it can be used for purposes of <i>verification (3.8.12)</i> . Note 2 to entry: The result of an inspection can show conformity or <i>nonconformity (3.6.9)</i> or a degree of conformity ISO/IEC 17000 4.3 (VIML A11) Inspection: examination of a product design, product, process or installation and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements Note: Inspection of a process may include inspection of persons, facilities, technology and methodology	The word “ <i>inspection</i> ” is used in MID with 2 meanings: <i>inspection</i> of the instrument <i>inspection</i> of the <i>manufacturer</i> by the <i>notified body (audit)</i>

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Inspection report	Modules D, D1, E, E1, H, H1			
Instructions	Article 8, 9, 11, 22, Annex I Module D, D1, E, E1, H, H1 MI-007			
Instrument	Recitals Annex E			<i>See: Measuring instrument</i>
Instrument model	Modules A, A2, C, C2, D, D1, E, E1, F, F1, H, H1			<i>See: Model of the instrument</i>

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Interface	Article 18 Annex I MI-006 MI-007		<p>VIML 6.03 software interface: program code and dedicated data domain receiving, filtering, or transmitting data between software modules</p> <p>Note A software interface is not necessarily legally relevant.</p> <p>VIML 6.08 user interface: interface that enables information to be interchanged between the operator and the measuring instrument or its hardware or software components, e.g. switches, keyboard, mouse, display, monitor, printer, touch-screen, software window on a screen including the software that generates it</p>	
Internal checks	Modules A2, C2			
Internal production control	Module A Modules C, C2	Module A Internal production control: 'conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3 and 4, and ensures and declares on his sole responsibility that the measuring instruments concerned satisfy the requirements of this Directive that apply to them.		

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Internal production control plus supervised instrument checks at random intervals	Module A2	Module A2: Internal production control plus supervised instrument checks at random intervals is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3, 4, and 5, and ensures and declares on his sole responsibility that the measuring instruments concerned satisfy the requirements of this Directive that apply to them		
Legal metrological control	Article 4 Annex I	Article 4 (3) Legal metrological control means the control of the measurement tasks intended for the field of application of a measuring instrument, for reasons of public interest, public health, public safety, public order, protection of the environment, levying of taxes and duties, protection of the consumers and fair trading	VIML 2.1: Legal metrological control: The whole of legal metrological activities which contribute to metrological assurance.	
Legally controlled measuring instrument	Recitals		VIML 4.07: Legally controlled measuring instrument: Measuring instrument which conforms to prescribed requirements, in particular legal metrological requirements	
Light industrial	Annex I			See: <i>residential, commercial and light industrial</i>

