



Introduction

NMi Certin B.V. is a lab specialized in the testing of measuring equipment, usually used for custody transfer/weights and measures. In the Annex to declaration of accreditation (scope of accreditation) registration number: L029, tests are described which are accredited by the Dutch Accreditation Body – Raad van Accreditatie (RvA).

The relation between a specific test and the standards for which the test can be performed, is given below. Herewith the standards are presented for which NMi Certin B.V. can refer to accreditation. In this list provides information if NMi Certin B.V. is able to perform the tests on their test object, in accordance with a specified standard, referring to accreditation.

If different test objects or standards are requested, NMi Certin B.V. reviews the applicable requirements and identifies whether they have the capability to perform the required test. When the internal verification shows that NMi Certin B.V. is capable of performing the test for a specific test object or standard, the list below is updated accordingly.

Overview of validated documents

The standards according to which these products can be tested in NMi Certin B.V. are:

No.	Test object	Standard	Test activity reference number and description
a	Measuring instruments and ancillary equipment	WELMEC Guide 7.2: 2021 Software Guide	PT37 - Software validation
b	Measuring instruments and ancillary equipment	WELMEC Guide 7.2: 2022 Software Guide	PT37 - Software validation
c	Measuring instruments and ancillary equipment	WELMEC Guide 7.2: 2023 Software Guide	PT37 - Software validation
d	Measuring instruments and ancillary equipment	WELMEC Guide 7.2: 2025 Software Guide	PT37 - Software validation
e	Automatic Distance Time speed meters	Automatic Distance/Time Speedmeter Handbook (Second Edition), Publication No 02/06	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT30 - Reference speed test in laboratory conditions PT31 - Reference speed test in practical conditions PT33 - Frequency and power output and beam width test
f	Speed meters	Belgian “Koninklijk besluit van 12 oktober 2010 betreffende de goedkeuring, ijking en de installatie van de meettoestellen gebruikt om toezicht te houden op de naleving van de wet betreffende de politie over het wegverkeer en haar uitvoeringsbesluiten van 12 oktober 2010”	CL01 - Temperatures CL02 - Humidity CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME07 - Rotation PT11 - Clock accuracy PT30 - Reference speed test in laboratory conditions PT31 - Reference speed test in practical conditions PT32 - Radar antenna diagram PT33 - Frequency and power output and beam width test
g	Breath alcohol test devices other than single use devices - Requirements and test methods	EN 15964:2011	CL01 - Temperatures CL02 - Humidity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT10 - Reference gas testing (Type 2 generator including the possibility for simplified gas)

1) The requirements are supplemented, where appropriate, by specific instrument requirements in the directives (MI-001 until MI-010), OIML Document D 11 and WELMEC guidance and test documents.

No.	Test object	Standard	Test activity reference number and description
h	Alcohol interlocks - Test methods and performance requirements - Part 1: Instruments for drink-driving-offender programs	EN 50436-1:2023	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET04 - Starting profile ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT08 - Gas composition reference testing PT10 - Reference gas testing (Type 2 generator including the possibility for simplified gas)
i	Breath analyzers	Koninklijk besluit betreffende de ademtesttoestellen en de ademanalysetoestellen, 21 april 2007	CL01 - Temperatures CL02 - Humidity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.24 - Power frequency magnetic field immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT10 - Reference gas testing (Type 2 generator including the possibility for simplified gas)
j	Evidential breath analyzers	OIML R 126:2021	CL01 - Temperatures CL02 - Humidity CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT10 - Reference gas testing (Type 2 generator including the possibility for simplified gas)
k	Taximeters	OIML R 21:2007	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET03 - Load dump ET04 - Starting profile ME01 - Random vibration ME02 - Sinusoidal vibration PT11 - Clock accuracy PT13 - Simulated inputs and outputs PT34 - Taximeter function test

