

UL International Italia Srl Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: 1363 Sede A
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ELENCO PROVE ACCREDITATE - CATEGORIA: 0

Alimentatori a bassa tensione con uscita in corrente continua / Low-Voltage power supplies, d.c. Output

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione e prove di immunità / Emission measurements and immunity tests

IEC 61204-3:2011 (ed.2); EN 61204-3:2000

Apparati radio e apparati ausiliari/Radio and ancillary equipment

Denominazione della prova / Campi di prova

Metodo di prova

Compatibilità elettromagnetica e questioni relative allo spettro delle radiofrequenze (ERM); compatibilità elettromagnetica (EMC) per apparecchiature e servizi radio; Parte 1: Requisiti tecnici comuni / Electromagnetic compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirement (f min = 9 kHz f max = 18 GHz)

ETSI EN 301 489-1 V1.9.2:2011 escl. 9.6, Annex B

Misura di emissione di spurie dei ricevitori / Receiver spurious emission (Intervallo operativo di frequenza: f min = 9 kHz f max = 18 GHz/ Operating frequency range: f min = 9 kHz f max = 18 GHz) (f min = 9 kHz f max = 18 GHz)

ETSI EN 300 220-1 V2.4.1:2012, ETSI EN 300 220-2 V2.4.1:2012, ETSI EN 300 328 V1.9.1:2015, ETSI EN 300 330-1 v1.8.1:2015, ETSI EN 300 330-2 v1.6.1:2015, ETSI EN 300 440-1 V1.6.1:2010, ETSI EN 300 440-2 V1.4.1:2010, ETSI EN 301 511 V9.0.2:2003, ETSI TS 151 010-1 V4.9.0 :2002

Misura di emissione di spurie dei trasmettitori/Transmitter spurious emission (Intervallo operativo di frequenza: f min = 9 kHz f max = 18 GHz/ Operating frequency range: f min = 9 kHz f max = 18 GHz) (f min = 9 kHz f max = 18 GHz)

ETSI EN 300 220-1 V2.4.1:2012, ETSI EN 300 220-2 V2.4.1:2012, ETSI EN 300 328 V1.9.1:2015, ETSI EN 300 330-1 v1.8.1:2015, ETSI EN 300 330-2 v1.6.1:2015, ETSI EN 300 440-1 V1.6.1:2010, ETSI EN 300 440-2 V1.4.1:2010, ETSI EN 301 511 V9.0.2:2003, ETSI TS 151 010-1 V4.9.0 :2002

Apparati radio e apparati ausiliari/Radio and ancillary equipment (Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz)

Denominazione della prova / Campi di prova

Metodo di prova

Compatibilità elettromagnetica e questioni relative allo spettro delle radiofrequenze (ERM); compatibilità elettromagnetica (EMC) per apparecchiature e servizi radio; Parte 3: Condizioni specifiche per dispositivi a breve portata (SRD) operanti su frequenze tra 9 kHz e 246 GHz /Electromagnetic compatibility and Radio spectrum Matters (ERM);ElectroMagnetic Compatibility (EMC) standard for radio equipment and services;Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz (f min = 9 kHz f max = 18 GHz)

ETSI EN 301 489-3 V1.6.1:2013

Apparecchi di illuminazione / Lighting Equipment

Denominazione della prova / Campi di prova

Metodo di prova

Esposizione umana ai campi elettromagnetici / Human exposure to electromagnetic fields

IEC 62493:2015 (ed.2); EN 62493:2015

Apparecchi di illuminazione e apparecchi analoghi / Lighting Equipment and similar equipment

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione / Emission measurements

CISPR 15:2013 +A1:2015 (ed.8.1); EN 55015: 2013 + a1:2015

Prove di immunità / Immunity tests

IEC 61547:2009 (ed.2); EN 61547:2009

Apparecchi elettrici di misura, controllo e per utilizzo in Laboratorio / Electrical equipment for measurement, control and laboratory use

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione e prove di immunità / Emission measurements and immunity tests

IEC 61326-1: 2012 (ed.2); EN 61326-1:2013

Apparecchi Elettromedicali / Medical Electrical Equipment

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione e prove di immunità / Emission measurements and immunity tests

IEC 60601-1-2: 2007 (ed.3); EN 60601-1-2:2007+AC:2010

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Apparecchi per la tecnologia dell'informazione / Information technology equipment

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione / Emission measurements	CISPR 22: 2008(ed.6); EN 55022: 2010+ AC: 2011

Apparecchi per la tecnologia dell'informazione / Information technology equipment

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Prove di immunità / Immunity tests	CISPR 24:2010 (ed.2); EN 55024:2010

Apparecchiatura per la saldatura ad arco / Arc welding equipment

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione e prove di immunità / Emission measurements and immunity tests	IEC 60974-10:2014 (ed.3); EN 60974-10:2014

Apparecchiature assiemate di protezione e di manovra per bassa tensione (quadri BT) / Low-voltage switchgear and controlgear assemblies

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione e prove di immunità / Emission measurements and immunity tests	IEC 61439-1:2011 (ed.2); EN 61439-1:2011

Apparecchiature elettriche ed elettroniche (radiatori non intenzionali) / Electric and electronic equipment (unintentional radiators)

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione / Emission measurements (Intervallo operativo di frequenza: f min = 9 kHz f max = 18 GHz/ Operating frequency range: f min = 9 kHz f max = 18 GHz) (f min = 9 kHz f max = 18 GHz)	FCC CFR 47 Part 15 Subpart B ANSI C63.4-2009 ANSI C63.4-2014

Apparecchiature elettriche ed elettroniche / Electric and electronic equipment

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione / Emission measurements (Intervallo operativo di frequenza: f min = 9 kHz f max = 18 GHz/ Operating frequency range: f min = 9 kHz f max = 18 GHz) (f min = 9 kHz f max = 18 GHz)	FCC CFR 47 Part 18; FCC/OST MP-5:1986
Prova di immunità a fluttuazioni di tensione / Voltage fluctuations immunity test	IEC 61000-4-14:1999+A1:2001+A2:2009 (ed1.2); EN 61000-4-14:1999+A1:2004+A2:2009
Prova di immunità a onde oscillatorie / Ring wave immunity test	IEC 61000-4-12:2006 (ed.2); EN 61000-4-12:2006
Prova di immunità ai buchi di tensione, alle brevi interruzioni e alle variazioni di tensione sulle porte di alimentazione a tensione continua / Voltage dips, short interruptions and voltage variations on d.c. Input power ports, immunity tests	IEC 61000-4-29:2000(ed.1) ; EN 61000-4-29:2000
Prova di immunità ai campi magnetici a frequenza di rete / Power frequency magnetic field immunity test	IEC 61000-4-8:1993 +A1:2000; EN 61000:1993+A1:2001; IEC 61000-4-8:2009 ; EN 61000:2010
Prova di immunità ai disturbi condotti di modo comune (0Hz to 150kHz)	IEC 61000-4-16:1998+A1:2001+A2:2009 (ed.1.2); EN 61000-4-16:1998+A1:2004+A2:2011
Prova di immunità alle variazioni della frequenza di alimentazione / variation of power frequency, immunity test	IEC 61000-4-28:1999+A1:2001+A2:2009 (ed.1.2); EN 61000-4-28:2000+A1:2004+A2:2009

Apparecchiature elettriche ed elettroniche per gli ambienti industriali / Electric and electronic equipment for industrial environments

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione / Emission measurements	IEC 61000-6-4:2006+A1:2010 (ed.2.1) ; EN 61000-6-4:2007+A1:2011
Prove di immunità / Immunity tests	IEC 61000-6-2:2005 (ed.2) ; EN 61000-6-2:2005

