



<b>UL International Italia Srl</b> Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L</b> Sede <b>A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>2</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

Misure di emissione / Emission measurements

CISPR 15:2013 +A1:2015  
CISPR 15:2018 (Escluse le lampade singole/Excluded single capped lamps)  
EN 55015:2013+A1:2015  
EN IEC 55015:2019  
(Escluse le lampade singole/Excluded single capped lamps)

EMC/RADIO

Prove di immunità / Immunity tests

IEC 61547:2009  
EN 61547:2009

EMC/RADIO

#### **Apparecchi e sistemi per la navigazione marittima e radiocomunicazione / Maritime navigation and radiocommunication equipment and system**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

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

IEC 60945:2002+COR1:2008  
EN 60945:2002  
(clauses 9 and 10)

EMC/RADIO

#### **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*

*Tecnica di prova*

*O&I*

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

IEC 61326-1:2012  
EN 61326-1:2013

EMC/RADIO

#### **Apparecchi Elettromedicali / Medical Electrical Equipment**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

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

IEC 60601-1-2:2007  
IEC 60601-1-2:2014  
EN 60601-1-2:2007+AC:2010  
EN 60601-1-2:2015

GRID

#### **Apparecchi industriali, scientifici e medicali/Industrial, scientific and medical equipment**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

Emission measurements

ICES-001 (Issue 4, June 2006)

EMC/RADIO

Misure di emissione / Emission measurements

CISPR 11:2015 + A1:2016+A2:2019  
CISPR 11:2009+A1:2010  
EN 55011:2016+A1:2017  
EN 55011 :2009+A1:2010

EMC/RADIO

#### **Apparecchi per la tecnologia dell'informazione / Information technology equipment**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

Misure di emissione / Emission measurements

CISPR 22:2008  
EN 55022:2010+AC: 2011

EMC/RADIO

#### **Apparecchi per la tecnologia dell'informazione / Information technology equipment**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

Prove di immunità / Immunity tests

CISPR 24:2010 +A1:2015  
EN 55024:2010+A1:2015

EMC/RADIO

#### **Apparecchiatura per la saldatura a resistenza / Resistance welding equipment**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

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

IEC 62135-2:2015  
EN 62135-2:2015

EMC/RADIO

#### **Apparecchiatura per la saldatura ad arco / Arc welding equipment**

*Denominazione della prova / Campi di prova*

*Metodo di prova*

*Tecnica di prova*

*O&I*

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

IEC 60974-10:2014 + A1:2015  
EN 60974-10:2014 + A1:2015

EMC/RADIO

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>3</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

**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>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione e prove di immunità / Emission measurements and immunity tests	IEC 61439-1:2011 EN 61439-1:2011	EMC/RADIO	

**Apparecchiature elettriche ed elettroniche / Electric and electronic equipment**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Electrical fast transient / burst immunity test	IEC 61000-4-4:2012 EN 61000-4-4:2012	EMC/RADIO	
Electrostatic discharge immunity test	IEC 61000-4-2:2008 EN 61000-4-2:2009	EMC/RADIO	
- Harmonic current measurement	IEC 61000-3-12:2011 EN 61000-3-12:2011	EMC/RADIO	
- Harmonic current measurement	IEC 61000-3-2:2014 IEC 61000-3-2:2018 EN 61000-3-2:2014 EN IEC 61000-3-2:2019	EMC/RADIO	
Immunity to conducted disturbances, induced by radio-frequency fields	IEC 61000-4-6:2013 EN 61000-4-6:2014	EMC/RADIO	
Prova di immunità a fluttuazioni di tensione / Voltage fluctuations immunity test	IEC 61000-4-14:1999+A1:2001+A2: 2009 EN 61000-4-14:1999+A1:2004+A2: 2009	EMC/RADIO	
Prova di immunità a onde oscillatorie / Ring wave immunity test	IEC 61000-4-12:2006 IEC 61000-4-12:2017 EN 61000-4-12:2006 EN 61000-4-12:2017	EMC/RADIO	
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 EN 61000-4-29:2000	EMC/RADIO	
Prova di immunità ai campi magnetici a frequenza di rete / Power frequency magnetic field immunity test	IEC 61000-4-8:2009 EN 61000-4-8:2010	EMC/RADIO	
Prova di immunità ai disturbi condotti di modo comune (0Hz to 150kHz) / Immunity to conducted common mode disturbances (0Hz to 150kHz)	IEC 61000-4-16:1998+A1:2001+A2: 2009 IEC 61000-4-16:2015 EN 61000-4-16:1998+A1:2004+A2: 2011 EN 61000-4-16:2016	EMC/RADIO	
Prova di immunità alle variazioni della frequenza di alimentazione / variation of power frequency, immunity test	IEC 61000-4-28:1999+A1:2001+A2: 2009 EN 61000-4-28:2000+A1:2004+A2: 2009	EMC/RADIO	
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	EMC/RADIO	