No.	Test object	Standard	Test activity reference number and description
l	Instruments for measuring vehicle exhaust emissions	OIML R 99-1&2:2008	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.25 - Pulsed magnetic field Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET03 - Load dump ET04 - Starting profile ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT08 - Gas composition reference testing
m	Regeling meetmiddelen politie 2022	Regeling meetmiddelen politie 2022	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET03 - Load dump ET04 - Starting profile ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT11 - Clock accuracy PT30 - Reference speed test in laboratory conditions PT31 - Reference speed test in practical conditions PT32 - Radar antenna diagram PT33 - Frequency and power output and beam width test
n	Breath analyzers	Regeling ademanalyse (25 september 1987)	CL01 - Temperatures CL02 - Humidity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT02 - Pressure tests PT10 - Reference gas testing (Type 2 generator including the possibility for simplified gas)
o	Speed meters	"The Speed meter Handbook" (Fourth Edition), A Guide to Type Approval Procedures for Speedmeters Used for Road Traffic Law Enforcement in Great Britain, Publication No. 15/05	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT30 - Reference speed test in laboratory conditions PT31 - Reference speed test in practical conditions PT32 - Radar antenna diagram PT33 - Frequency and power output and beam width test

No.	Test object	Standard	Test activity reference number and description
p	Speed meters	"The Speedmeter, Traffic Light and Prohibited Lane Enforcement Camera Handbook v2.0", A guide to type-approval procedures for devices used for road traffic law enforcement in Great Britain, 19 December 2022	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT11 - Clock accuracy PT30 - Reference speed test in laboratory conditions PT31 - Reference speed test in practical conditions PT32 - Radar antenna diagram PT33 - Frequency and power output and beam width test
q	Traffic light camera	The traffic light camera handbook (Second Edition)	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT11 - Clock accuracy PT30 - Reference speed test in laboratory conditions PT33 - Frequency and power output and beam width test
r	Water meters for cold potable water and hot water	OIML R 49-2:2006	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT05 - Flow performance tests with water PT06 - Fluid weighing PT13 - Simulated inputs and outputs
s	Water meters for cold potable water and hot water	OIML R 49-2:2013	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT05 - Flow performance tests with water PT06 - Fluid weighing PT13 - Simulated inputs and outputs
t	Water meters for cold potable water and hot water	OIML R 49-2:2024	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT05 - Flow performance tests with water PT06 - Fluid weighing PT13 - Simulated inputs and outputs

No.	Test object	Standard	Test activity reference number and description
u	Water meters for cold potable water and hot water	ISO 4064-2:2017	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT05 - Flow performance tests with water PT06 - Fluid weighing PT13 - Simulated inputs and outputs
v	Water meters for cold potable water and hot water	ISO 4064-2: 2024	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT02 - Pressure tests PT05 - Flow performance tests with water PT06 - Fluid weighing PT13 - Simulated inputs and outputs
w	Heat meters	OIML R 75-2:2002	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT01 - Temperatures PT02 - Pressure tests PT09 - Liquid density reference testing PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs
x	Thermal energy meters	EN 1434-4:2015+A1:2018	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT02 - Pressure tests PT09 - Liquid density reference testing PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs

No.	Test object	Standard	Test activity reference number and description
y	Thermal energy meters	EN 1434-4:2015	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT02 - Pressure tests PT09 - Liquid density reference testing PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs
z	Dynamic measuring devices and systems for cryogenic liquids	OIML R 81:1998	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME02 - Sinusoidal vibration PT01 - Temperatures PT02 - Pressure tests PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs
aa	Automatic level gauges for measuring the level of liquid in stationary storage tanks	OIML R 85-1&2:2008	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT01 - Temperatures PT02 - Pressure tests PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs
ab	Dynamic measuring systems for liquids other than water	OIML R 117-1:2007	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration PT01 - Temperatures PT02 - Pressure tests PT06 - Fluid weighing PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs

No.	Test object	Standard	Test activity reference number and description
ac	Dynamic measuring systems for liquids other than water.	OIML R 117-2:2014	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration PT01 - Temperatures PT02 - Pressure tests PT06 - Fluid weighing PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs
ad	Dynamic measuring systems for liquids other than water.	OIML R 117-2:2019	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration PT01 - Temperatures PT02 - Pressure tests PT06 - Fluid weighing PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs
ae	Clinical electrical thermometers with maximum device	OIML R 125:1998	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT01 - Temperatures PT02 - Pressure tests PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs
af	Compressed gaseous fuel measuring systems for vehicles.	OIML R 139-2:2018	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration PT01 - Temperatures PT02 - Pressure tests PT06 - Fluid weighing PT09 - Liquid density reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs

No.	Test object	Standard	Test activity reference number and description
ag	Metrological aspects of non-automatic weighing instruments	EN 45501:2015	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME10 - Tilting PT13 - Simulated inputs and outputs PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode
ah	Weighing in motion	NMi International WIM standard v1.1	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument PT28 - Length / Linear dimension PT31 - Reference speed test in practical conditions
ai	Automatic rail-weighbridges	OIML R 106-1:2011	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument
aj	Discontinuous totalizing automatic weighing instruments (totalizing hopper weighers)	OIML R 107-1:2007	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument
ak	Multi-dimensional measuring instruments	OIML R 129-2:2020	CL01 - Temperatures CL02 - Humidity CL08 - Illumination measurement EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT28 - Length / Linear dimension

No.	Test object	Standard	Test activity reference number and description
al	Automatic instruments for weighing road vehicles in motion and measuring axle loads	OIML R 134-1:2006	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument PT31 - Reference speed test in practical conditions
am	Vessels for commercial transactions	OIML R 138:2007	PT35 - Capacity measurements
an	Continuous totalizing automatic weighing instruments of the arched chute type	OIML R 150-2:2020	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument
ao	Material measures of length for general use	OIML R 35-2:2011	CL01 - Temperatures CL02 - Humidity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT28 - Length / Linear dimension
ap	Continuous totalizing automatic weighing instruments (belt weighers)	OIML R 50-2:2014	EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument PT27 - Measurement of a belt speed
aq	Automatic catchweighing instruments	OIML R 51-1:2006	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME10 - Tilting PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument PT27 - Measurement of a belt speed
ar	Load cells	OIML R 60-2 2021	CL01 - Temperatures CL02 - Humidity CL07 - Atmospheric pressure variation EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT25 - Weighing performance using standard or high resolution mode

No.	Test object	Standard	Test activity reference number and description
as	Automatic gravimetric filling instruments	OIML R 61-1:2004	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME10 - Tilting PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument
at	Automatic gravimetric filling instruments	OIML R 61-2:2017	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME10 - Tilting PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode PT26 - Weighing performance using a control instrument
au	Non-automatic weighing instruments	OIML R 76-1:2006	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.27 - Electric transient transmission via lines other than supply lines Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.39 - Electric transient transmission along supply lines Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME10 - Tilting PT13 - Simulated inputs and outputs PT24 - Weighing performance using small additional weights PT25 - Weighing performance using standard or high resolution mode
av	Electricity metering equipment	ANSI C12.32:2021	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET05 - DC voltage test up to 5 kV ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT15 - Electrical performance test for DC energy (kWh)

No.	Test object	Standard	Test activity reference number and description
aw	Electricity metering equipment	ANSI C12.1:2022	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET05 - DC voltage test up to 5 kV ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT14 - Electrical performance test for AC energy (kWh)
ax	Electricity metering equipment	ANSI C12.1:2024	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET05 - DC voltage test up to 5 kV ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT14 - Electrical performance test for AC energy (kWh)
ay	Electricity metering equipment	EN 50470-4:2023	CL01 - Temperatures EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh) PT15 - Electrical performance test for DC energy (kWh)
az	Electricity metering equipment	EN 50470-1:2006	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.11 - Impulse voltage Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME05 - Glow wire $\leq 960^{\circ}\text{C}$ PT01 - Temperatures PT14 - Electrical performance test for AC energy (kWh)

No.	Test object	Standard	Test activity reference number and description
ba	Electricity metering equipment	EN 50470-2:2006	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.24 - Power frequency magnetic field immunity EMC.I.38 - Damped oscillatory wave immunity ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME05 - Glow wire ≤ 960 °C ME10 - Tilting PT14 - Electrical performance test for AC energy (kWh)
bb	Electricity metering equipment	EN 50470-3:2006	CL01 - Temperatures EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.24 - Power frequency magnetic field immunity ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET06 - AC power-frequency voltage test up to 4 kV PT14 - Electrical performance test for AC energy (kWh)
bc	Electricity metering equipment	EN 50470-3:2022	CL01 - Temperatures PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh)
bd	Electricity metering equipment	EN IEC 62052-11:2021/A11:2022	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh) PT23 - Time measurement of signals
be	Electromagnetic compatibility (EMC) - Part 4-30: Testing and measurement techniques - Power quality measurement methods	IEC 61000-4-30:2015	CL01 - Temperatures EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.48 - An objective light flickermeter and voltage fluctuation immunity test ET01 - AC and DC voltage and frequency variations ET02 - Current variation PT11 - Clock accuracy PT16 - Electrical performance test for frequency measurement PT17 - Electrical performance test for voltage measurement PT18 - Electrical performance test for current measurement PT19 - Flicker measurement