Apparecchiature elettriche ed elettroniche per gli ambienti residenziali, commerciali e dell'industria leggera / Electric and electronic equipment for residential, commercial and light-industrial environments

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione / Emission measurements	IEC 61000-6-3:2006+A1:2010 (ed.2.1) ; EN 61000-6-3:2007+A1:2011+ AC:2012
Prove di immunità / Immunity tests	IEC 61000-6-1:2005 (ed.2); EN 61000-6-1:2007

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Apparecchiature multimediali / Multimedia Equipment

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione / Emission measurements

CISPR 32:2015 (ed.2); EN 55032:2012+AC:2013
Esclusi ricevitori broadcast e apparecchi audio/video /
Excluded broadcast receiver and audio/video
equipment

Automatic disconnection device between a generator and the public low-voltage grid

Denominazione della prova / Campi di prova

Metodo di prova

- Functional safety (par.6.1);
- Switch-on condition (par.6.2)
- Voltage monitoring (par.6.3);
- Frequency monitoring (par.6.4);
- Direct current monitoring (par.6.5);
- Detection of island operation (par.6.6);

DIN VDE V 0126-1-1 (VDE V 0126-1-1):2013-08

Azionamenti elettrici a velocità variabile / Adjustable speed electrical power drive systems

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione e prove di immunità / Emission measurements and
immunity tests

IEC 61800-3:2004 + A1:2011 (ed.2.1); EN
61800-3:2004 + A1:2012

Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

Denominazione della prova / Campi di prova

Metodo di prova

- Unintentional islanding test (par.5.7.1) (<120kVA)

IEEE 1547.1:2005

Degrees of protection provided by enclosures

Denominazione della prova / Campi di prova

Metodo di prova

12 Tests for protection against access to hazardous parts indicated by the
first; 13 Tests for protection against solid foreign objects indicated by the first
characteristic numeral; 14 Tests for protection against water indicated by the
second characteristic numeral; 15 Tests for protection against access to
hazardous parts indicated by the additional letter;
characteristic numeral

IEC 60529:2013; EN 60529:1991 + A1:2000 +
A2:2013

Electric and electronic equipment

Denominazione della prova / Campi di prova

Metodo di prova

Electrical fast transient / burst immunity test

IEC 61000-4-4:2012, EN 61000-4-4:2012

Electrostatic discharge immunity test

IEC 61000-4-2:2008, EN 61000-4-2:2009

Immunity to conducted disturbances, induced by radio-frequency fields

IEC 61000-4-6:2013, EN 61000-4-6:2014

Radiated, radio-frequency, electromagnetic field immunity test

IEC 61000-4-3:2006 + A1:2007 + A2:2010, EN
61000-4-3:2006 + A1:2008 + IS1:2009 + A2:2010

Surge immunity test

IEC 61000-4-5:2014, EN 61000-4-5:2014

Testing and measurement techniques –
Harmonics and interharmonics including
mains signalling at a.c. power port,
low frequency immunity tests

IEC 61000-4-13:2002 + A1:2009; EN
61000-4-13:2002 + A1:2009

Testing and measurement techniques –
Voltage dips, short interruptions and
voltage variations immunity tests

IEC 61000-4-11:2004; EN 61000-4-11:2004

Testing and measurement techniques –
Voltage dips, short interruptions and voltage
variations immunity tests for equipment
with input current more than 16 A per phase

IEC 61000-4-34:2005 + A1:2009; EN
61000-4-34:2007 + A1:2009

Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection

Denominazione della prova / Campi di prova

Metodo di prova

- Voltage changes, voltage fluctuations and flicker measurement

IEC 61000-3-11:2000, EN 61000-3-11:2000

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Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and <=75 A per phase)

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Harmonic current measurement	IEC 61000-3-12:2011, EN 61000-3-12:2011

Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16A per phase)

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Harmonic current measurement	IEC 61000-3-2:2014, EN 61000-3-2:2014

Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <=16 A per phase and not subject to conditional connection

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Voltage changes, voltage fluctuations and flicker measurement	IEC 61000-3-3:2013, EN 61000-3-3:2013

Elettrodomestici, utensili elettrici e apparecchi similari / Household appliances, Electric tools and similiar apparatus

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Misure di emissione / Emission measurements	CISPR 14-1:2005+A1:2008+A2:2011 (ed.5.2); EN 55014-1 :2006+A1:2009+A2:2011
Prove di immunità / Immunity tests	CISPR 14-2:2015 (ed.2); CISPR 14-2:1997 +A1:2001 +A2:2008 (ed.1.2); EN 55014-2:2015

Ensayos de deteccion de funcionamiento en isla de multiples inversores fotovoltaicos conectados a red en paralelo / Performance tests for islanding detection of multiple grid-connected photovoltaic inverters in parallel

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Procedure of evaluation (par.4)	UNE 206006 IN:2011

Erection of electrical installations with rated voltages up to AC 1000 V and DC 1500 V - Part 4-712: Photovoltaic power-systems - Erection and safety requirements systems

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Functional safety (Annex A.3.1); - Voltage monitoring (Annex A.3.2); - Frequency monitoring (Annex A.3.3); - Direct current monitoring (Annex A.3.4); - Detection of island operation (Annex A.3.5); - Residual current monitoring (Annex A.3.6)	OVE/ONORM E 8001-4-712:2009

Fire hazard testing

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
Glowinghot-wire based test methods – Glow-wire apparatus and common test procedure	IEC 60695-2-10:2013
Glowinghot-wire based test methods – Glow-wire flammability index (GWFI) test method for materials	IEC 60695-2-12:2010
Glowinghot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials	IEC 60695-2-13:2010
Glowinghot-wire based test methods –Glow-wire flammability test method for end products	IEC 60695-2-11:2000
Test flames – 50 W horizontal and vertical flame test methods	IEC 60695-11-10:2013
Test flames – Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	IEC 60695-11-5: 2004

Grid Connection Code for RPPs in South Africa

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
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- Tolerance of Frequency and Voltage Deviations (par.5);
- Frequency Response (par.6);
- Reactive Power Capabilities (par.7);
- Reactive Power and Voltage Control Functions (par.8);
- Power Quality (par.9);
- Protection and Fault levels (par.10);
- Active Power Constraint Functions (par.11)

Grid Connection Code for Renewable Power Plants (RPPs) connected to the Electricity Transmission System (TS) or the Distribution System (DS) in South Africa:2012 (Version 2.6)

Grid connection of energy systems via inverters - Part 2: Inverter requirements

Denominazione della prova / Campi di prova

Metodo di prova

- Power flow direction (par.4.3);
- Power factor (par.4.4);
- Harmonic currents (par.4.5);
- Voltage fluctuations and flicker (par.4.6);
- Impulse protection (par.4.7);
- Transient voltage limits (par.4.8);
- Direct current injection (par.4.9) (AS/NZS 3100 and AS/NZS 60950.1 excluded)

AS 4777.2:2005

Grid connection of energy systems via inverters - Part 3: Grid protection requirements

Denominazione della prova / Campi di prova

Metodo di prova

- Voltage flicker (par.4.4);
- Impulse protection (par.4.5);
- Disconnection device (par.5.2);
- Voltage and frequency limits (passive anti-islanding protection) (par.5.3);
- Active anti-islanding protection (par.5.5);
- Reconnection procedure (par.5.6);
- Security of protection settings (par.5.7);
- Grid protection device tests (appendix B) (AS/NZS 3100 and AS/NZS 60950.1 excluded)