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>	
	Revisione: <b>15</b>	Data: <b>23/06/2020</b>
	pag. <b>4</b> di <b>39</b>	UNI CEI EN ISO/IEC 17025:2018

Surge immunity test	IEC 61000-4-5:2014+A1:2017 EN 61000-4-5:2014+A1:2017	EMC/RADIO
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+A2: 2015 EN 61000-4-13:2002+A1:2009+A2: 2016	EMC/RADIO
Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests	IEC 61000-4-11:2004+A1:2017 EN 61000-4-11:2004+A1:2017	EMC/RADIO
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	EMC/RADIO
- Voltage changes, voltage fluctuations and flicker measurement	IEC 61000-3-3:2013+A1:2017 EN 61000-3-3:2013+A1:2019	EMC/RADIO
- Voltage changes, voltage fluctuations and flicker measurement	IEC 61000-3-11:2017 IEC 61000-3-11:2000 EN 61000-3-11:2000 EN IEC 61000-3-11:2019	EMC/RADIO

#### **Apparecchiature elettriche ed elettroniche e materiali metallici / Electric and electronic equipment and metal materials**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Test Db: Damp heat, cyclic (12 h + 12 h cycle)	IEC 60068-2-30:2005 EN 60068-2-30:2005	ENV	
Test Ka: Salt Mist	IEC 60068-2-11:1981 EN 60068-2-11:1999	ENV	
Test Kb: Salt mist, cyclic (sodium chloride solution) (Limitata alla Neutral Salt Solution / Limited to Neutral Salt Solution)	IEC 60068-2-52:2017 EN 60068-2-52:2018	ENV	
Test Na, Nb: change of temperature (Test Nc not covered)	IEC 60068-2-14:2009 EN 60068-2-14:2009	ENV	
Range di temperatura: -40°C a 150°C / Temperature Range: -40°C to 150°C			
For test Nb max 2K/min)			
Test Z/AD: Composite temperature/humidity cyclic test (Range di temperatura: -10°C a 65°C / Temperature Range: -10°C a 65°C)	IEC 60068-2-38:2009 EN 60068-2-38:2009	ENV	

#### **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>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione / Emission measurements	IEC 61000-6-4:2006+A1:2010 IEC 61000-6-4:2018 EN 61000-6-4:2007+A1:2011 EN IEC 61000-6-4:2019	EMC/RADIO	
Prove di immunità / Immunity tests	IEC 61000-6-2:2005 IEC 61000-6-2:2016 EN 61000-6-2:2005 EN IEC 61000-6-2:2019	EMC/RADIO	

#### **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>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione / Emission measurements	IEC 61000-6-3:2006+A1:2010 EN 61000-6-3:2007+A1:2011+ AC:2012	EMC/RADIO	

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>	
	Revisione: <b>15</b>	Data: <b>23/06/2020</b>
	pag. <b>5</b> di <b>39</b>	UNI CEI EN ISO/IEC 17025:2018

Prove di immunità / Immunity tests

IEC 61000-6-1:2005  
IEC 61000-6-1:2016  
EN 61000-6-1:2007  
EN IEC 61000-6-1:2019

EMC/RADIO

**Apparecchiature elettriche, elettroniche e meccaniche, componenti e materiali / Electric, electronic and mechanical equipment, components and materials**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Test A: Cold (Limite di temperatura -40°C / Temperature limit -40°C)	IEC 60068-2-1:2007 EN 60068-2-1:2007	ENV	
Test B: Dry heat (Limite di temperatura 150°C / Temperature limit 150°C) (Limite di temperatura 150°C / Temperature limit 150°C)	IEC 60068-2-2:2007 EN 60068-2-2:2007	ENV	
Test Cab: Damp heat, steady state	IEC 60068-2-78:2012 EN 60068-2-78:2013	ENV	
Test Eh: Hammer tests	IEC 60068-2-75:2014 EN 60068-2-75:2014	ENV	

**Apparecchiature multimediali / Multimedia Equipment**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione / Emission measurements	CISPR 32:2015+COR1:2016+A1:2019 EN 55032:2015+AC:2016 (Esclusi ricevitori broadcast e apparecchi audio/video / Excluded broadcast receiver and audio/video equipment)	EMC/RADIO	
Prove di immunità / Immunity tests (Esclusi ricevitori broadcast, apparecchi audio/video e dispositivi con porta xDSL / Excluded broadcast receiver, audio/video equipment and equipment with xDSL PORT)	CISPR 35:2016 EN 55035:2017	EMC/RADIO	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione e prove di immunità / Emission measurements and immunity tests	IEC 61800-3:2004 + A1:2011 IEC 61800-3:2017 EN 61800-3:2004 + A1:2012 EN IEC 61800-3:2018	EMC/RADIO	