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Manufacturer	Article 4 Every Annex	Directive, Article 4 (8) 'manufacturer' means any natural or legal person who manufactures a measuring instrument or has a measuring instrument designed or manufactured, and markets that measuring instrument under his name or trade mark or puts it into use for his own purposes	Regulation 765/2008/EU article 2 (3): manufacturer 'manufacturer' shall mean any natural or legal person who manufactures a product or has a product designed or manufactured, and markets that product under his name or trademark See also "Blue Guide", 3.1 The manufacturer is any natural or legal person who is responsible for designing or manufacturing a product and places it on the market under his own name or trademark (91). The definition contains two cumulative conditions: the person has to manufacture (or have a product manufactured) and to market the product under his own name or trademark. So, if the product is marketed under another person's name or trademark, this person will be considered as the manufacturer.	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Market surveillance	Article 8-11, 13, 34, 38, 41, 42		<p>Regulation 765/2008/EU article 2 (18):</p> <p>market surveillance' shall mean the activities carried out and measures taken by public authorities to ensure that products comply with the requirements set out in the relevant Community harmonisation legislation and do not endanger health, safety or any other aspect of public interest protection</p> <p>see also "Blue Guide", 7</p> <p>Market surveillance aims at ensuring that products fulfil the applicable requirements providing a high level of protection of public interests such as health and safety in general, health and safety in the workplace, protection of consumers, protection of the environment and security while ensuring that the free movement of products is not restricted to any extent greater than that which is allowed under Union harmonisation legislation or any other relevant Union rule. Market surveillance entitles citizens to an equivalent level of protection throughout the single market, regardless of the origin of the product. Further, market surveillance is important for the interest of economic operators, because it helps to eliminate unfair competition.</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Marking	Articles 4 , 8, 10, 11, 18, 20-22, 45 all annexes		<p>VIML, 2.19: Marking</p> <p>affixing of one or more marks</p> <p><i>Note 1</i> Examples of marks include: verification, rejection, sealing and type approval marks (as described in 3.05, 3.06, and 3.07).</p> <p><i>Note 2</i> Verification and sealing marks may be combined.</p> <p><i>Note 3</i> The manufacturer may be authorized to apply other marks.</p>	<p>See also:</p> <p><i>CE-marking Conformity marking</i></p> <p><i>Supplementary metrology marking</i></p>
Material Measure	Annex I MI-008	<p>Annex I, Definitions: Material Measure</p> <p>A material measure is a device intended to reproduce or supply in a permanent manner during its use one or more known values of a given quantity.</p>	<p>VIM, 3.6: Material measure</p> <p>measuring instrument reproducing or supplying, in a permanent manner during its use, quantities of one or more given kinds, each with an assigned quantity value</p> <p>EXAMPLES Standard weight, volume measure (sup-plying one or several quantity values, with or without a quantity-value scale), standard electric resistor, line scale (ruler), gauge block, standard signal generator, certified reference material.</p> <p>NOTE 1 The indication of a material measure is its assigned quantity value.</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Maximum permissible error (*)	Annex I, all MI-annexes		VIML 0.05 maximum permissible measurement error maximum permissible error limit of error extreme value of measurement error, with respect to a known reference quantity value, permitted by specifications or regulations for a given measurement, measuring instrument, or measuring system	See: <i>Maximum permissible error (MPE) value</i>
Maximum permissible error (MPE) value (*)	Annex I	Annex I, 1.1 Unless stated otherwise in the instrument-specific annexes, MPE is expressed as a bilateral value of the deviation from the true measurement value.		
Measurand	Annex I	Annex I, Definitions: Measurand The measurand is the particular quantity subject to measurement.	VIM, 2.35: Measurand quantity intended to be measured	
Measurement	Articles 2, 4, 32 All annexes		VIM 2.1: Measurement process of experimentally obtaining one or more quantity values that can reasonably be attributed to a quantity	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Measurement function	Article 4 Annex MI-001 MI-002 MI-003			<p>What is the difference between <i>Measurement function</i>, <i>Measurement task</i>, and <i>Measuring function</i>?</p> <p>Neither of these expressions have been defined.</p>
Measurement task	Article 4 Annex 1			<p>What is the difference between <i>Measurement function</i>, <i>Measurement task</i>, and <i>Measuring function</i> ?</p> <p>Neither of these expressions have been defined.</p>
Measuring capacity	Annex I			
Measuring function	Annex I MI-002 MI-005			<p>What is the difference between <i>Measurement function</i>, <i>Measurement task</i>, and <i>Measuring function</i> ?</p> <p>Neither of these expressions have been defined.</p>