AS 4777.3:2005

Grid integration of generator plants - Low-Voltage- Test requirements for generator units to be connected to and operated in parallel with low-Voltage distribution networks

Denominazione della prova / Campi di prova

Metodo di prova

- Rapid Voltage changes (par.5.1.2) - Flicker (par.5.1.3)
- Harmonics and inter-harmonics (par 5.1.4)
- Proof of the symmetrical behavior of rotary current converter units (par.5.2)
- Proof of the behavior of the generation unit on the grid (par. 5.3)
- Proof of NS protection (par. 5.4)
- Connection conditions and synchronization (par. 5.5) (Tutto)

DIN V VDE V 0124-100:2012

Grid interconnection of embedded generation - Part 2: Small-scale embedded generation - Section 1: Utility interface

Denominazione della prova / Campi di prova

Metodo di prova

- Flicker (par.4.1.3);
- Harmonics and waveform distortion (par.4.1.6);
- Power factor (par.4.1.7);
- Synchronization (par.4.1.8);
- Overvoltage and undervoltage (par.4.2.2.3.2);
- Overfrequency and underfrequency (par.4.2.2.3.3);
- Prevention of islanding (par.4.2.2.4);
- DC current injection (par.4.2.2.5)

NRS 097-2-1:2010

Household and similar electrical appliances - Safety - Part 2-100: Particular requirements for hand-held mains-operated garden blowers, vacuums and blower vacuums

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-100:2002 (ed.1)

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Industrial, scientific and medical equipment

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione / Emission measurements

CISPR 11:2009+A1:2010 (ed.5.1); EN 55011:2009+A1:2010

Interruttori automatici / Circuit-breakers

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione e prove di immunità / Emission measurements and immunity tests

IEC 60947-2:2006 + A1:2009 + A2:2013 (ed.4.2); EN 60947-2:2006 + A1:2009 + A2:2013 (allegati F e J / Annexes F and J)

Interruttori differenziali (RCD) per usi domestici e similari / Residual current-operated protective device (RCDs) for household and similar use

Denominazione della prova / Campi di prova

Metodo di prova

Prove di immunità / Immunity tests

IEC 61543:1995 + A1:2004 + A2:2005 (ed.1.2); EN 61543:1995 + AC:1997 + A11:2003 + A11:2003/AC:2004 + A12:2005 + A2:2006

Macchine utensili / Machine tools

Denominazione della prova / Campi di prova

Metodo di prova

Misure di emissione / Emission measurements

EN 50370-1:2005

Prove di immunità / Immunity tests

EN 50370-2:2003

Metodi di misura dei campi elettromagnetici degli apparecchi elettrodomestici e similari in relazione all'esposizione umana

Denominazione della prova / Campi di prova

Metodo di prova

5.5.2 - Time domain evaluation of magnetic fields, 5.5.3 - Line spectrum evaluation, 5.5.4 - Simplified test methods

IEC 62233:2005 (ed.1); EN 62233:2008

Photovoltaic (PV) systems - Characteristics of the utility interface

Denominazione della prova / Campi di prova

Metodo di prova

- Voltage, current and frequency (par.4.1);
 - Normal voltage operating range (par.4.2);
 - Flicker (par.4.3);
 - DC injection (par.4.4);
 - Normal frequency operating range (par.4.5);
 - Harmonics and waveform distortion (par.4.6);
 - Power factor (par.4.7);
 - Loss of utility voltage (par.5.1);
 - Over/under voltage and frequency (par.5.2);
 - Islanding protection (par.5.3);
 Response to utility recovery (par.5.4) (Tutto tranne 5.5, 5.6, 5.7)

IEC 61727:2004;
 EN 61727:1995

Photovoltaic systems - Power conditioners - Procedure for measuring efficiency

Denominazione della prova / Campi di prova

Metodo di prova

- Efficiency measurement (par.4,5,6);
 - Loss measurements (par.7) (Tutto)

IEC 61683:1999;
 EN 61683:2000

Power generation systems connected to the low-voltage distribution network - Technical minimum requirements for the connection to and parallel operation with low-voltage distribution networks.

Denominazione della prova / Campi di prova

Metodo di prova

Vedere dettagli della norma DIN V VDE V 0124-100:2012 (Tutto)

VDE-AR-N 4105:2011

Procedimento de ensaio de anti-ilhamento para inversores de sistemas fotovoltaicos conectados à rede elétrica / Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters

Denominazione della prova / Campi di prova

Metodo di prova

-Test for single or multi-phase inverter (par.6)

ABNT NBR IEC 62116:2012

Radio Equipment (Broadband Data Transmission Systems)

Denominazione della prova / Campi di prova

Metodo di prova

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems (f min = 9 kHz f max = 18 GHz)

ETSI EN 301 489-17 V2.2.1:2012

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Radio Equipment (External Power Supply (EPS) for mobile phones)

Denominazione della prova / Campi di prova

Metodo di prova

Electromagnetic compatibility and Radio spectrum Matters (ERM);
ElectroMagnetic Compatibility (EMC) standard for radio equipment and
services; Part 34: Specific conditions for External Power Supply (EPS) for
mobile phones

ETSI EN 301 489-34 V1.4.1:2013

Recommendations for the connection of generating plant to the distribution systems of licensed distribution network operators

Denominazione della prova / Campi di prova

Metodo di prova

- Disconnection times (par.13.8.3.1);
- Over / Under Voltage (par.13.8.3.2);
- Over / Under Frequency (par.13.8.3.3);
- Loss of Mains Protection, Inverter connected machines (par.13.8.3.4A);
- Reconnection (par.13.8.3.5);
- Frequency Drift and Step Change Stability test (par.13.8.3.6)
- Harmonics (par.13.8.4.1);
- Power Factor (par.13.8.4.2);
- Voltage Flicker (par.13.8.4.3);
- DC Injection (par.13.8.4.4);
- Over current Protection (par.13.8.3.4.5)
- Short circuit Current Contribution inverter connected Generating Units (par.13.8.4.6A);
- Self Monitoring - Solid State Disconnection (par.13.8.4.7)

ENA G59/3-1:2014

- Disconnection times (par.13.8.3.1);
- Over / Under Voltage (par.13.8.3.2);
- Over / Under Frequency (par.13.8.3.3);
- Loss of Mains Protection, Inverter connected machines (par.13.8.3.4A);
- Reconnection (par.13.8.3.5);
- Frequency Drift and Step Change Stability test (par.13.8.3.6)
- Harmonics (par.13.8.4.1);
- Power Factor (par.13.8.4.2);
- Voltage Flicker (par.13.8.4.3);
- DC Injection (par.13.8.4.4);
- Over current Protection (par.13.8.3.4.5)
- Short circuit Current Contribution inverter connected Generating Units (par.13.8.4.6A);
- Self Monitoring - Solid State Disconnection (par.13.8.4.7)

ENA G59/3-2:2015

Recommendations for the Connection of Type Tested Small-scale Embedded Generators (Up to 16A per Phase) in Parallel with Low-Voltage Distribution Systems

Denominazione della prova / Campi di prova

Metodo di prova

- Disconnection times (par.A1.3.1);
- Over / Under Voltage (par.A1.3.2);
- Over / Under Frequency (par.A1.3.3);
- Loss of Mains (LoM) Protection (par.A1.3.4);
- Re-connection (par.A1.3.5);
- Frequency Drift and Step Change Stability test (par.A1.3.6);
- Harmonics (par.A1.4.1);
- Power Factor (par.A1.4.2);
- Voltage Flicker (par.A1.4.3);
- DC Injection (par.A1.4.4);
- Short circuit Current Contribution (par.A1.4.6);
- Self Monitoring - Solid State Disconnection (par.A1.4.7) (Type Verification Functional Testing of the Interface Protection (Appendix A1.3))