**Convertitori connessi alla rete e protezione di interfaccia / Grid connected converters and interface protections**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Annex B - Test on inverters for indirectly connected power systems	CEI 0-21:2019-04	GRID	
Appendix B (Power factor test), Appendix C (Harmonic current limit test), Appendix D (Transient voltage limit test), Appendix E (DC injection test), Appendix F (Active anti-islanding test), Appendix G (Voltage and frequency limits (Passive anti-islanding protection) test), Appendix H (Limits for sustained operation), Appendix I (Demand and power quality response mode testing including disconnection on external signal), Appendix J (Multiple inverter testing)	AS/NZS 4777.2:2015	GRID	
Islanding prevention measures	IEC 62116:2014 EN 62116:2014	GRID	
- 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 (VDE V 0124-100):2012	GRID	

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>	
	Revisione: <b>15</b>	Data: <b>23/06/2020</b>
	pag. <b>6 di 39</b>	UNI CEI EN ISO/IEC 17025:2018

- 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 (Version 2.8 - 2014)

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

IEEE 1547.1:2005+IS1:2010 GRID

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

IEEE 1547:2003 GRID

#### **Convertitori connessi alla rete e protezione di interfaccia/Grid connected converters and interface protections**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
- Efficiency measurement (par.4,5,6); - Loss measurements (par.7) (Tutto)	IEC 61683:1999 EN 61683:2000	GRID	
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)	CEI 0-16:2019-04	GRID	
Vedere dettagli della norma DIN V VDE V 0124-100:2012 (Tutto)	VDE-AR-N 4105:2011	GRID	

#### **Dispositivi a radiofrequenza, apparati digitali/RF devices, digital apparatus**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione / Emission measurements	ICES-003 (Issue 6, January 2016)	EMC/RADIO	

#### **Elettrodomestici, utensili elettrici e apparecchi simili / Household appliances, Electric tools and similiar apparatus**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</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 EN 62233:2008	EMC/RADIO	
Misure di emissione / Emission measurements	CISPR 14-1:2005+A1:2008+A2:2011 CISPR 14-1:2016+COR1:2016 EN 55014-1:2006+A1:2009+A2:2011 EN 55014-1:2017	EMC/RADIO	
Prove di immunità / Immunity tests	CISPR 14-2:2015 EN 55014-2:2015	EMC/RADIO	

#### **Fire hazard testing**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Abnormal heat - Ball pressure test method	IEC 60695-10-2:2014 EN 60695-10-2:2014	SICU	
Glowing/hot-wire based test methods - Glow-wire flammability index (GWFI) test method for materials	IEC 60695-2-12:2010+A1:2014	SICU	

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>	
	Revisione: <b>15</b>	Data: <b>23/06/2020</b>
	pag. <b>7</b> di <b>39</b>	UNI CEI EN ISO/IEC 17025:2018

Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials	IEC 60695-2-13:2010+A1:2014	SICU
Glowing/hot-wire based test methods –Glow-wire flammability test method for end products	IEC 60695-2-11:2014	SICU
Glowinghot-wire based test methods – Glow-wire apparatus and common test procedure	IEC 60695-2-10:2013	SICU
Test flames – 50 W horizontal and vertical flame test methods	IEC 60695-11-10:2013	SICU
Test flames – Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	IEC 60695-11-5:2016	SICU

#### Gradi di protezione forniti dalle coperture / Degrees of protection provided by enclosures

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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 (Escluso grado IPX9 / IPX9 excluded) (Escluso grado IPX9 / IPX9 excluded)	IEC 60529:1989+A1:1992+A2:2013 EN 60529:1991+ A1:2000+A2:2013+AC:2016-12	SICU	
IPX8 limitato a 2meters/IPX8 limited to 2 meters)			

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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	SICU	

#### Industrial, Scientific, and Medical Equipment (FCC Part 18)

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Electromagnetic compatibility - Radiated and conducted emissions (up to 18 GHz)	FCC MP-5 (February 1986) FCC Part 18	EMC/RADIO	

#### Interruttori automatici / Circuit-breakers

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Emission measurements and immunity tests (Annexes F.4, F.5 and J)	IEC 60947-2:2016+COR1:2016+A1:2019 IEC 60947-2:2006+A1:2009+A2:2013 EN 60947-2:2017 EN 60947-2:2006 + A1:2009 + A2:2013 (allegati F e J / Annexes F and J)	EMC/RADIO	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> <span style="float: right;">Data: <b>23/06/2020</b></span>
	pag. <b>8</b> di <b>39</b> <span style="float: right;">UNI CEI EN ISO/IEC 17025:2018</span>

Prove di immunità / Immunity tests

IEC  
61543:1995+A1:2004+A2:2005  
EN  
61543:1995+AC:1997+A11:2003  
+A11:2003/AC:2004+A12:2005+  
A2:2006

EMC/RADIO

**Involucri per apparecchiature elettriche / Enclosures for electrical equipment**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	IEC 62262:2002 EN 62262:2002	IP	