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Measuring instrument	Article 4, All modules MI-005 MI-007 MI-009 MI-010	Annex 4 (1) measuring instrument' means any device or system with a measurement function that is covered by Article 2(1);	VIM 3.1 : Measuring instrument device used for making measurements , alone or in conjunction with one or more supplementary devices NOTE 1 A measuring instrument that can be used alone is a measuring system . NOTE 2 A measuring instrument may be an indicating measuring instrument or a material measure .	
Measuring range	Article 32, Annex I MI-006		VIM 4.7 : Measuring interval set of values of quantities of the same kind that can be measured by a given measuring instrument or measuring system with specified instrumental measurement uncertainty , under defined conditions.	
Mechanical environment	Annex I	Annex I, 1.3.1, (b) The following influence quantities shall be considered in relation with mechanical environments: Vibration; Mechanical shock		
Member State	Several articles			
Metrological characteristics	Article 18, Annex I module B, H1 MI-003			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Metrological performance	Article 18 Annex B, H1			
Metrology	Several articles and annexes		VIM 2.2 and VIML 0..01: Metrology Science of measurement and its application	
Metrology marking	Article 8, 10, 11, 20- 22, 45, Annex 1 All modules except module B			<i>See: Supplementary metrology marking</i>
Model	A, A2, C, C2, D, D1, E, E1, F, F1, H, H1			also see: <i>Type and instrument model</i> The words " <i>type</i> " and " <i>model</i> " are used in MID with the same meaning
Module	Article 19, 30- 32			See: <i>Conformity assessment module</i>
Normal operational status	Annex I			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Normative document	Article 4	Article 4 (4), 'normative document' means a document containing technical specifications adopted by the Organisation Internationale de Métrologie Légale (OIML),		
Notification	Several articles Module D, D1, E, E1, H, H1			
Notified body	Article 17, 22, 27, 29, 32-36, 42, 45 All modules except A			
Notify (a body)	Article 23			This word is used in 2 meanings: Designate Put forward
Notifying authority	Article 24, 25, 29-32, 34, 38, Modules B, D, D1, E, E1, H, H1,			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Operational status	Annex I			<i>See: Normal operational status</i>
Other industrial buildings	Annex I		<p>EN-IEC 61000-6-2, 1&3.7</p> <p>The environments encompassed by this standard are industrial, both indoor and outdoor. Industrial locations are in addition characterised by a separate power network, supplied from a high- or medium-voltage transformer, dedicated for the supply of the installation.</p>	
Performance	Article 8,10, 18, 25, 27 Annex I Annex B, H1 MI-003 MI-006			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Placing on the market	Article 4, , A2, B, C2	Directive, Article 4 (6) 'placing on the market' means the first making available of a measuring instrument on the Union market	"Blue Guide", 2.3: Placing on the market product is placed on the market when it is made available for the first time on the Union market. The operation is reserved either for a manufacturer or an importer, i.e. the manufacturer and the importer are the only economic operators who place products on the market. When a manufacturer or an importer supplies a product to a distributor or an end-user for the first time, the operation is always labelled in legal terms as 'placing on the market'. Any subsequent operation, for instance, from a distributor to distributor or from a distributor to an end-user is defined as making available.	
Policies	Article 27 Annex D, D1, E, E1, H, H1			
Power supply	Annex I, MI-001 MI-002 MI-005 MI-007		OIML D 11, 3.221: Mains power Primary external source of electrical power for an instrument, including all <i>sub-assemblies</i> . (Examples: public power (AC or DC), generator, external battery or other DC supply systems). (not to be confused with <i>power supply device</i>)	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Process	Article 22, 27 All modules except A and B MI-006		EN-ISO 9000, 3.4.1: Process set of interrelated or interacting activities that use inputs to deliver an intended result	
Procedure	Several articles All Annexes		EN-ISO 9000, 3.4.5: Procedure specified way to carry out an activity or a process ISO/IEC 17000 3.2 procedure: Same as EN-ISO 9000, 3.4.5	
Product	Article 18, 22, 27, 30, 36, 45, Modules A1, C1, D, D1, E, E1, F, F1, H, H1 MI-006 MI-008 MI-009		EN-ISO 9000, 3.7.6: Product <i>output (3.7.5) of an organization (3.2.1) that can be produced without any transaction taking place</i> between the organization and the <i>customer (3.2.4)</i>	
Product inspection	Modules D, D1, E, E1, H, H1			see inspection