ENA G83/2:2012

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Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti AT ed MT delle imprese distributrici di energia elettrica

Denominazione della prova / Campi di prova

Metodo di prova

- Misura di correnti armoniche (par.N.3.1);
- Misura di fluttuazioni di tensione dovute a manovre di sezionamento/separazione (par.N.3.2);
- Misura di fluttuazioni di tensione (flicker) in condizioni di funzionamento continuo (par.N.3.3);
- Verifica del campo di funzionamento in tensione e frequenza (par.N.4);
- Verifica delle condizioni di sincronizzazione e presa di carico (par.N.5);
- Verifica dei requisiti costruttivi circa lo scambio di potenza reattiva (par.N.6);
- Verifica dei requisiti costruttivi circa la regolazione di potenza attiva (par.N.7);
- Verifica della insensibilità agli abbassamenti di tensione (VFRT capability) (par.N.8);
- Verifica della insensibilità alle richiuse automatiche in discordanza di fase (par.N.9)
- Misura di correnti armoniche (par.Nbis.3.1);
- Misura di fluttuazioni di tensione dovute a manovre di sezionamento/separazione (par.Nbis.3.2);
- Misura di fluttuazioni di tensione (flicker) in condizioni di funzionamento continuo (par.Nbis.3.3);
- Verifica del campo di funzionamento in tensione e frequenza (par.Nbis.4);
- Verifica delle condizioni di sincronizzazione e presa di carico (par.Nbis.5);
- Verifica dei requisiti costruttivi circa lo scambio di potenza reattiva (par.Nbis.6);
- Verifica dei requisiti costruttivi circa la regolazione di potenza attiva (par.Nbis.7);
- Verifica della insensibilità agli abbassamenti di tensione (VFRT capability) (par.Nbis.8);
- Verifica della insensibilità alle richiuse automatiche in discordanza di fase (par.Nbis.9) (<120kVA)

CEI 0-16:2014-09 + V1:2014-12

Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica

Denominazione della prova / Campi di prova

Metodo di prova

- Emissione armonica di corrente (par. B.1, punti a, b);
- Fluttuazioni di tensione e flicker (par. B.1, punto c);
- Connessione, riconnessione ed erogazione graduale della potenza (par. B.1.1);
- Erogazione della potenza reattiva (par. B.1.2);
- Limitazione della potenza attiva (par.B.1.3);
- Verifica della componente continua della corrente di uscita (par.B.1.4);
- Verifica della insensibilità agli abbassamenti di tensione (par. B.1.5);
- Verifica dell'assenza di danneggiamenti in caso di richiuse automatiche da parte del Distributore (par.B.1.6)

CEI 0-21:2014-09 + V1:2014-12

Requirements for the connection of micro-generators in parallel with public low-voltage distribution networks

Denominazione della prova / Campi di prova

Metodo di prova

- Over / Under Voltage (par.D.2.3);
- Over / Under Frequency (par.D.2.4);
- Loss of Mains (LoM) detection (par.D.2.5);
- Operating range (par.D.3.1);
- Active power feed-in at under-frequency (par.D.3.2);
- Power response to over-frequency (par.D.3.3);
- Reactive power capability (par.D.3.4);
- Connection and starting to generate electrical power (par.D.3.6);
- Short-circuit current contribution (par.D.3.7);
- Harmonic current emission (par.D.3.8);
- Voltage fluctuations and flicker (D.3.9);
- DC injection (par.D.3.10)

EN 50438:2013

Requisitos de conexiòn a la red elèctrica – Parte 1: Inversores para conexiòn a la red de distribuciòn / Requirements for connecting to the power system. Part 1: Grid-connected inverters

Denominazione della prova / Campi di prova

Metodo di prova

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- Injection of direct current to main supply (par. 5.1);
- Behavior under isolation failure (par. 5.2);
- Detection of fault currents in the PV generator (par. 5.3);
- Disconnection due voltage and frequency (par. 5.4);
- Automatic reconnection (par. 5.5);
- Detection of island operation (par. 5.6);
- Generation surges (par. 5.7);
- Network quality (par. 5.8);
- Reconnection out of sync (par. 5.9)

UNE 206007-1 IN:2013

Sicurezza degli apparati di conversione di potenza utilizzati in impianti fotovoltaici di Potenza. Parte 1: Prescrizioni generali

Denominazione della prova / Campi di prova

Metodo di prova

4 General testing requirements, 5 -Marking and documentation, 6 - Environmental requirements and conditions, 7 -Protection against electric shock and energy hazards, 8 - Protection against mechanical hazards, 9 Protection against fire hazards, 10 - Protection against sonic pressure hazards, 11 - Protection against liquid hazards, 12 - Chemical hazards, 13 Physical requirements, 14 - Components (eccetto 8.4, 8.5)

EN 62109-1: 2010 (ed.1.0) IEC 62109-1: 2010

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 1: Norme generali

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 22.16, 22.32, Annex F)

IEC 60335-1:2004 (ed.4) +A1:2004 +A2:2006; EN 60335-1:2002 +A1:2004 +A2:2006 +A11:2004 +A12:2006 +A13:2008 +A14:2010 +A15:2011

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 22.16, 22.32, Annex F)

IEC 60335-1:2010 (ed.5)+A1:2013; EN 60335-1:2012 +A11:2014

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi da cucina

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-14:2006 (ed.5) +A1:2008 +A2:2012; EN 60335-2-14:2006 +A1:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per massaggio

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-32:2002 (ed.4) +A1:2008 +A2:2013; EN 60335-2-32:2003 + A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per l'igiene orale

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-52:2002 (ed.3) +A1:2008; EN 60335-2-52:2003 +A1:2008 +A11:2010 +A11/EC:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi di grigliatura per uso esterno

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-78:2002 (ed.2) +A1:2008; EN 60335-2-78:2003 + A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per il riscaldamento di liquidi

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-15:2002 (ed.5) +A1:2005 +A2:2008; EN 60335-2-15:2002 +A1:2005 +A2:2008 +A11:2012

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-15:2012 (ed.6)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi elettrici di riscaldamento per locali

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-30:2002 (ed.4) +A1:2004 +A2:2007; EN 60335-2-30:2003 + A1:2004 +A2:2007

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-30:2009 (ed.5); EN 60335-2-30:2009 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi elettrici annessi ad acquari e bacini da giardino

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-55:2002 (ed.3) +A1:2008; EN 60335-2-55:2003 + A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per vaporizzare sostanze insettifughe o deodoranti

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-101:2002 (ed.1) +A1:2008 +A2:2014;
EN 60335-2-101:2002 +A1:2008 +A2:2014

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi di refrigerazione, apparecchi per gelati e produttori di ghiaccio

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 21.101)

IEC 60335-2-24:2002 (ed.6) +A1:2005 +A2:2007; EN 60335-2-24:2003 +A1:2005 +A2:2007 +A11:2004 +A12:2009

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 21.101)

IEC 60335-2-24:2010 (ed.7) +A1:2012; EN 60335-2-24:2010

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi di pulizia di superfici con l'uso di agenti pulenti liquidi o vapore per uso domestico

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 21.101, 21.102, 21.103,21.104, 21.105)

IEC 60335-2-54:2002 (ed.3) +A1:2004 +A2:2007; EN 60335-2-54:2003 +A1:2004 +A2:2007 +A11:2006

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (eccetto 21.101, 21.102, 21.103,21.104, 21.105)