**Macchine utensili / Machine tools**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
Misure di emissione / Emission measurements	EN 50370-1:2005	EMC/RADIO	
Prove di immunità / Immunity tests	EN 50370-2:2003	EMC/RADIO	

**Requisiti di sicurezza per i sistemi e le apparecchiature di conversione elettronica di potenza / Safety requirements for power electronic converter systems and equipment**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------





<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>10 di 39</b> UNI CEI EN ISO/IEC 17025:2018

**Sicurezza degli apparecchi d'uso domestico e similare - Parte 2: Norme particolari per apparecchi bagnomaria per uso collettivo**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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 overvoltages, 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, Annex A (informative) Routine tests, - Annex B (normative) - Appliances powered by rechargeable batteries that are recharged in the appliance, Annex C (normative) - Ageing test on motors, Annex D (normative) - Thermal motor protectors, Annex E (normative) - Needle-flame test, Annex G (normative) Safety isolating transformers, Annex H (normative) - Switches, Annex I (normative) - Motors having basic insulation that is inadequate for the rated voltage of the appliance, Annex J (normative) - Coated printed circuit boards, Annex K (normative) Overvoltage categories, Annex L (informative) - Guidance for the measurement of clearances and creepage distances, Annex M (normative) - Pollution degree, Annex N (normative) - Proof tracking test, Annex O (informative) Selection and sequence of the tests of Clause 30, - Annex P (informative) Guidance for the application of this standard to appliances used in tropical climates, Annex Q (informative) - Sequence of tests for the evaluation of electronic circuits, Annex R (normative) - Software evaluation, Annex S (normative) Battery-operated appliances powered by batteries that are non-rechargeable or not recharged in the appliance (Esclusi par. 22.16 e 22.32 / Excluded cl. 22.16 and 22.32)	IEC 60335-2-50:2002+A1:2008+A2: 2017 EN 60335-2-50:2003+A1:2008+corri gendum Sep. 2007	SICU	



<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>12</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU  
 Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-14:2006+A1:2008+A2:  
 - Heating, 13 - Leakage current and electric strength at operating 2012  
 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 IEC 60335-2-14:2016+A1:2019  
 Leakage current and electric strength, 17 - Overload protection of EN 60335-2-14:2006 +A1:2008  
 transformers and associated circuits, 18 - Endurance, 19 - Abnormal +A11:2012+corrigendum  
 operation, 20 - Stability and mechanical hazards, 21 - Mechanical Feb.2007 +A11/AC:2013 +  
 strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 A12:2016 + A11:2012/AC:2016  
 - 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

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-32:2002+A1:2008+A2: - Heating, 13 - Leakage current and electric strength at operating 2013 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 IEC 60335-2-32:2019 Leakage current and electric strength, 17 - Overload protection of EN transformers and associated circuits, 18 - Endurance, 19 - Abnormal 60335-2-32:2003+A1:2008+A2: operation, 20 - Stability and mechanical hazards, 21 - Mechanical 2015 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			

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-52:2002+A1:2008+A2: - Heating, 13 - Leakage current and electric strength at operating 2017 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN Leakage current and electric strength, 17 - Overload protection of 60335-2-52:2003+A1:2008+A11 transformers and associated circuits, 18 - Endurance, 19 - Abnormal :2010+A11/EC:201+A12:2019 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			

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-78:2002+A1:2008+A2: - Heating, 13 - Leakage current and electric strength at operating 2019 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN 60335-2-78:2003+A1:2008 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			



<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>	
	Revisione: <b>15</b>	Data: <b>23/06/2020</b>
	pag. <b>14</b> di <b>39</b>	UNI CEI EN ISO/IEC 17025:2018

## Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per apparecchi di trattamento delle acque con radiazioni UV

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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 overvoltages, 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, Annex A (informative) Routine tests, - Annex B (normative) - Appliances powered by rechargeable batteries that are recharged in the appliance, Annex C (normative) - Ageing test on motors, Annex D (normative) - Thermal motor protectors, Annex E (normative) - Needle-flame test, Annex G (normative) Safety isolating transformers, Annex H (normative) - Switches, Annex I (normative) - Motors having basic insulation that is inadequate for the rated voltage of the appliance, Annex J (normative) - Coated printed circuit boards, Annex K (normative) Overvoltage categories, Annex L (informative) - Guidance for the measurement of clearances and creepage distances, Annex M (normative) - Pollution degree, Annex N (normative) - Proof tracking test, Annex O (informative) Selection and sequence of the tests of Clause 30, - Annex P (informative) Guidance for the application of this standard to appliances used in tropical climates, Annex Q (informative) - Sequence of tests for the evaluation of electronic circuits, Annex R (normative) - Software evaluation, Annex S (normative) Battery-operated appliances powered by batteries that are non-rechargeable or not recharged in the appliance (Esclusi par. 22.16 e 22.32 / Excluded cl. 22.16 and 22.32	IEC 60335-2-109:2010+A1:2013+A2 :2016 EN 60335-2-109:2010+A1:2018+A2 :2018	SICU	
Limitation: par. 15 IPX8 solo per oggetti di piccole dimensione fino a 2-3metri / Limitation: cl. 15 IPX8 only for small samples up to 2-3m)			