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Product quality	Modules D, D1, E, E1, H, H1			
Product verification	Modules F, F1		<p>VIML 2.09: verification of a measuring instrument</p> <p>conformity assessment procedure (other than type evaluation) which results in the affixing of a verification mark and/or issuing of a verification certificate</p> <p><i>Note</i> See also OIML V2-200:2012, 2.44</p>	see also: <i>Verification</i>
Put(ting) into use	Article 1 Article 4 Article 7, 11, 50 Annex I MI-001 MI-002 MI-003 MI-004 MI-005	<p>Directive, Article 4, (7)</p> <p>'putting into use' means the first use of a measuring instrument intended for the end-user for the purposes for which it was intended</p>		
Quality	Annex1 Modules A2, C2, D, D1, E, E1, F, F1, H, H1		<p>EN-ISO 9000, 3.6.: quality</p> <p>degree to which a set of inherent characteristics fulfils requirements</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Quality assurance	Modules D, D1, E, E1, H, H1		EN-ISO 9000, 3.2.11: quality assurance part of <i>quality management</i> (3.3.4) focused on providing confidence that <i>quality requirements</i> (3.6.5) will be fulfilled	
Quality assurance of final instrument inspection and testing	Module E1	Module E1: Quality assurance of final instrument inspection and testing is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 4 and 7, and ensures and declares on his sole responsibility that the measuring instruments concerned satisfy the requirements of this Directive that apply to them		See Conformity assessment module
Quality assurance of the production process	Module D1	Module D1: Quality assurance of the production process is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 4 and 7, and ensures and declares on his sole responsibility that the measuring instruments concerned satisfy the requirements of this Directive that apply to them		
Quality assurance technique	Modules D, D1, H, H1			
Quality control	Modules D, D1, H, H1		EN-ISO 9000, 3.3.7: quality control part of the quality management focussed on fulfilling quality requirements	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Quality management	Modules D, D1, E, E1, H, H1		EN-ISO 9000, 3.3.2: quality management management (3.3.3) with regard to <i>quality</i> (3.6.2)	
Quality management system	Modules D, D1, E, E1, H, H1		EN-ISO 9000, 3.4.3: quality management system <i>process</i> (3.4.1) of establishing, documenting, implementing, maintaining and continually improving a <i>quality management system</i> (3.5.4)	
Quality objective	Modules D, D1, E, E1, H, H1		EN-ISO 9000, 3.7.2: quality objective <i>objective</i> (3.7.1) related to <i>quality</i> (3.6.2)	
Quality programme	Modules D, D1, E, E1, H, H1			
Quality record	Modules D, D1, E, E1, H, H1			
Quality system	Modules D, D1, E, E1, H, H1			See: <i>Quality management system</i>
Quality system approval	Modules D, D1, E, E1, H, H1			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Quality system documentation	Modules D, D1, E, E1, H, H1			
Rated Operating Conditions	Annex I Article 18, 47 Annexes MI-001 - MI-007 MI-010	Annex I, Definitions: Rated Operating Conditions The rated operating conditions are the values for the measurand and influence quantities making up the normal working conditions of an instrument.	VIM, 4.9 (VIML 5.19, D11 3.15.2): Rated operating conditions operating condition that must be fulfilled during measurement in order that a measuring instrument or measuring system perform as designed NOTE Rated operating conditions generally specify intervals of values for a quantity being measured and for any influence quantity .	
Re- assessment	Module D, D1, E, E1, H, H1			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Reference value	Annex I MI-003		<p>VIM 5.18: reference quantity value (reference value) .,</p> <p>quantity value used as a basis for comparison with values of quantities of the same kind</p> <p>NOTE 1 A reference quantity value can be a true quantity value of a measurand, in which case it is unknown, or a conventional quantity value, in which case it is known.</p> <p>NOTE 2 A reference quantity value with associated measurement uncertainty is usually provided with reference to</p> <ul style="list-style-type: none"> a) a material, e.g. a certified reference material, b) a device, e.g. a stabilized laser, c) a reference measurement procedure, d) a comparison of measurement standards. 	
Reliability	Annex I			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Repeatability	Annex I		<p>VIM2.20 repeatability condition of measurement</p> <p>(repeatability condition)</p> <p>condition of measurement, out of a set of conditions that includes the same measurement procedure, same operators, same measuring system, same operating conditions and same location, and replicate measurements on the or similar objects over a short period of time</p> <p>VIM 2.21: measurement repeatability: measurement precision under a set of repeatability conditions of measurement</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Reproducibility	Article 18, Annex I Modules B, H1	<p>Annex I, 2: Reproducibility</p> <p>The application of the same measurand in a different location or by a different user, all other conditions being the same, shall result in the close agreement of successive measurements. The difference between the measurement results shall be small when compared with the MPE.</p>	<p>VIM 3.25: measurement reproducibility (reproducibility)</p> <p>measurement precision under reproducibility conditions of measurement</p> <p>VIM 2.24: reproducibility condition of measurement (reproducibility condition)</p> <p>condition of measurement, out of a set of conditions that includes different locations, operators, measuring systems, and replicate measurements on the same or similar objects</p> <p>NOTE 1 The different measuring systems may use different measurement procedures.</p> <p>NOTE 2 A specification should give the conditions changed and unchanged, to the extent practical</p> <p>.</p>	
Residential use	MI-002 MI-003 MI-004			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Scale interval	Annex I MI-005 MI-006 MI-008 MI-009		<p>VIML 5.01: Scale interval</p> <p>value expressed in units of the measured quantity of the difference between</p> <ul style="list-style-type: none"> • the values corresponding to two consecutive scale marks, for analog indication, or • two consecutive indicated values, for digital indication 	
Seal	Article 18		<p>VIML 2.20: Sealing means intended to protect the measuring instrument against any unauthorized modification, readjustment, removal of parts, software, etc.</p> <p><i>Note</i> This may be achieved by hardware, software or a combination of both.</p>	
Sealing	Modules B, H1		<p>VIML, 3.06: Sealing mark</p> <p>mark intended to protect the measuring instrument against any unauthorized modification, readjustment, removal of parts, etc.</p>	
Secure	Annex I MI-006 MI-007		<p>VIML 2.21: securing</p> <p>means preventing unauthorized access to hardware or software</p>	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Sensitivity	Annex I		<p>VIM, 4.12 : sensitivity of a measuring system (sensitivity) quotient of the change in an indication of a measuring system and the corresponding change in a value of a quantity being measured</p> <p>NOTE 1 Sensitivity of a measuring system can depend on the value of the quantity being measured.</p> <p>NOTE 2 The change considered in a value of a quantity being measured must be large compared with the resolution</p>	
Standard	<p>Article 4 , 8, 14, 18, 27, 28, 36, 42, 43</p> <p>All modules except A and C.</p>			
Sub-assembly	<p>Article 4 Annex B, H1, MI-002 MI-004</p>	<p>Directive, Article 4, (2)</p> <p>‘Sub-assembly’ means a hardware device, mentioned as such in the specific annexes, that functions independently and makes up a measuring instrument together with other sub-assemblies with which it is compatible, or with a measuring instrument with which it is compatible</p>		