IEC 60335-2-54:2008 (ed.4); EN 60335-2-54:2008 +A11:2012

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Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi aventi bruciatori a gas, gasolio e combustibile solido provvisti di connessioni elettriche

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-102:2004 (ed.1) +A1:2009 +A2:2012; EN 60335-2-102:2006 +A1:2010

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per la pulizia a secco o umida, incluse le spazzole a motore, per uso industriale e commerciale

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 21.102, 21.103, 21.104, 21.105, 21.106)

IEC 60335-2-69:2002 (ed.3) +A1:2005 +A2:2008; EN 60335-2-69:2009

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (eccetto 21.102, 21.103, 21.104, 21.105, 21.106)

IEC 60335-2-69:2012 (ed.4); EN 60335-2-69:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per il trattamento dei pavimenti e per la pulitura dei pavimenti bagnati, per uso industriale e collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-67:2002 (ed.3) +A1:2005; EN 60335-2-67:2009

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-67:2012 (ed.4); EN 60335-2-67:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi per la refrigerazione commerciale comprendenti un'unità di condensazione del fluido frigorifero o un compressore, incorporato o remoto

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-89:2002 (ed.1) +A1:2005 +A2:2007; EN 60335-2-89:2002 +A1:2005 +A2:2007 +A11:2004

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-89:2010 (ed.2) +A1:2012; EN 60335-2-89:2010

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per armadi caldi elettrici per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-49:2002 (ed.4) +A1:2008; EN 60335-2-49:2003 +A1:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per aspirapolvere ed apparecchi per pulizia ad aspirazione d'acqua

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 21.101, 21.102, 21.103,21.104, 21.105)

IEC 60335-2-2:2002 (ed.5) +A1: 2004 +A2:2006; EN 60335-2-2:2003 +A1:2004 +A2:2006 +A11:2010 +A11/EC:2012

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 21.101, 21.102, 21.103,21.104, 21.105)

IEC 60335-2-2:2009 (ed.6) +A1:2012; EN 60335-2-2:2010 +A11:2012 +A1:2013

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per attuatori di cancelli, porte e finestre motorizzati

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 32.101)

IEC 60335-2-103:2002 (ed.1); EN 60335-2-103:2003 +A11:2009

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (eccetto 32.101)

IEC 60335-2-103:2006 (ed.2) +A1:2011

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per cappe da cucina

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-31:2002 (ed.4) +A1:2006 +A2:2009; EN 60335-2-31:2003 +A1:2006 +A2:2009

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-31:2012 (ed.5)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per cappe da cucina per uso commerciale

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-99:2003 (ed.1); EN 60335-2-99:2003

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per cucine, fornelli, forni ed apparecchi similari per uso domestico

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-6:2002 (ed.5) +A1:2005 +A2:2008; EN 60335-2-6:2003 +A1:2005 +A2:2008 +A11:2010 +A12:2012 +A11/EC:2012 +A13:2013

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-6:2014 (ED.6)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per cucine, forni, fornelli e piani di cottura elettrici per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-36:2002 (ed.5) +A1:2004 +A2:2008; EN 60335-2-36:2002 +A1:2004 +A2:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per distributori commerciali e apparecchi automatici per la vendita

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne Annex A)

IEC 60335-2-75:2002 (ed.2) +A1:2005 +A2:2009; EN 60335-2-75:2004 +A1:2005 +A2:2008 +A11:2006 +A12:2010

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (eccetto Annex AA)

IEC 60335-2-75:2012 (ed.3)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per ferri da stiro

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-3:2002 (ed.5) +A1:2005 +A2:2008; EN 60335-2-3:2002 +A1:2005 +A2:2008 +A11:2010 +A11/EC:2012

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-3:2012 (ed.6)

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Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per forni elettrici a ventilazione forzata, forni per cottura a vapore e forni combinati convezione-vapore per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-42:2002 (ed.5) +A1:2009; EN 60335-2-42:2003 +A1:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per friggitrice elettriche per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-37:2002 (ed.5) +A1:2008 +A2:2011; EN 60335-2-37:2002 +A1:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per gli apparecchi per la purificazione dell'aria

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-65:2002 (ed.2) +A1:2008; EN 60335-2-65:2003 +A1:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per gli apparecchi per la cura della pelle e dei capelli

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-23:2003 (ed.5) +A1:2008 +A2:2012; EN 60335-2-23:2003 +A1:2008 +A11:2010 +A11/EC:2012

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Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per gli apparecchi per l'asciugatura dei tessuti e per gli asciugasalviette

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-43:2002 (ed.3) +A1:2005 +A2:2008; EN 60335-2-43:2003 +A1:2006 +A2:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per grill e tostapane elettrici per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-48:2002 (ed.4) +A1:2008; EN 60335-2-48:2003 +A1:2008 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per griglie, tostapane e apparecchi per cottura mobili similari

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-9(ed.5)+am1+am2; EN 60335-2-9:2003 + A1:2004 + A2:2006 + A12:2007 + A13:2010 + A13/EC:2011 + A13/EC:2012

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-9:2008 (ed.6) +A1:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per i motori di movimentazione di porte di garage a movimento verticale per uso residenziale

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-95:2002 (ed.2); EN 60335-2-95:2004

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-95:2011 (ed.3)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per idropulitrici ed apparecchi per la pulizia a vapore

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-79:2002 (ed.2) +A1:2005 +A2:2007; EN 60335-2-79:2009

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-79:2012 (ed.3); EN 60335-2-79:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per lavastoviglie elettriche per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne Annex BB)

IEC 60335-2-58:2002 (ed.3) +A1:2008; EN 60335-2-58:2005 +A1:2008 +A11:2010

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Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per le cabine con doccia multifunzione

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-105:2004 (ed.1) +A1:2008 +A2:2013; EN 60335-2-105:2005 +A1:2008 +A11:2010

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per le pompe di calore elettriche, per i condizionatori d'aria e per i deumidificatori

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 22.108)

IEC 60335-2-40:2002 (ed.4) +A1:2005 +A2:2005; EN 60335-2-40:2003 +A1:2006 +A2:2009 +A11:2004 +A12:2005 +A13:2012

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-40:2002 (ed.5)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per macchine per cucire elettriche

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-28:2002 (ed.4) +A1:2008; EN 60335-2-28: 2003 + A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per macchine da cucina elettriche per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-64:1991 (ed.2) +A1:1997; EN 60335-2-64:2000 +A1:2002

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-64:2002 (ed.3) +A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per macchine automatiche per il trattamento dei pavimenti per uso industriale e collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-72:2002 (ed.2); EN 60335-2-72:2009

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-72:2012 (ed.3); EN 60335-2-72:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per macchine per la pulizia a polverizzazione e ad aspirazione d'acqua per uso industriale e collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-68:2002 (ed.3) +A1:2005 +A2:2007; EN 60335-2-68:2009

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-68:2012 (ed.4); EN 60335-2-68:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per motori di movimentazione per tapparelle, tende per esterno, tende e apparecchiature avvolgibili similari

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-97:2002 (ed.2) +A1:2005 +A2:2009; EN 60335-2-97:2006 +A2:2010 +A11:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per padelle per friggere, friggitrici e apparecchi similari

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-13:2002 (ed.5) +A1:2004 +A2:2008; EN 60335-2-13:2003 +A1:2004 +A2:2008

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-13:2009 (ed.6); EN 60335-2-13:2010 +A11:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per piastre a grigliare elettriche per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-38:2002 (ed.5) +A1:2008; EN 60335-2-38:2003 + A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per pompe

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-41:2002 (ed.3) +A1:2004 +A2:2010; EN 60335-2-41:2003 +A1:2004 +A2:2010