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008 EN 60335-2-55:2003+A1:2008+A11 :2018	SICU	

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>15</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

**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	Tecnica di prova	O&I
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+A1:2008 +A2:2014 EN 60335-2-101:2002 +A1:2008 +A2:2014	SICU	

**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	Tecnica di prova	O&I
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+A1:2005+A2:2007 IEC 60335-2-24:2010+A1:2012+A2:2017 EN 60335-2-24:2003+A1:2005+A2:2007+A11:2004+A12:2009+corrigendum Aug.2010 EN 60335-2-24:2010+A1:2019+A2:2019	SICU	

**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	Tecnica di prova	O&I
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+A1:2004 +A2:2007 IEC 60335-2-54:2008+A1:2015+A2:2019 EN 60335-2-54:2003+A1:2004+A2:2007+A11:2006 EN 60335-2-54:2008 +A11:2012+A11:2012/AC:2015 + A1:2015	SICU	

**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	Tecnica di prova	O&I
--	-----------------	------------------	-----





<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> <span style="float: right;">Data: <b>23/06/2020</b></span>
	pag. <b>17</b> di <b>39</b> <span style="float: right;">UNI CEI EN ISO/IEC 17025:2018</span>

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+A1:2005+A2:2007 IEC 60335-2-89:2010+A1:2012+A2:2015 IEC 60335-2-89:2019 EN 60335-2-89:2002+A1:2005+A2:2007+A11:2004+corrigendum Aug.2010 EN 60335-2-89:2010+AC:2014+A1:2016+A2:2017	SICU
--	---	------

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008+A2:2017 EN 60335-2-49:2003+A1:2008+A11:2012+A2:2019+corrigendum Sep.2007	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 - Marking 8 - Protection against access to live parts 10 - Power input 11 - Heating 13 - Leakage current and el. strength at op. temp 14 - Transient overvoltages 15 - Moisture resistance 16 - Leakage current and el. Strength 17- Overload protection of transformers and associated circuits 18 - Endurance 19 - Abnormal Operations 20 - Stability and mechanical hazards 21 - Mechanical strength 22 - Construction 23 - Internal wiring 24 - Components 25 - Supply connection and ext. flexible cords 26 - Terminals for external conductors 27 - Provision for earthing 28 - Screws and connections 29 - Cl./Cr. distances and solid insulation 30 - Resistance to heat and fire 31 Resistance to rusting 32 Radiation, toxicity and similar hazards Annex AA Annex BB	IEC 60335-2-11:2008+A1:2012+A2:2015 IEC 60335-2-11:2019 EN 60335-2-11:2010+A11:2012+A1:2015	SICU	

UL International Italia Srl Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>18</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

**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	Tecnica di prova	O&I
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+A1: 2004 +A2:2006 IEC 60335-2-2:2009+A1:2012+A2:2 016 IEC 60335-2-2:2019 EN 60335-2-2:2003+A1:2004+A2:2 006+A11:2010+A11/EC:2012 EN 60335-2-2:2010+A11:2012+A1: 2013	SICU	

**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	Tecnica di prova	O&I
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 IEC 60335-2-103:2006+A1:2010 IEC 60335-2-103:2015+A1:2017+A2 :2019 EN 60335-2-103:2003 +A11:2009 EN 60335-2-103:2015	SICU	

**Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per brasiere elettriche di cottura multiuso per uso collettivo**

Denominazione della prova / Campi di prova	Metodo di prova	Tecnica di prova	O&I
--	-----------------	------------------	-----

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>19 di 39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-39:2012+A1:2017 SICU  
 Starting of motor-operated appliances, 10 Power input and current, 11 EN  
 - Heating, 13 - Leakage current and electric strength at operating 60335-2-39:2003+A1:2004+A2:  
 temperature, 14 - Transient overvoltages, 15 - Moisture resistance, 16 2008+corrigendum Sep. 2007  
 - 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, Annex A (informative) Routine  
 tests, - Annex B (normative) - Appliances powered by rechargeable  
 batteries that are recharged in the appliance, Annex C (normative) -  
 Ageing test on motors, Annex D (normative) - Thermal motor  
 protectors, Annex E (normative) - Needle-flame test, Annex G  
 (normative) Safety isolating transformers, Annex H (normative) -  
 Switches, Annex I (normative) - Motors having basic insulation that is  
 inadequate for the rated voltage of the appliance, Annex J (normative)  
 - Coated printed circuit boards, Annex K (normative) Overvoltage  
 categories, Annex L (informative) - Guidance for the measurement of  
 clearances and creepage distances, Annex M (normative) - Pollution  
 degree, Annex N (normative) - Proof tracking test, Annex O  
 (informative) Selection and sequence of the tests of Clause 30, -  
 Annex P (informative) Guidance for the application of this standard to  
 appliances used in tropical climates, Annex Q (informative) -  
 Sequence of tests for the evaluation of electronic circuits, Annex R  
 (normative) - Software evaluation, Annex S (normative)  
 Battery-operated appliances powered by batteries that are  
 non-rechargeable or not recharged in the appliance (Esclusi par. 22.16  
 e 22.32 / Excluded cl. 22.16 and 22.32)