No.	Test object	Standard	Test activity reference number and description
bf	Power metering and monitoring devices (PMD)	IEC 61557-12:2018	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.09 - Continuous magnetic field Immunity EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity ET01 - AC and DC voltage and frequency variations ET02 - Current variation PT11 - Clock accuracy PT16 - Electrical performance test for frequency measurement PT17 - Electrical performance test for voltage measurement PT18 - Electrical performance test for current measurement PT20 - Electrical performance test for active power (W) PT21 - Electrical performance test for apparent power (VA) PT22 - Electrical performance test for power factor (PF)
bg	Electricity metering equipment	IEC 62052-11:2020	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh) PT23 - Time measurement of signals
bh	Electricity metering equipment	IEC 62052-21:2004	CL01 - Temperatures CL04 - Sand and Dust CL05 - Water EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.11 - Impulse voltage Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME05 - Glow wire ≤ 960 °C PT01 - Temperatures PT11 - Clock accuracy PT23 - Time measurement of signals PT28 - Length / Linear dimension

No.	Test object	Standard	Test activity reference number and description
bi	Electricity metering equipment	IEC 62052-31:2015	CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.11 - Impulse voltage Immunity EMC.I.23 - Surge immunity ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET05 - DC voltage test up to 5 kV ET06 - AC power-frequency voltage test up to 4 kV ME04 - Spring Hammer Test / Mechanical impact ME05 - Glow wire $\leq 960^{\circ}\text{C}$ ME08 - Measurement and application of torque ME11 - Cable Flexion and pull test ME13 - Ball pressure ME15 - Sharp edge test PT01 - Temperatures
bj	Electricity metering equipment	IEC 62052-31:2024	CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.11 - Impulse voltage Immunity EMC.I.23 - Surge immunity ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET05 - DC voltage test up to 5 kV ET06 - AC power-frequency voltage test up to 4 kV ME04 - Spring Hammer Test / Mechanical impact ME05 - Glow wire $\leq 960^{\circ}\text{C}$ ME08 - Measurement and application of torque ME11 - Cable Flexion and pull test ME13 - Ball pressure PT01 - Temperatures
bk	Electricity metering equipment	IEC 62053-21:2020	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh) PT23 - Time measurement of signals

No.	Test object	Standard	Test activity reference number and description
bl	Electricity metering equipment	IEC 62053-22:2020	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh) PT23 - Time measurement of signals
bm	Electricity metering equipment	IEC 62053-23:2020	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.24 - Power frequency magnetic field immunity EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT14 - Electrical performance test for AC energy (kWh)
bn	Electricity metering equipment	IEC 62053-24:2020	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.24 - Power frequency magnetic field immunity EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT14 - Electrical performance test for AC energy (kWh)
bo	Electricity metering equipment	IEC 62053-41:2021	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT15 - Electrical performance test for DC energy (kWh) PT23 - Time measurement of signals
bp	Electricity metering equipment	IEC 62054-11:2004	EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity ET01 - AC and DC voltage and frequency variations ET02 - Current variation PT11 - Clock accuracy PT17 - Electrical performance test for voltage measurement

No.	Test object	Standard	Test activity reference number and description
bq	Electricity metering equipment	IEC 62054-21:2004	CL01 - Temperatures EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, PT11 - Clock accuracy
br	Electricity metering equipment	IEC 62055-31:2022	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.36 - Ring wave immunity test EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh) PT23 - Time measurement of signals
bs	Power quality measurement in power supply systems	IEC 62586-2:2017	CL01 - Temperatures EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.48 - An objective light flickermeter and voltage fluctuation immunity test ET01 - AC and DC voltage and frequency variations ET02 - Current variation PT11 - Clock accuracy PT16 - Electrical performance test for frequency measurement PT17 - Electrical performance test for voltage measurement PT18 - Electrical performance test for current measurement PT19 - Flicker measurement
bt	Electricity meters	NMI M 6-1, v4.0, June 2022	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.24 - Power frequency magnetic field immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME10 - Tilting PT14 - Electrical performance test for AC energy (kWh)