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Supplementary metrology marking	Article 4, 8 , 11, 20, 21, 22, 45 All modules except B	Directive, Article 17, 2: The supplementary metrology marking consists of the capital letter 'M 'and the last two digits of the year of its affixing, surrounded by a rectangle.		See Marking
Surveillance	Article 8, 9, 10, 11, 13, 34, 38, 41, 42, Modules D, D1, E, E1, H, H1		ISO/IEC 17000 6.1 Surveillance Systematic iteration of conformity assessment activities as a basis for maintaining the validity of a statement of conformity	See: <i>Market surveillance</i>
System	several modules			See: <i>Measuring system</i> and <i>Quality system</i>
Test	Article 14, 18, Annex I Annex, B, D, D1, E, E1, F, F1, H, H1 MI-001 MI-002 MI-005 MI-007		EN-ISO 9000, 3.11.8 : test determination (3.11.1) according to requirements (3.6.4) for a specific intended use or application Note 1 to entry: If the result of a test shows conformity (3.6.11), it can be used for purposes of validation (3.8.13)	

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Test data	Modules D, D1, E, E1, H, H1			
Test report	Annex D, D1, E, E1, H, H1			
Testing	Article 8, 10, 31, Annex I Modules B, D, D1, E, E1, F, F1, H, H1 MI-003 MI-007 MI-009		ISO/IEC 17000 4.2: testing Determination of one or more characteristics of an object of conformity assessment, according to a procedure	
Testing laboratory	Modul B, H1			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Type (of a measuring instrument)	Article 8, 18 Module B, C, C1, D, E, F MI-004 MI-005 MI-006 (MI-008) (MI-009)		VIML 4.06: type of a measuring instrument or module Definitive model of a measuring instrument or module (including a family of instruments or modules) of which all of the elements affecting its metrological properties are suitably defined.	The word “type” has been used in 2 different meanings: Type in the sense of “category of instruments” or “kind of instruments”. In particular in MI- 008 and MI-009. Also see <i>category</i> . In this sense, the words <i>type</i> and <i>category</i> are used in MID with the same meaning.
Unit verification	Module G			See also: <i>Verification</i>
Utility	Annex I	Annex I, Definitions: Utility A utility is regarded as a supplier of electricity, gas, thermal energy or water.		
Utility measuring instrument	Annex I			
Vehicle	Annex I MI-005 MI-006 MI-010			

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Comments
Verification	Article 31 Modules F, F1, G, H, H1 MI-006		<p>VIML, 2.09: verification of a measuring instrument</p> <p>conformity assessment procedure (other than type evaluation) which results in the affixing of a verification mark and/or issuing of a verification certificate</p> <p>VIM 2.44: verification</p> <p>provision of objective evidence that a given item fulfils specified requirements</p> <p>EN-ISO 9000, 3.8.12: verification</p> <p>confirmation, through the provision of objective evidence, that specified requirements have been fulfilled</p>	

2 Part 2 - Symbols and abbreviations

Term in MID	Where in MID	Definition in MID	Definition of (comparable) term in other document(s)	Conclusions and comments
E1	Annex I Annex E1 MI-008 MI-009		See OIML D11 8.4 Classification of EM environment and the associated required severity of electromagnetic tests	
E2	Annex I MI-003			
E3	Annex I MI-007			
MPE (*)	Annex I, MI-all			

Annex - Referred international publications

Abbreviation	Year	Title
765/2008/EU	2008	Regulation 765/2008/EU setting out the requirements for accreditation and market surveillance relating to the marketing of products
Blue guide	2016	The 'Blue Guide' on the implementation of EU products rules 2016, OJ 2016/C 272/01)
EN ISO/IEC 17000	2004	Conformity assessment – Vocabulary and general principles
EN-IEC 61000-6-1	2019	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments
EN-IEC 61000-6-2	2019	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
EN-ISO 9000	2015	Quality management systems - Fundamentals and vocabulary
OIML D 11	2013	General requirements for electronic measuring instruments
VIM	2012	International Vocabulary of Basic and General Terms in Metrology (OIML V1)
VIML	2013	International Vocabulary of Terms in Legal Metrology (OIML V2-200)