

STANDARD INFORMATION

Standard Number: UL 621
Standard Name: Ice Cream Makers
Standard Edition and Issue Date: 7th Edition Dated May 7, 2010
Date of Revision: March 1, 2018
Date of Previous Revision of Standard: February 15, 2017

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **January 31, 2020**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes: The following revision to ANSI/UL 621 includes revisions to Control Requirements including the deletion of the option to use controls certified to UL 873 and UL 353.

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
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Additions to existing requirements are underlined and deletions are shown lined out below.

17 Info **Switches and Controllers**

Purpose of the control	Applicable standards
Temperature sensing control	UL 873/UL 244A ; or UL 60730-1 and UL 60730-2-9 UL 873/UL 244A ; or
Pressure controls	UL 873/UL 244A ; or UL 508; or UL 60730-1 and UL 60730-2-6
Motor and speed controls	UL 873 ; or UL 508; or UL 508C; or UL 244A; or UL 60730-1
Timers	UL 244A; or UL 60730-1 and UL 60730-2-7
Liquid level controls	UL 244A; or UL 873 ; or UL 508; or UL 60730-1 and UL 60730-2-15
Limit controls	UL 353 60730-1 and UL 60730-2-6 or UL 60730-2-9

Table 17.2

Table 17.4

Functional safety test parameters /severity levels etc.	Hardware only	Software only		Hardware and software	
	UL 991	UL 1998	H.11.12, UL 60730-1	UL 991, UL 1998	UL 60730-1 (+)
FMEA analysis	X	X	X	X	X
Equipment failure rate	X failures/10 ⁶	-	-	-	-
Test accelerated multiplier	Intermittent use – 576.3 Continuous use – 5763	-	-	-	-
Test accelerated factor	Table 25.2 based on ambient temperature	-	-	-	-
Voltage dips, variation and interruptions <u>See SA12.1(f)</u>	X	-	-	X	X
<u>Harmonics and Interharmonics: Mains Signaling. See SA12.1(g)</u>	<u>X</u>	-	-	<u>X</u>	<u>X</u>
Influence of voltage unbalance (3-phase product only)	-	-	-	-	X
Surge immunity (+ +)	X	-	-	X	X
Fast transient/burst	X	-	-	X	X
Ring wave	X	-	-	X	X



CLAUSE	VERDICT	COMMENT				
Electrostatic discharge		6 kV – contact	-	-	6 kV–contact	6 kV-contact
		8 kV – air	-	-	8 kV – air	8 kV – air
Electric and magnetic field		X	-	-	X	-
RF – conducted disturbances		-	-	-	X	-
Radiated EMF immunity		≥10 V/m	-	-	≥10 V/m	X
Influence of supply frequency (+ + +)		-	-	-	X	X
Magnetic field immunity		-	-	-	X	X
Thermal cycling		Indoor 0 – 40°C	-	-	Indoor 0 – 40°C	Indoor 0 – 40°C
		Outdoor minus 35 – 40°C	-	-	Outdoor minus 35 – 40°C	Outdoor minus 35 – 40°C
Humidity		Indoor 50 percent	-	-	Indoor 50 percent	Indoor 50 percent
		Outdoor 98 percent	-	-	Outdoor 98 percent	Outdoor 98 percent
Class of software		-	Class 1	Class B/C	Class 1	Class B/C
<p>NOTES</p> <p>For a limit control evaluated to UL 353, use Supplement SA for software evaluations.</p> <p>(+) the test values shall be based on the type of control function under consideration. Test parameters corresponding to test / severity level 2 shall be used for Class B control functions. Test parameters corresponding to test/severity level 3 shall be used for Class C control functions, unless otherwise noted.</p> <p>(+ +) – Indoor Use is installation Class 3. Outdoor Use is Installation Class 4.</p> <p>(+ + +) – If supply frequency is relied upon for correct operation of the control.</p>						

27	Info	Transformer Protection
27.1	Info	High-voltage transformers
27.1.2	Info	Thermal protection
27.1.2.2		<p>A thermal cutoff shall comply with the Standard for Thermal-Links – Requirements and Application Guide, UL 60691. A manual or automatic resetting thermal protector shall have an endurance rating of not less than 6000 cycles and shall comply with the Standard for Temperature-Indicating and -Regulating Equipment, UL 873, pertaining to the calibration of temperature-limiting controls requirements for a type-2 action thermal cut-out, as specified in the Standard for Automatic Electrical Controls - Part 1: General Requirements, UL 60730-1 and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9.</p> <p>Exception: A type 2 action thermal cut out, as specified in the Standard for Automatic Electrical Controls – Part 1: General Requirements, UL 60730-1 and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9, is considered to comply with the requirements of UL 873.</p>



CLAUSE	VERDICT	COMMENT
Supplement SA	Info	UL 60335-1 BASED REQUIREMENTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS
SA12	Info	Electromagnetic Compatibility (EMC) Requirements – Immunity
		Protective Electronic Controls and control with functions necessary to prevent Dangerous Malfunctions shall continue to provide their desired safety function when subjected to the EMC related stresses specified in (a) – (g), applied one at a time.
SA12.1		b) The appliance is subjected to radiated fields in accordance with the Standard for Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test, IEC 61000-4-3, test level 3 being applicable . <u>The frequency ranges tested shall be 80 MHz to 1000 MHz, test level 3; 1.4 GHz to 2.0 GHz, test level 3; and 2.0 GHz to 2.7 GHz, test level 2.</u> The dwell time for each frequency is to be sufficient to observe a possible malfunction of the protective electronic circuit.
CUSTOMERS PLEASE NOTE: This Table and column “Verdict” can be used in determining how your current or future production is or will be in compliance with new/revised requirements.		