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2006+A2: 2008 IEC 60335-2-31:2012+A1:2016+A2: 2018 EN 60335-2-31:2003+A1:2006+A2: 2009+corrigendum Dec.2005 EN 60335-2-31:2014	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------



<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>21</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2004+A2:2008 IEC 60335-2-75:2012+A1:2015+A2:2018 EN 60335-2-75:2004+A1:2005+A2:2008+A11:2006+A12:2010	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2005 +A2:2008 IEC 60335-2-3:2012+A1:2015 EN 60335-2-3:2002 +A1:2005 +A2:2008 +A11:2010 +A11/AC:2012 EN 60335-2-3:2016	SICU	

**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**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008+A2:2017 EN 60335-2-42:2003+A1:2008+A11 :2012+corrigendum Sep.2007	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------



<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>23</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU  
Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-43:2002+A1:2005+A2:  
- Heating, 13 - Leakage current and electric strength at operating 2008  
temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 IEC 60335-2-43:2017  
Leakage current and electric strength, 17 - Overload protection of EN  
transformers and associated circuits, 18 - Endurance, 19 - Abnormal 60335-2-43:2003+A1:2006+A2:  
operation, 20 - Stability and mechanical hazards, 21 - Mechanical 2008  
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

**Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2: Norme particolari per gli apparecchi per il trattamento dei pavimenti e per gli strofina-pavimenti per pavimenti bagnati**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 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, 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 60335-2-10:2002+A1:2008 EN 60335-2-10:2003+A1:2008	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-48:2002+A1:2008+A2: - Heating, 13 - Leakage current and electric strength at operating 2017 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN Leakage current and electric strength, 17 - Overload protection of 60335-2-48:2003+A1:2008+A11 transformers and associated circuits, 18 - Endurance, 19 - Abnormal :2012+A2:2019+corrigendum operation, 20 - Stability and mechanical hazards, 21 - Mechanical Sep.2007 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		SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------





UL International Italia Srl Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L</b> Sede <b>A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>25</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

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

Denominazione della prova / Campi di prova	Metodo di prova	Tecnica di prova	O&I
7 - Marking	IEC 60335-2-5:2012+A1:2018	SICU	
8 - Protection against access to live parts	EN 60335-2-5:2015+A11:2019		
10 - Power input			
11 - Heating			
13 - Leakage current and el. strength at op. temp			
14 - Transient overvoltages			
15 - Moisture resistance			
16 - Leakage current and el. Strength			
17- Overload protection of transformers and associated circuits			
18 - Endurance			
19 - Abnormal Operations			
20 - Stability and mechanical hazards			
21 - Mechanical strength			
22 - Construction			
22.103 - Construction			
23 - Internal wiring			
24 - Components			
25 - Supply connection and ext. flexible cords			
26 - Terminals for external conductors			
27 - Provision for earthing			
28 - Screws and connections			
29 - Cl./Cr. distances and solid insulation			
30 - Resistance to heat and fire			
31 Resistance to rusting			
32 Radiation, toxicity and similar hazards			
Annex AA			

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

Denominazione della prova / Campi di prova	Metodo di prova	Tecnica di prova	O&I
7 - Marking	IEC	SICU	
8 - Protection against access to live parts	60335-2-7:2008+A1:2001+A2:2		
10 - Power input	016		
11 - Heating	IEC 60335-2-7:2019		
13 - Leakage current and el. strength at op. temp	EN		
14 - Transient overvoltages	60335-2-7:2010+A11:2013+A2:		
15 - Moisture resistance	2019		
16 - Leakage current and el. Strength			
17- Overload protection of transformers and associated circuits			
18 - Endurance			
19 - Abnormal Operations			
20 - Stability and mechanical hazards			
21 - Mechanical strength			
22 - Construction			
23 - Internal wiring			
24 - Components			
25 - Supply connection and ext. flexible cords			
26 - Terminals for external conductors			
27 - Provision for earthing			
28 - Screws and connections			
29 - Cl./Cr. distances and solid insulation			
30 - Resistance to heat and fire			
31 Resistance to rusting			
32 Radiation, toxicity and similar hazards			
Annex AA			