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-41:2012 (ed.4)

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per rasoi, tosatrici e apparecchi elettrici analoghi

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-8:2002 (ed.5) +A1:2005 +A2:2008; EN 60335-2-8:2003 +A1:2005 +A2:2008

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-8:2012 (ed.6)

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Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per riscaldatori fissi ad immersione

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminals for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2:2002 (ed.2) +A1:2006 +A2:2009; EN 60335-2-73:2003 +A1:2006 +A2:2009

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per riscaldatori mobili ad immersione

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminals for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-74:2002 (ed.2) +A1:2006 +A2:2009; EN 60335-2-74:2003 +A1:2006 +A2:2009

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per risciacquatrici elettriche per uso collettivo

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminals for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-62:2002 (ed.3) +A1:2008; EN 60335-2-62:2003 + A1:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per scaldavivande elettriche ed apparecchi similari

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminals for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-12:2002 (ed.5) +A1:2008; EN 60335-2-12:2003 + A1:2008

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Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per umidificatori da utilizzarsi in sistemi di riscaldamento, ventilazione o di condizionamento dell'aria

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards (Tutto tranne 22.7, 22.106)

IEC 60335-2-88:2002 (ed.2); EN 60335-2-88:2002

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per utensili elettrici mobili riscaldanti e apparecchi similari

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-45:2002 (ed.3) +A1:2008 +A2:2012; EN 60335-2-45:2002 +A1:2008 +A2:2012

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per vasche per idromassaggio e per piscine di tipo "spa"

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-60:2002 (ed.3) +A1:2005 +A2:2008; EN 60335-2-60:2003 +A1:2005 +A2:2008 +A11:2010 +A12:2010

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per ventilatori

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminal s for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-80:2002 (ed.2) +A1:2004 +A2:2008; EN 60335-2-80:2003 +A1:2004 +A2:2009

Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Prescrizioni particolari per umidificatori

Denominazione della prova / Campi di prova

Metodo di prova

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7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminals for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-98:2002 (ed.2) +A1:2005 +A2:2008; EN 60335-2-98:2003 +A1:2005 +A2:2008

Sicurezza degli apparecchi elettrici d'uso domestico e similare Parte 2: Norme particolari per apparecchi sterminainsetti

Denominazione della prova / Campi di prova

Metodo di prova

7 Marking and instructions, 8 Protection against access to live parts, 9 Starting of motor-operated appliances, 10 Power input and current, 11 - Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal operation, 20 - Stability and mechanical hazards, 21 - Mechanical strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 - Supply connection and external flexible cords, 26 - Terminals for external conductors, 27 - Provision for earthing, 28 - Screws and connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards

IEC 60335-2-59:2002 (ed.3) +A1:2006+ A2:2009; EN 60335-2-59:2003 +A1:2006 +A2:2009

Sicurezza degli apparecchi elettrici d'uso domestico e similare Parte2: Norme particolari per forni a microonde, compresi forni a microonde combinati

Denominazione della prova / Campi di prova

Metodo di prova

Classificazione / Classification (par. 6);
 Marcatura e istruzioni / Marking and instructions (par. 7);
 Protezione contro l'accesso a parti in tensione / Protection against access to live parts (par. 8);
 Potenza e corrente / Power input and current (par. 10);
 Riscaldamento / Heating (par. 11);
 Corrente di dispersione e rigidità dielettrica alla temperatura di funzionamento / Leakage current and electric strength at operating temperature (par. 13);
 Sovratensioni transitorie / Transient overvoltage (par. 14);
 Resistenza all'umidità / Moisture resistance (par. 15);
 Corrente di dispersione e rigidità dielettrica / Leakage current and electric strength (par. 16);
 Protezione contro il sovraccarico dei trasformatori e dei circuiti associati / Overload protection of transformers and associated circuits (par. 17);
 Durata / Endurance (par. 18);
 Funzionamento anormale / Abnormal operation (par. 19);
 Stabilità e pericoli meccanici / Stability and mechanical hazards (par. 20);
 Resistenza meccanica / Mechanical strength (par. 21);
 Costruzione / Construction (par. 22);
 Cavi interni / Internal wiring (par. 23);
 Componenti / Components (par. 24);
 Collegamento alla rete e cavi flessibili esterni / Supply connection and external flexible cords (par. 25);
 Morsetti per cavi esterni / Terminals for external conductors (par. 26);
 Disposizioni per la messa a terra / Provision for earthing (par. 27);
 Viti e connessioni / Screws and connections (par. 28);
 Distanze di isolamento superficiali, in aria e distanze attraverso l'isolamento solido / Clearances, creepage distances and solid insulation (par. 29);
 Resistenza al calore e al fuoco / Resistance to heat and fire (par. 30);
 Protezione contro la ruggine / Resistance to rusting (par. 31);
 Radiazione, tossicità e pericoli analoghi / Radiation, toxicity and similar hazards (par. 32)

IEC 60335-2-25:2010+AMD1: 2014; EN 60335-2-25:2012/A1:2015

Sicurezza dei convertitori di potenza utilizzati negli impianti Fotovoltaici.

Parte 2: Prescrizioni particolari per gli inverter

Denominazione della prova / Campi di prova

Metodo di prova

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4 General testing requirements, 5 -Marking and documentation, 6 - Environmental requirements and conditions, 7 -Protection against electric shock and energy hazards, 8 - Protection against mechanical hazards, 9 Protection against fire hazards, 10 - Protection against sonic pressure hazards, 11 - Protection against liquid hazards, 12 - Chemical hazards, 13 Physical requirements, 14 - Components - (eccetto 8.4, 8.5)

EN 62109-2: 2011
(ed.1.0)

IEC 62109-2: 2011

Sistemas fotovoltaicos (FV) – Características da interface de conexão com a rede elétrica de distribuição / Photovoltaic (PV) systems – Characteristics of the utility interface

Denominazione della prova / Campi di prova

Metodo di prova

- Compatibility with the electrical grid (par.4);
- Personal safety and PV system protection (par. 5);
- External control (par. 6);
- Requirements for supportability to voltages caused by electrical faults (fault ride through - FRT) (par. 7)

ABNT NBR 16149:2013

Sistemas fotovoltaicos (FV) – Características da interface de conexão com a rede elétrica de distribuição – Procedimento de ensaio de conformidade / Photovoltaic (PV) systems – Characteristics of the utility interface – Conformity test procedure

Denominazione della prova / Campi di prova

Metodo di prova

- Flicker (par. 6.1);
- c.c. component injection (par. 6.2);
- Harmonics and wave-form distortion (par. 6.3);
- Power factor (par. 6.4);
- Reactive power injection / demand (par. 6.5);
- Voltage variation (par. 6.6);
- Frequency variation (par. 6.7);
- Active power control in overfrequency (par. 6.8);
- Reconnection (par. 6.9);
- Automatic out-of-phase reconnection (par. 6.10);
- Active power limitation (par. 6.11);
- Reactive power command (par. 6.12);
- Disconnection and reconnection of the photovoltaic system in the electrical grid (par. 6.13);
- Supportability requirements to undervoltages due to faults in the electrical grid (fault ride through - FRT)

ABNT NBR 16150:2013

Solid insulating materials

Denominazione della prova / Campi di prova

Metodo di prova

Method for the determination of the proof and the comparative tracking indices of solid insulating materials

IEC 60112:2009

Technical Guideline - Generating plants connected to the Medium-Voltage Network

Denominazione della prova / Campi di prova

Metodo di prova

- Verification of feed-in power (par. 6.2);
- Verification of network interactions (par. 6.3);
- Verification of the generating plant's behaviour connected to the network (par. 6.4);
- Verification of connection conditions (par. 6.5);
- Verification of the properties of disconnection equipment (par. 6.6)