No.	Test object	Standard	Test activity reference number and description
bu	Active electrical energy meters	OIML R 46-1&2:2012	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME10 - Tilting PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh)
bv	Electrical Vehicle Supply Equipment	OIML G22:2022 (Rxx)	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT14 - Electrical performance test for AC energy (kWh) PT15 - Electrical performance test for DC energy (kWh)
bw	Electrical Vehicle Supply Equipment	OIML G22:1CD:2026 (Rxx)	CL01 - Temperatures CL02 - Humidity EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations PT14 - Electrical performance test for AC energy (kWh) PT15 - Electrical performance test for DC energy (kWh)

No.	Test object	Standard	Test activity reference number and description
bx	Electricity meters - prepayment	SANS 1524-1:2014	CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.10 - Short time overcurrent Immunity overcurrent value EMC.I.11 - Impulse voltage Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.38 - Damped oscillatory wave immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ET02 - Current variation ET06 - AC power-frequency voltage test up to 4 kV ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME05 - Glow wire ≤ 960 °C PT01 - Temperatures PT11 - Clock accuracy PT14 - Electrical performance test for AC energy (kWh)
by	Measuring systems for gaseous fuel	CT-002-2 - Corresponding Table - Volume Conversion Devices - OIML R 140, 2007	EMC.I.24 - Power frequency magnetic field immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity ET01 - AC and DC voltage and frequency variations ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact
bz	Gas meters	CT-002-I, Version 2016	EMC.I.24 - Power frequency magnetic field immunity PT03 - Flow performance tests with air
ca	Gas meters	EN 12261:2002/A1:2006	CL01 - Temperatures CL02 - Humidity CL06 - Ultraviolet exposure ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME16 - Penetration resistance PT02 - Pressure tests PT03 - Flow performance tests with air PT28 - Length / Linear dimension PT36 - Angle measurement
cb	Gas meters	EN 12261:2018	CL01 - Temperatures CL02 - Humidity CL06 - Ultraviolet exposure ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME16 - Penetration resistance PT02 - Pressure tests PT03 - Flow performance tests with air PT28 - Length / Linear dimension PT36 - Angle measurement

No.	Test object	Standard	Test activity reference number and description
cc	Gas meters	EN 12405-1:2018	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT02 - Pressure tests PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs PT28 - Length / Linear dimension PT36 - Angle measurement
cd	Gas meters	EN 12405-1:2021	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT02 - Pressure tests PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs PT28 - Length / Linear dimension PT36 - Angle measurement
ce	Gas meters	EN 12405-2:2012	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT02 - Pressure tests PT08 - Gas composition reference testing PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs PT28 - Length / Linear dimension PT36 - Angle measurement

No.	Test object	Standard	Test activity reference number and description
cf	Gas meters	EN 12405-3:2015	CL01 - Temperatures CL02 - Humidity CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT01 - Temperatures PT02 - Pressure tests PT03 - Flow performance tests with air PT11 - Clock accuracy PT12 - Algorithm testing PT13 - Simulated inputs and outputs PT28 - Length / Linear dimension PT36 - Angle measurement
cg	Gas meters	EN 12480:2002/A1:2006	CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL06 - Ultraviolet exposure ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME16 - Penetration resistance PT02 - Pressure tests PT03 - Flow performance tests with air PT28 - Length / Linear dimension PT36 - Angle measurement
ch	Gas meters	EN 12480:2018	CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL06 - Ultraviolet exposure ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME16 - Penetration resistance PT02 - Pressure tests PT03 - Flow performance tests with air PT28 - Length / Linear dimension PT36 - Angle measurement
ci	Gas meters	EN 12480:2025	CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL06 - Ultraviolet exposure ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME16 - Penetration resistance PT02 - Pressure tests PT03 - Flow performance tests with air PT28 - Length / Linear dimension PT36 - Angle measurement