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>26</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008+A2:2015 IEC 60335-2-58:2017 EN 60335-2-58:2005+A1:2008+A11 :2010+corrigendum Aug.2007+A2:2015+A12:2016	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008+A2 :2013 IEC 60335-2-105:2016+A1:2019 EN 60335-2-105:2005+A1:2008+A1 1:2010+A2:2020	SICU	

**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**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2005+A2:2005 IEC 60335-2-40:2013+A1:2016 IEC 60335-2-40:2018 EN 60335-2-40:2003+A1:2006+A2:2009+A11:2004+A12:2005+A13 :2012+corrigendum Apr.2006+corrigendum Aug.2010+A13:2012/AC:2013	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>	
	Revisione: <b>15</b>	Data: <b>23/06/2020</b>
	pag. <b>27</b> di <b>39</b>	UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-28:2002+A1:2008 SICU  
Starting of motor-operated appliances, 10 Power input and current, 11 EN 60335-2-28:  
- Heating, 13 - Leakage current and electric strength at operating 2003+A1:2008+A11:2018  
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

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-64:1991+A1:1997 SICU Starting of motor-operated appliances, 10 Power input and current, 11 IEC - Heating, 13 - Leakage current and electric strength at operating 60335-2-64:2002+A1:2007+A2: temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 2017 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal EN operation, 20 - Stability and mechanical hazards, 21 - Mechanical 60335-2-64:2000+A1:2002+corri strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 gendum Jun.2002 - 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			

**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**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-72:2002+A1:2005 SICU Starting of motor-operated appliances, 10 Power input and current, 11 IEC 60335-2-72:2012 - Heating, 13 - Leakage current and electric strength at operating IEC 60335-2-72:2016 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN 60335-2-72:2009 Leakage current and electric strength, 17 - Overload protection of transformers and associated circuits, 18 - Endurance, 19 - Abnormal EN 60335-2-72:2012 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			

**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**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>28 di 39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-68:2002+A1:2005 SICU  
 Starting of motor-operated appliances, 10 Power input and current, 11 +A2:2007  
 - Heating, 13 - Leakage current and electric strength at operating IEC 60335-2-68:2012+A1:2016  
 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN 60335-2-68:2009  
 Leakage current and electric strength, 17 - Overload protection of EN 60335-2-68:2012  
 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

**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**

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2004+A2: 2008 IEC 60335-2-97:2016+A1:2019 EN 60335-2-97:2006+A2:2010+A11 :2008+A12:2015	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2004+A2: 2008 IEC 60335-2-13:2009+A1:2016 EN 60335-2-13:2003+A1:2004+A2: 2008 EN 60335-2-13:2010+A11:2012+A1 :2019	SICU	

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> <span style="float: right;">Data: <b>23/06/2020</b></span>
	pag. <b>29</b> di <b>39</b> <span style="float: right;">UNI CEI EN ISO/IEC 17025:2018</span>

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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 overvoltages, 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, Annex A (informative) Routine tests, - Annex B (normative) - Appliances powered by rechargeable batteries that are recharged in the appliance, Annex C (normative) - Ageing test on motors, Annex D (normative) - Thermal motor protectors, Annex E (normative) - Needle-flame test, Annex G (normative) Safety isolating transformers, Annex H (normative) - Switches, Annex I (normative) - Motors having basic insulation that is inadequate for the rated voltage of the appliance, Annex J (normative) - Coated printed circuit boards, Annex K (normative) Overvoltage categories, Annex L (informative) - Guidance for the measurement of clearances and creepage distances, Annex M (normative) - Pollution degree, Annex N (normative) - Proof tracking test, Annex O (informative) Selection and sequence of the tests of Clause 30, - Annex P (informative) Guidance for the application of this standard to appliances used in tropical climates, Annex Q (informative) - Sequence of tests for the evaluation of electronic circuits, Annex R (normative) - Software evaluation, Annex S (normative) Battery-operated appliances powered by batteries that are non-rechargeable or not recharged in the appliance (Esclusi par. 22.16 e 22.32 / Excluded cl. 22.16 and 22.32)	IEC 60335-2-47:2002+A1:2008+A2:2017 EN 60335-2-47:2003+A1:2008+A11:2012+A2:2019+corrigendum Sep. 2007	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008+A2:2017 EN 60335-2-38:2003+A1:2008+corri gendum Aug.2007	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------

Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>30 di 39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU  
Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-41:2002+A1:2004+A2:  
- Heating, 13 - Leakage current and electric strength at operating 2009  
temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 IEC 60335-2-41:2012  
Leakage current and electric strength, 17 - Overload protection of EN  
transformers and associated circuits, 18 - Endurance, 19 - Abnormal 60335-2-41:2003+A1:2004+A2:  
operation, 20 - Stability and mechanical hazards, 21 - Mechanical 2010  
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