BDEW:2008

Technical Guidelines for power generating units and farms - Part 3: Determination of electrical characteristics of power generating units and systems connected to MV, HV and EHV grids

Denominazione della prova / Campi di prova

Metodo di prova

- Active power provision (par. 4.2);
- Reactive power provision (par. 4.3);
- Voltage quality (par. 4.4);
- Disconnecting the PGU from the grid (par. 4.5);
- Verification of cut-in conditions (par. 4.6);
- Performance in the case of voltage dips (par. 4.7) (<120kVA)

FGW Part 3 Revision 23:2013

Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures

Denominazione della prova / Campi di prova

Metodo di prova

- Test for single or multi-phase inverter (par.6) (<120kVA)

IEC 62116:2014;
EN 62116:2014

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ELENCO PROVE ACCREDITATE - CATEGORIA: III

Automatic disconnection device between a generator and the public low-voltage grid

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Functional safety (par.6.1); - Switch-on condition (par.6.2); - Voltage monitoring (par.6.3); - Frequency monitoring (par.6.4); - Direct current monitoring (par.6.5); - Detection of island operation (par.6.6)	DIN VDE V 0126-1-1 (VDE V 0126-1-1):2013-08

Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Unintentional islanding test (par.5.7.1)	IEEE 1547.1:2005

Ensayos de detección de funcionamiento en isla de múltiples inversores fotovoltaicos conectados a red en paralelo / Performance tests for islanding detection of multiple grid-connected photovoltaic inverters in parallel

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Procedure of evaluation (par.4)	UNE 206006 IN:2011

Erection of electrical installations with rated voltages up to AC 1000 V and DC 1500 V - Part 4-712: Photovoltaic power-systems - Erection and safety requirements systems

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Functional safety (Annex A.3.1); - Voltage monitoring (Annex A.3.2); - Frequency monitoring (Annex A.3.3); - Direct current monitoring (Annex A.3.4); - Detection of island operation (Annex A.3.5); - Residual current monitoring (Annex A.3.6)	OVE/ONORM E 8001-4-712:2009

Grid Connection Code for RPPs in South Africa

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Tolerance of Frequency and Voltage Deviations (par.5); - Frequency Response (par.6); - Reactive Power Capabilities (par.7); - Reactive Power and Voltage Control Functions (par.8); - Power Quality (par.9); - Protection and Fault levels (par.10); - Active Power Constraint Functions (par.11)	Grid Connection Code for Renewable Power Plants (RPPs) connected to the Electricity Transmission System (TS) or the Distribution System (DS) in South Africa:2012 (Version 2.6)

Grid connection of energy systems via inverters - Part 2: Inverter requirements

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Power flow direction (par.4.3); - Power factor (par.4.4); - Harmonic currents (par.4.5); - Voltage fluctuations and flicker (par.4.6); - Impulse protection (par.4.7); - Transient voltage limits (par.4.8); - Direct current injection (par.4.9) (AS/NZS 3100 and AS/NZS 60950.1 excluded)	AS 4777.2:2005

Grid connection of energy systems via inverters - Part 3: Grid protection requirements

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Voltage flicker (par.4.4); - Impulse protection (par.4.5); - Disconnection device (par.5.2); - Voltage and frequency limits (passive anti-islanding protection) (par.5.3); - Active anti-islanding protection (par.5.5); - Reconnection procedure (par.5.6); - Security of protection settings (par.5.7); - Grid protection device tests (appendix B) (AS/NZS 3100 and AS/NZS 60950.1 excluded)	AS 4777.3:2005

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Grid integration of generator plants - Low-Voltage- Test requirements for generator units to be connected to and operated in parallel with low-Voltage distribution networks

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Rapid Voltage changes (par.5.1.2) - Flicker (par.5.1.3) -Harmonics and inter-harmonics (par 5.1.4) - Proof of the symmetrical behavior of rotary current converter units (par.5.2) -Proof of the behavior of the generation unit on the grid (par. 5.3) - Proof of NS protection (par. 5.4) - Connection conditions and sincronization (par. 5.5)	DIN V VDE V 0124-100:2012

Grid interconnection of embedded generation - Part 2: Small-scale embedded generation - Section 1: Utility interface

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Flicker (par.4.1.3); - Harmonics and waveform distortion (par.4.1.6); - Power factor (par.4.1.7); - Sincronization (par.4.1.8); - Overvoltage and undervoltage (par.4.2.2.3.2); - Overfrequency and underfrequency (par.4.2.2.3.3); - Prevention of islanding (par.4.2.2.4); - DC current injection (par.4.2.2.5)	NRS 097-2-1:2010

Metodi di misura dei campi elettromagnetici degli apparecchi elettrodomestici e similari in relazione all'esposizione umana

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
5.5.2 - Time domain evaluation of magnetic fields, 5.5.3 - Line spectrum evaluation, 5.5.4 - Simplified test methods	IEC 62233:2005 (ed.1); EN 62233:2008

Photovoltaic (PV) systems - Characteristics of the utility interface

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Voltage, current and frequency (par.4.1); - Normal voltage operating range (par.4.2); - Flicker (par.4.3); - DC injection (par.4.4); - Normal frequency operating range (par.4.5); - Harmonics and waveform distortion (par.4.6); - Power factor (par.4.7); - Loss of utility voltage (par.5.1); - Over/under voltage and frequency (par.5.2); - Islanding protection (par.5.3); Response to utility recovery (par.5.4) (Tutto tranne 5.5, 5.6, 5.7)	IEC 61727:2004; EN 61727:1995

Photovoltaic systems - Power conditioners - Procedure for measuring efficiency

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Efficiency measurement (par.4.5,6); - Loss measurements (par.7)	IEC 61683:1999; EN 61683:2000

Power generation systems connected to the low-voltage distribution network - Technical minimum requirements for the connection to and parallel operation with low-voltage distribution networks.

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
- Verification of the electrical properties (par.9); - Islanding detection (Annex D)	VDE-AR-N 4105:2011

Procedimento de ensaio de anti-ilhamento para inversores de sistemas fotovoltaicos conectados à rede elétrica / Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>
-Test for single or multi-phase inverter (par.6)	ABNT NBR IEC 62116:2012

Recommendations for the Connection of Type Tested Small-scale Embedded Generators (Up to 16A per Phase) in Parallel with Low-Voltage Distribution Systems

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>

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- Disconnection times (par.A1.3.1);
 - Over / Under Voltage (par.A1.3.2);
 - Over / Under Frequency (par.A1.3.3);
 - Loss of Mains (LoM) Protection (par.A1.3.4);
 - Re-connection (par.A1.3.5);
 - Frequency Drift and Step Change Stability test (par.A1.3.6);
 - Harmonics (par.A1.4.1);
 - Power Factor (par.A1.4.2);
 - Voltage Flicker (par.A1.4.3);
 - DC Injection (par.A1.4.4);
 - Short circuit Current Contribution (par.A1.4.6);
 - Self Monitoring - Solid State Disconnection (par.A1.4.7) (Type Verification Functional Testing of the Interface Protection (Appendix A1.3))
- ENA G83/2:2012

Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti AT ed MT delle imprese distributrici di energia elettrica

Denominazione della prova / Campi di prova

Metodo di prova

- Misura di correnti armoniche (par.N.3.1);
- Misura di fluttuazioni di tensione dovute a manovre di sezionamento/separazione (par.N.3.2);
- Misura di fluttuazioni di tensione (flicker) in condizioni di funzionamento continuo (par.N.3.3);
- Verifica del campo di funzionamento in tensione e frequenza (par.N.4);
- Verifica delle condizioni di sincronizzazione e presa di carico (par.N.5);
- Verifica dei requisiti costruttivi circa lo scambio di potenza reattiva (par.N.6);
- Verifica dei requisiti costruttivi circa la regolazione di potenza attiva (par.N.7);
- Verifica della insensibilità agli abbassamenti di tensione (VFRT capability) (par.N.8);
- Verifica della insensibilità alle richiuse automatiche in discordanza di fase (par.N.9)
- Misura di correnti armoniche (par.Nbis.3.1);
- Misura di fluttuazioni di tensione dovute a manovre di sezionamento/separazione (par.Nbis.3.2);
- Misura di fluttuazioni di tensione (flicker) in condizioni di funzionamento continuo (par.Nbis.3.3);
- Verifica del campo di funzionamento in tensione e frequenza (par.Nbis.4);
- Verifica delle condizioni di sincronizzazione e presa di carico (par.Nbis.5);
- Verifica dei requisiti costruttivi circa lo scambio di potenza reattiva (par.Nbis.6);
- Verifica dei requisiti costruttivi circa la regolazione di potenza attiva (par.Nbis.7);
- Verifica della insensibilità agli abbassamenti di tensione (VFRT capability) (par.Nbis.8);
- Verifica della insensibilità alle richiuse automatiche in discordanza di fase (par.Nbis.9)

CEI 0-16:2014-09 + V1:2014-12

Requisitos de conexiòn a la red elèctrica – Parte 1: Inversores para conexiòn a la red de distribuciòn / Requirements for connecting to the power system. Part 1: Grid-connected inverters

Denominazione della prova / Campi di prova

Metodo di prova

- Injection of direct current to main supply (par. 5.1);
- Behavior under isolation failure (par. 5.2);
- Detection of fault currents in the PV generator (par. 5.3);
- Disconnection due voltage and frequency (par 5.4);
- Automatic reconnection (par. 5.5);
- Detection of island operation (par. 5.6);
- Generation surges (par. 5.7);
- Network quality (par. 5.8);
- Reconnection out of sync (par. 5.9)

UNE 206007-1 IN:2013

Sicurezza degli apparati di conversione di potenza utilizzati in impianti fotovoltaici di Potenza. Parte 1: Prescrizioni generali

Denominazione della prova / Campi di prova

Metodo di prova

- 4 General testing requirements, 5 -Marking and documentation, 6 - Environmental requirements and conditions, 7 -Protection against electric shock and energy hazards, 8 - Protection against mechanical hazards, 9 Protection against fire hazards, 10 - Protection against sonic pressure hazards, 11 - Protection against liquid hazards, 12 - Chemical hazards, 13 Physical requirements, 14 - Components (eccetto 8.4, 8.5)

EN 62109-1: 2010 (ed.1.0) IEC 62109-1: 2010

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Sicurezza dei convertitori di potenza utilizzati negli impianti Fotovoltaici. Parte 2: Prescrizioni particolari per gli inverter

Denominazione della prova / Campi di prova

4 General testing requirements, 5 -Marking and documentation, 6 - Environmental requirements and conditions, 7 -Protection against electric shock and energy hazards, 8 - Protection against mechanical hazards, 9 Protection against fire hazards, 10 - Protection against sonic pressure hazards, 11 - Protection against liquid hazards, 12 - Chemical hazards, 13 Physical requirements, 14 - Components - Tutto tranne 8.4, 8.5

Metodo di prova

EN 62109-2: 2011 IEC 62109-2: 2011

Sistemas fotovoltaicos (FV) – Características da interface de conexão com a rede elétrica de distribuição / Photovoltaic (PV) systems – Characteristics of the utility interface

Denominazione della prova / Campi di prova

- Compatibility with the electrical grid (par.4);
- Personal safety and PV system protection (par. 5);
- External control (par. 6);
- Requirements for supportability to voltages caused by electrical faults (fault ride through - FRT) (par. 7)

Metodo di prova

ABNT NBR 16149:2013

Sistemas fotovoltaicos (FV) – Características da interface de conexão com a rede elétrica de distribuição – Procedimento de ensaio de conformidade / Photovoltaic (PV) systems – Characteristics of the utility interface – Conformity test procedure

Denominazione della prova / Campi di prova

- Flicker (par. 6.1);
- c.c. component injection (par. 6.2);
- Harmonics and wave-form distortion (par. 6.3);
- Power factor (par. 6.4);
- Reactive power injection / demand (par. 6.5);
- Voltage variation (par. 6.6);
- Frequency variation (par. 6.7);
- Active power control in overfrequency (par. 6.8);
- Reconnection (par. 6.9);
- Automatic out-of-phase reconnection (par. 6.10);
- Active power limitation (par. 6.11);
- Reactive power command (par. 6.12);
- Disconnection and reconnection of the photovoltaic system in the electrical grid (par. 6.13);
- Supportability requirements to undervoltages due to faults in the electrical grid (fault ride through - FRT)

Metodo di prova

ABNT NBR 16150:2013

Technical Guideline - Generating plants connected to the Medium-Voltage Network

Denominazione della prova / Campi di prova

- Verification of feed-in power (par. 6.2);
- Verification of network interactions (par. 6.3);
- Verification of the generating plant's behaviour connected to the network (par. 6.4);
- Verification of connection conditions (par. 6.5);
- Verification of the properties of disconnection equipment (par. 6.6)

Metodo di prova

BDEW:2008

Technical Guidelines for power generating units and farms - Part 3: Determination of electrical characteristics of power generating units and systems connected to MV, HV and EHV grids

Denominazione della prova / Campi di prova

- Active power provision (par. 4.2);
- Reactive power provision (par. 4.3);
- Voltage quality (par. 4.4);
- Disconnecting the PGU from the grid (par. 4.5);
- Verification of cut-in conditions (par. 4.6);
- Performance in the case of voltage dips (par. 4.7)

Metodo di prova

FGW Part 3 Revision 23:2013

Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures

Denominazione della prova / Campi di prova

-Test for single or multi-phase inverter (par.6)

Metodo di prova

IEC 62116:2014;
EN 62116:2014

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Legenda

CEI = Comitato Elettrotecnico Italiano
EN = European Committee for Standardization
ISO = International Organization for Standardization
IEC = International Electrotechnical Commission
ETSI = European Telecommunications Standards Institute
CISPR = Comité international spécial des perturbations radioélectriques
ABNT NBR = Associação Brasileira De Normas Técnicas
ANSI = American National Standards Institute
AS = Australian Standards
BDEW = Bundesverband der Energie- und Wasserwirtschaft (German Association of Energy and Water Industries)
DIN = Deutsches Institut für Normung
ENA = Energy Network Association
FCC = Federal Communications Commission
FGW = Fördergesellschaft Windenergie (Society for the Promotion of wind energy and other renewable energy)
IEEE = Institute of Electrical and Electronics Engineers
NRS = Specifications for the Electricity Supply Industry in collaboration with the South African Bureau of Standards (SABS)
ÖVE = Österreichischer Verband für Elektrotechnik (Austrian Standards Institute)
UNE = AENOR - Asociación Española de Normalización y Certificación
VDE = Verband der Elektrotechnik Elektronik Informationstechnik

ACCREDIA
Il Direttore del Dipartimento
(*Dr.ssa Silvia Tramontin*)

La decorrenza del presente elenco delle prove accreditate, coincide con la data di revisione del documento, posta in alto a destra.
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