No.	Test object	Standard	Test activity reference number and description
cj	Gas meters	EN 1359:2017	CH01 - Exposure to 3% Toluene/iso-octane vapour CH02 - Exposure to Water vapour CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL06 - Ultraviolet exposure ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME14 - Adhesion force PT02 - Pressure tests PT03 - Flow performance tests with air PT07 - Flow pulsations PT28 - Length / Linear dimension PT36 - Angle measurement
ck	Gas meters	EN 14236:2018	CH01 - Exposure to 3% Toluene/iso-octane vapour CH02 - Exposure to Water vapour CH03 - Contaminants in the gas stream CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL04 - Sand and Dust CL05 - Water CL06 - Ultraviolet exposure EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.24 - Power frequency magnetic field immunity EMC.I.25 - Pulsed magnetic field Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME12 - Acoustic noise interference PT02 - Pressure tests PT03 - Flow performance tests with air PT04 - Flow performance tests with gas mixtures PT07 - Flow pulsations PT28 - Length / Linear dimension PT36 - Angle measurement
cl	Gas meters	EN 16314:2013	CH01 - Exposure to 3% Toluene/iso-octane vapour CH02 - Exposure to Water vapour CH03 - Contaminants in the gas stream CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL04 - Sand and Dust CL05 - Water EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.24 - Power frequency magnetic field immunity EMC.I.25 - Pulsed magnetic field Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME06 - Shut-off valve closing PT02 - Pressure tests PT03 - Flow performance tests with air PT11 - Clock accuracy PT13 - Simulated inputs and outputs

No.	Test object	Standard	Test activity reference number and description
cm	Gas meters	EN 17526:2021+A1:2025	CH01 - Exposure to 3% Toluene/iso-octane vapour CH02 - Exposure to Water vapour CH03 - Contaminants in the gas stream CH04 - Indelibility CL01 - Temperatures CL02 - Humidity CL03 - Resistance to high ambient temperatures CL04 - Sand and Dust CL05 - Water CL06 - Ultraviolet exposure EMC.I.09 - Continuous magnetic field Immunity EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.24 - Power frequency magnetic field immunity EMC.I.25 - Pulsed magnetic field Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME02 - Sinusoidal vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME04 - Spring Hammer Test / Mechanical impact ME08 - Measurement and application of torque ME09 - Bending moment ME12 - Acoustic noise interference ME14 - Adhesion force PT02 - Pressure tests PT03 - Flow performance tests with air PT04 - Flow performance tests with gas mixtures PT07 - Flow pulsations PT28 - Length / Linear dimension PT36 - Angle measurement
cn	Ultrasonic meters for gas	ISO 17089-1:2019	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact PT03 - Flow performance tests with air
co	Gas meters	OIML R 137-1&2:2012, including amendment (2014)	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.30 - DC voltage ripple Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact ME08 - Measurement and application of torque PT03 - Flow performance tests with air PT04 - Flow performance tests with gas mixtures
cp	Measuring systems for gaseous fuel	OIML R 140:2007	CL01 - Temperatures CL02 - Humidity EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.22 - Electrical fast transient / burst immunity (EFT) EMC.I.23 - Surge immunity EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity EMC.I.40 - Radiated Immunity, ET01 - AC and DC voltage and frequency variations ME01 - Random vibration PT01 - Temperatures PT02 - Pressure tests PT03 - Flow performance tests with air PT08 - Gas composition reference testing PT12 - Algorithm testing PT13 - Simulated inputs and outputs