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-8:2002+A1:2005+A2:2 - Heating, 13 - Leakage current and electric strength at operating 008 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 IEC Leakage current and electric strength, 17 - Overload protection of 60335-2-8:2012+A1:2015+A2:2 transformers and associated circuits, 18 - Endurance, 19 - Abnormal 018 operation, 20 - Stability and mechanical hazards, 21 - Mechanical EN strength, 22 - Construction, 23 - Internal wiring, 24 - Components, 25 60335-2-8:2003+A1:2005+A2:2 - Supply connection and external flexible cords, 26 - Terminal s for 008 external conductors, 27 - Provision for earthing, 28 - Screws and EN 60335-2-8:2015+A1:2016 connections, 29 - Clearances, creepage distances and solid insulation, 30 - Resistance to heat and fire, 31 - Resistance to rusting, 32 - Radiation, toxicity and similar hazards			

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-73:2002+A1:2006+A2: - Heating, 13 - Leakage current and electric strength at operating 2009 temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN Leakage current and electric strength, 17 - Overload protection of 60335-2-73:2003+A1:2006+A2: transformers and associated circuits, 18 - Endurance, 19 - Abnormal 2009 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			

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
---	------------------------	-------------------------	----------------

<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>31 di 39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC SICU  
Starting of motor-operated appliances, 10 Power input and current, 11 60335-2-74:2002+A1:2006+A2:  
- Heating, 13 - Leakage current and electric strength at operating 2009  
temperature, 14 - Transient overvoltage, 15 - Moisture resistance, 16 EN  
Leakage current and electric strength, 17 - Overload protection of 60335-2-74:2003+A1:2006+A2:  
transformers and associated circuits, 18 - Endurance, 19 - Abnormal 2009+A11:2018  
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

**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	Tecnica di prova	O&I
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 60335-2-62:2002+A1:2008 IEC 60335-2-62:2019 EN 60335-2-62:2003+A1:2008+corri gendum Aug.2007	SICU	

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

Denominazione della prova / Campi di prova	Metodo di prova	Tecnica di prova	O&I
--	-----------------	------------------	-----

<b>UL International Italia Srl</b> Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>32</b> di <b>39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-21:2012+A1:2018 SICU  
Starting of motor-operated appliances, 10 Power input and current, 11 EN  
- Heating, 13 - Leakage current and electric strength at operating temperature, 14 - Transient overvoltages, 15 - Moisture resistance, 16 2008 60335-2-21:2003+A1:2005+A2:  
- 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, Annex A (informative) Routine tests, - Annex B (normative) - Appliances powered by rechargeable batteries that are recharged in the appliance, Annex C (normative) - Ageing test on motors, Annex D (normative) - Thermal motor protectors, Annex E (normative) - Needle-flame test, Annex F (normative) - Capacitors, Annex G (normative) Safety isolating transformers, Annex H (normative) - Switches, Annex I (normative) - Motors having basic insulation that is inadequate for the rated voltage of the appliance, Annex J (normative) - Coated printed circuit boards, Annex K (normative) Overvoltage categories, Annex L (informative) - Guidance for the measurement of clearances and creepage distances, Annex M (normative) - Pollution degree, Annex N (normative) - Proof tracking test, Annex O (informative) Selection and sequence of the tests of Clause 30, - Annex P (informative) Guidance for the application of this standard to appliances used in tropical climates, Annex Q (informative) - Sequence of tests for the evaluation of electronic circuits, Annex R (normative) - Software evaluation, Annex S (normative) Battery-operated appliances powered by batteries that are non-rechargeable or not recharged in the appliance, Annex T (normative) - UV-C radiation effect on non-metallic materials

---

**Sicurezza degli apparecchi elettrici d'uso domestico e simile - Parte 2: Norme particolari per scaldacqua istantanei***Denominazione della prova / Campi di prova**Metodo di prova**Tecnica di prova**O&I*





<b>UL International Italia Srl</b>  Via delle Industrie, 6 20061 Carugate MI	Numero di accreditamento: <b>1363 L Sede A</b>
	Revisione: <b>15</b> Data: <b>23/06/2020</b>
	pag. <b>34 di 39</b> UNI CEI EN ISO/IEC 17025:2018

7 Marking and instructions, 8 Protection against access to live parts, 9 IEC 60335-2-88:2002 SICU  
Starting of motor-operated appliances, 10 Power input and current, 11 EN 60335-2-88:2002  
- 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)

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2008+A2: 2011 EN 60335-2-45:2002+A1:2008+A2: 2012	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2004+A2: 2008 IEC 60335-2-60:2017 EN 60335-2-60:2003+A1:2005+A2: 2008+A11:2010+A12:2010	SICU	

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

<i>Denominazione della prova / Campi di prova</i>	<i>Metodo di prova</i>	<i>Tecnica di prova</i>	<i>O&amp;I</i>
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+A1:2004+A2: 2008 IEC 60335-2-80:2015 EN 60335-2-80:2003+A1:2004+A2: 2009	SICU	