No.	Test object	Standard	Test activity reference number and description
cq	Gas meters	S-G-03 revision 3	CL01 - Temperatures PT02 - Pressure tests PT03 - Flow performance tests with air PT04 - Flow performance tests with gas mixtures PT08 - Gas composition reference testing PT12 - Algorithm testing
cr	Measuring instruments and ancillary equipment	ABNT NBR 15639:2016-11-25	PT12 - Algorithm testing
cs	Measuring instruments and ancillary equipment	AGA XQ9212 Report 8:1994	PT12 - Algorithm testing
ct	Measuring instruments and ancillary equipment	AGA XQ1704-1 Report 8 Part 1:2017	PT12 - Algorithm testing
cu	Measuring instruments and ancillary equipment	AGA XQ1704-2 Report 8 Part 2:2017	PT12 - Algorithm testing
cv	Measuring instruments and ancillary equipment	AGA NX-19 (1962)	PT12 - Algorithm testing
cw	Measuring instruments and ancillary equipment	API 11.2.1M:1997	PT12 - Algorithm testing
cx	Measuring instruments and ancillary equipment	API 11.2.2M:1997	PT12 - Algorithm testing
cy	Measuring instruments and ancillary equipment	API 11.3.3:2019	PT12 - Algorithm testing
cz	Measuring instruments and ancillary equipment	API 11.3.4:2019	PT12 - Algorithm testing
da	Measuring instruments and ancillary equipment	API MPMS 12.1.1:2024	PT12 - Algorithm testing
db	Measuring instruments and ancillary equipment	ASTM D 1250-53	PT12 - Algorithm testing
dc	Measuring instruments and ancillary equipment	ASTM D 1250-52 / IP-200	PT12 - Algorithm testing
dd	Measuring instruments and ancillary equipment	ASTM D 1250-80	PT12 - Algorithm testing
de	Measuring instruments and ancillary equipment	ASTM D 1250-04	PT12 - Algorithm testing
df	Measuring instruments and ancillary equipment	ASTM D1550 - 18	PT12 - Algorithm testing
dg	Measuring instruments and ancillary equipment	ASTM D1555M - 16	PT12 - Algorithm testing
dh	Measuring instruments and ancillary equipment	ASTM D4311/D4311M - 15	PT12 - Algorithm testing
di	Measuring instruments and ancillary equipment	ASTM D4311/D4311M - 21	PT12 - Algorithm testing
dj	Measuring instruments and ancillary equipment	ASTM TP-27:2007	PT12 - Algorithm testing
dk	Measuring instruments and ancillary equipment	DVGW Technical Report PK 1-5-3, May 2022: Modified SGERG-Equation SGERG-mod-H2	PT12 - Algorithm testing
dl	Measuring instruments and ancillary equipment	EN14214:2008 + A1:2009	PT12 - Algorithm testing
dm	Measuring instruments and ancillary equipment	EN 15940:2016+A1:2019+C1:2019	PT12 - Algorithm testing
dn	Measuring instruments and ancillary equipment	EN 60068-2-30:2006	CL01 - Temperatures CL02 - Humidity
do	Measuring instruments and ancillary equipment	IEC 60529:1989/A1:2001/A2:2013/C1:2013	CL04 - Sand and Dust CL05 - Water
dp	Measuring instruments and ancillary equipment	EN 60730-1:2000	CH04 - Indelibility
dq	Measuring instruments and ancillary equipment	EN 60730-1:2011, Annex A	CH04 - Indelibility
dr	Measuring instruments and ancillary equipment	EN 61000-6-1:2013	EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity
ds	Measuring instruments and ancillary equipment	EN 61000-6-2:2016	EMC.I.21 - Electrostatic discharge immunity (ESD) EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity
dt	Measuring instruments and ancillary equipment	EN 62054-21:2004	CL01 - Temperatures PT11 - Clock accuracy
du	Measuring instruments and ancillary equipment	EN ISO 12213-2:2009	PT12 - Algorithm testing
dv	Measuring instruments and ancillary equipment	EN ISO 12213-3:2009	PT12 - Algorithm testing
dw	Measuring instruments and ancillary equipment	EN ISO 6270-1:2018	CL01 - Temperatures CL02 - Humidity
dx	Measuring instruments and ancillary equipment	ISO 6976:1995 including amendment No. 1 - May 1998	PT12 - Algorithm testing
dy	Measuring instruments and ancillary equipment	EN ISO 6976:2016	PT12 - Algorithm testing
dz	Measuring instruments and ancillary equipment	EN-IEC 60654-2:1997	EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity
ea	Measuring instruments and ancillary equipment	EN IEC 61000-4-11:2020/AC:2022-10	EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity

No.	Test object	Standard	Test activity reference number and description
eb	Measuring instruments and ancillary equipment	EN-IEC 61000-4-12:2017	EMC.I.36 - Ring wave immunity test
ec	Measuring instruments and ancillary equipment	EN IEC 61000-4-17:1999/A2:2009	EMC.I.30 - DC voltage ripple Immunity
ed	Measuring instruments and ancillary equipment	IEC 61000-4-18:2019/C1:2019	EMC.I.38 - Damped oscillatory wave immunity
ee	Measuring instruments and ancillary equipment	EN 61000-4-2:2008	EMC.I.21 - Electrostatic discharge immunity (ESD)
ef	Measuring instruments and ancillary equipment	EN 61000-4-29:2000	EMC.I.37 - DC Voltage dips, short interruptions and voltage variations Immunity
eg	Measuring instruments and ancillary equipment	EN 61000-4-3:2020	EMC.I.40 - Radiated Immunity,
eh	Measuring instruments and ancillary equipment	EN 61000-4-4:2012	EMC.I.22 - Electrical fast transient / burst immunity (EFT)
ei	Measuring instruments and ancillary equipment	EN IEC 61000-4-5:2014/A1:2018	EMC.I.23 - Surge immunity
ej	Measuring instruments and ancillary equipment	EN 61000-4-6:2023	EMC.I.07 - Immunity to conducted disturbances, induced by radio-frequency fields
ek	Measuring instruments and ancillary equipment	EN IEC 61000-4-8:2009	EMC.I.24 - Power frequency magnetic field immunity
el	Measuring instruments and ancillary equipment	EN IEC 61000-4-9:2016	EMC.I.25 - Pulsed magnetic field Immunity
em	Measuring instruments and ancillary equipment	GPA 2145-16	PT12 - Algorithm testing
en	Measuring instruments and ancillary equipment	GPA 2172-09	PT12 - Algorithm testing
eo	Measuring instruments and ancillary equipment	GPA 2172-19	PT12 - Algorithm testing
ep	Measuring instruments and ancillary equipment	GPA TP-15:2007	PT12 - Algorithm testing
eq	Measuring instruments and ancillary equipment	ICUMSA SPS-4 (1998)	PT12 - Algorithm testing
er	Measuring instruments and ancillary equipment	IEC 60068-2-1:2007	CL01 - Temperatures
es	Measuring instruments and ancillary equipment	IEC 60068-3-4:2000	CL05 - Water
et	Measuring instruments and ancillary equipment	IEC 60068-2-2:2007	CL01 - Temperatures
eu	Measuring instruments and ancillary equipment	IEC 60068-2-27:2008	ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact
ev	Measuring instruments and ancillary equipment	IEC 60068-2-30:2005	CL01 - Temperatures CL02 - Humidity
ew	Measuring instruments and ancillary equipment	IEC 60068-2-31:2008	ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact
ex	Measuring instruments and ancillary equipment	IEC 60068-2-47:2005	ME01 - Random vibration ME02 - Sinusoidal vibration
ey	Measuring instruments and ancillary equipment	IEC 60068-2-6: 2007	ME03 - Mechanical shock / Resistance to mishandling / Mechanical impact
ez	Measuring instruments and ancillary equipment	IEC 60068-2-64:2008	ME01 - Random vibration ME02 - Sinusoidal vibration
fa	Measuring instruments and ancillary equipment	IEC 60068-2-75:2014	ME04 - Spring Hammer Test / Mechanical impact
fb	Measuring instruments and ancillary equipment	IEC 60068-2-78:2012	CL01 - Temperatures CL02 - Humidity
fc	Measuring instruments and ancillary equipment	IEC 60068-3-1:2023	CL01 - Temperatures
fd	Measuring instruments and ancillary equipment	IEC 60068-3-4:2001	CL01 - Temperatures CL02 - Humidity
fe	Measuring instruments and ancillary equipment	IEC 60068-3-4:1997	CL05 - Water
ff	Measuring instruments and ancillary equipment	IEC 60695-10-2:2014	ME13 - Ball pressure
fg	Measuring instruments and ancillary equipment	IEC 60695-2-10:2013	ME05 - Glow wire ≤ 960 °C
fh	Measuring instruments and ancillary equipment	IEC 60695-2-11:2014	ME05 - Glow wire ≤ 960 °C
fi	Measuring instruments and ancillary equipment	IEC 61000-2-1:1990	EMC.I.26 - Voltage dips, short interruptions and voltage variations Immunity
fj	Measuring instruments and ancillary equipment	IEC 61000-4-12:2017	EMC.I.36 - Ring wave immunity test
fk	Measuring instruments and ancillary equipment	IEC 61000-4-15:2011	EMC.I.48 - An objective light flickermeter and voltage fluctuation immunity test
fl	Measuring instruments and ancillary equipment	IEC 61000-4-18:2019	EMC.I.38 - Damped oscillatory wave immunity
fm	Measuring instruments and ancillary equipment	IEC 61000-4-19:2014	EMC.I.03 - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity