STANDARDS UPDATE NOTICE (SUN)
ISSUED: March 8, 2024

STANDARD INFORMATION

Standard: CSA E60335-2-30
Standard ID:
Household and Similar Electrical Appliances - Safety - Part 2-30: Particular Requirements for Room Heaters [CAN/CSA E60335-2-30:2013 Ed.3+A1;A2]
Previous Standard ID:
Household and Similar Electrical Appliances - Safety - Part 2-30: Particular Requirements for Room Heaters [CAN/CSA E60335-2-30:2013 Ed.3+A1]
Household and Similar Electrical Appliances - Safety - Part 2-30: Particular Requirements for Room Heaters (R2018) [CAN/CSA E60335-2-30:2013 Ed.3]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **June 1, 2025**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

CSA E60335-2-30 is to be used in conjunction with CSA C22.2 No. 60335-1 2011 edition.

All reports are required to be certified to Amendment 2 prior to the effective date.

Overview of Changes:

Amendment 1:

- Modification to maximum rated voltages (600V)
- New classification requirements, including limitations to the allowance of Class 0 appliances
- New product marking requirements and power limitations
- New requirements for cab heaters
- New temperature requirements for surfaces and heating elements
- New requirements relating to openings, switches, and motors
- New requirements for supply leads and supply cords
  New flammability requirement for non-metallic enclosures and supports

Amendment 2:

- New requirements and new tests for fan heaters
- New tests for portable fan heaters and heaters with floor level grills
- Modifications to the tip over test
- Addition of a voltage specification

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

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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
		Additions to existing requirements are underlined and deletions are shown ~~lined out~~ below.
		The following changes reflect Amendment 1:
1		**Scope** This Standard applies to electric room heaters for household and similar purposes, their rated voltage being not more than 250 V for cord-connected appliances and 600 V for other appliances. This Standard covers both permanently connected and cord-connected room heaters. This Standard also applies to electric heaters intended for the heating of driver and passenger compartments of motor vehicles when they are stationary, their rated voltage being not more than 250 V. For extraction fans of ceiling mounted heat lamp appliances, CAN/CSA-C22.2 No. 60335-2-80 or CAN/CSA-C22.2 No. 113 is applicable as far as is reasonable.
6	Info	**Classification**
6.1		***New clause added;*** Cab heaters, cord-connected heaters for other than household use, and all permanently connected heaters shall be Class I, Class II, or Class III. Cord-connected household heaters for operation on a nominal system voltage of 120 V shall be Class 0, Class I, or Class II.
7	Info	**Marking and instructions**
7.1		The maximum input rating marked on appliances intended for use on a nominal 120 V branch circuit protected by an overcurrent device rated or set at not more than 15 A shall not exceed 1500 W at 120 V. In the second paragraph of the addition, replace "except for colours" by "with or without colours". Cab heaters shall be marked with the following: Cab heater

CLAUSE	VERDICT	COMMENT
7.1A		***New clause added;*** Fixed appliances which require minimum installation distances to adjacent surfaces, such as the floor, walls, etc., in order to comply with this Standard shall be marked with the applicable minimum distances.
7.1B		***New clause added;*** Ceiling mounted heaters that are intended to be attached to and supported by a standard outlet box shall be marked with the following or equivalent: THIS HEATER IS FOR MOUNTING ON A STANDARD OUTLET BOX and CE RADIATEUR EST PRÉVU POUR MONTAGE SUR UNE BOÎTE DE SORTIE STANDARD.
7.1C		***New clause added;*** Warning and caution markings shall be in both English and French.
7.12.1		***New clause added;*** The installation instructions for cab heaters shall state – the shortest permissible distance between the heater outlet and the interior surfaces of the motor vehicle; – that the installation shall be in accordance with any instructions issued by the vehicle manufacturer.
11	Info	**Heating**
11.2		***New clause added;*** Fixed heaters having a supply cord fitted with a plug are mounted in front of a flush mounted type socket-outlet installed in the wall of the test corner with the plug inserted unless – the distance between the heater and the wall does not exceed 30 mm; or – the instructions state that the heater shall not be located in front of a socket-outlet. For ceiling mounted heat lamp appliances, means for ventilation or ducting are provided in accordance with the installation instructions. Cab heaters are placed in the test corner as follows: A test box as shown in Figure 103 and made of dull black-painted plywood approximately 20 mm thick is used. The wall A can be positioned at different distances from the far end of the test box.

CLAUSE	VERDICT	COMMENT
		NOTE 104 The test box simulates the front driver/passenger compartment of a motor vehicle. One wall of the test corner simulates the driver's door. The test box is placed in the test corner, with side B against one wall of the test corner and the sloping end of the test box against the other wall of the test corner. The test corner shall be at least 470 mm wide, 760 mm deep and 470 mm high. NOTE 105 Wall B of the test box, as well as its bottom, can be open to facilitate access before and after the test. The cab heater is placed in the test box in the most unfavourable position according to the manufacturer's instructions, if it will fit into the test box, and with the distance L = 0 mm. The shortest distance to the wall of the test box shall not be less than that stated in the manufacturer's instructions for the shortest permissible distance between the heater outlet and the interior surfaces of the motor vehicle. The wall A of the test box may be moved to increase L to a maximum distance L = 220 mm. If the manufacturer has not supplied any instructions for the placing of the cab heater or if the heater cannot fit in the test box, the cab heater is placed in the most unfavourable position on the floor of the test corner. Heaters containing PTC heating elements are placed away from the walls if this will lead to higher temperatures.
11.8		***New clause added;*** For fixed heaters mounted in front of a socket-outlet, the temperature rise of the plug shall not exceed 45 K. During the test for cab heaters, the temperature rise of the walls of the cab heater test box and the test corner shall not exceed 65 K. The temperature rise of surfaces of cab heaters shall not exceed the values shown in Table 102.
19	Info	**Abnormal operation**
19.1		***New clause added;*** Cab heaters are also subjected to the tests of 19.116. If relevant, then 19.117 is also applicable.

CLAUSE	VERDICT	COMMENT
19.109		Cab heaters and portable fan heaters are operated as specified in Clause 11, but placed so that the airflow is directed against one of the walls of the test corner. The heater is then moved as near as possible to the wall without the thermal cut-out operating. Thermal controls that operate during the test of Clause 11 are short-circuited. The temperature rise of the wall shall not exceed 150 K.
19.116		***New clause added;*** Cab heaters are positioned with the outlet air directed at a dull black-painted plywood wall. The heater is placed so that the distance between the test wall and the air outlet grille is 10 cm. The cab heater is supplied at 1,15 times rated power input and is operated until steady conditions are reached or a non-self-resetting protective device operates, whichever occurs first. All thermal controls that operate during the test of Clause 11 are short-circuited. During the test, the temperature rise at the test wall shall not exceed 65 K.
19.117		***New clause added;*** Fan heaters are operated as specified in Clause 11, except that all thermal cutouts and controls are short-circuited and the fan motor is stalled. The fan heater is energized for the longest time recorded during the test of 19.113 plus 5 s, and then it is deenergized. During the test, 19.13 is not applicable, but the fan heater shall not emit flames.
21	Info	**Mechanical strength**
21.1		***New clause added;*** For cab heaters, the impact energy of the blows is increased to 1,0 J, the test being performed at –25 °C after the appliance has been stored at this temperature for 24 h.
21.101		***New clause added;*** This test is also applied to the air inlet and air outlet grilles of cab heaters.

CLAUSE	VERDICT	COMMENT
21.105		***New clause added;*** Cab heaters shall withstand vibrations liable to occur during normal use. If the mounting instructions for the cab heater give several mounting options, the test shall be carried out in the most unfavourable mounting position. Compliance is checked by carrying out the vibration tests specified in IEC 60068-2-6 under the following conditions. The appliance is mounted as in normal use and is then fastened to a vibration-generator. The type of vibration is sinusoidal, and the severity is as follows: – the direction of vibration is vertical; – the amplitude of vibration is 0,35 mm; – the sweep frequency range is 10 Hz to 55 Hz; – the duration of the test is 30 min. After the test, the appliance shall show no damage that could impair compliance with this standard; in particular, compliance with 8.1, 15.1, 16.3 and Clause 29 shall not be impaired. Screws shall not have changed position and connections shall not have worked loose. If the test item comes off its mounting, it shall be subject to the test of Clause 11 in all positions which the appliance can take when it comes off. During this test, the temperature rise of the supporting surface shall not exceed 150 K.
21.106		***New clause added;*** Cab heaters other than those intended to be permanently mounted shall withstand the effects of being dropped. Compliance is checked by subjecting the cab heater to test free fall - Procedure 1 of IEC 60068-2-31. The appliance is dropped vertically onto its base from a height of 500 mm. After the test, compliance with 8.1, 16.3 and Clause 29 shall not be impaired.

CLAUSE	VERDICT	COMMENT
22	Info	**Construction**
22.2		***New clause added;*** If cord-connected stationary heaters and portable heaters provided with polarized attachment plugs are controlled by manually operated line switches or controls with an indicated off position, such switches and controls shall disconnect all ungrounded conductors of the circuit controlled when in the indicated off position. An attachment plug is acceptable as an alternative to the line switch or control, provided the heater is rated under 30 A.
22.101		***New clause added;*** Protective devices other than thermal motor protectors, incorporated in cab heaters in order to comply with Clause 19, shall not be self-resetting. Non-self-resetting thermal cut-outs, incorporated in cab heaters that are reset by disconnection of the supply mains are considered to be self-resetting. Add the following new subclause:
22.102		***New clause added;*** Protective devices other than thermal motor protectors, incorporated in cab heaters in order to comply with Clause 19, shall not close automatically when subjected to low temperatures. Compliance is checked by the following test. Three samples of the protective device are set in open position and kept at a temperature of –35 °C for 18 h. During this period, none of the samples shall change to the make position.
22.106A		***New clause added;*** Openings in external enclosures of heaters shall not be located directly below terminals, switches, heating elements, metal-sheathed heater elements operating at more than 280 °C, internal wiring, or other live parts unless they are baffled so as to prevent molten metal and flaming particles from falling through to the supporting surface. This requirement does not apply to alloy steel or glass sheathed heater elements of ceiling and pendant-type heaters required to be installed at least 2.4 m above the floor. Internal wiring provided with a suitable sleeving is considered to be baffled.

CLAUSE	VERDICT	COMMENT
22.111		***New clause added;*** Normally open switches relying on contact with the floor to keep them in the closed position shall have moving contacts that come to rest in either the closed or open position even when the operating means is in an intermediate position. Compliance is checked by inspection and by the relevant test. The adequacy of the separation of the contacts in an intermediate position is determined by the test of the mechanism according to Clause 13 of IEC 61058-1:2000 and, if necessary, by the test of 15.3 of IEC 61058-1:2000, the test voltage being applied between the relevant terminals.
22.112		***New clause added;*** Cab heaters shall not contain bare heating elements. Compliance is checked by inspection.
24	Info	**Components**
24.1.4		**New clause added;** For thermostats of cab heaters, the number of cycles of operation is increased to 100 000. For self-resetting thermal motor protectors for motors in cab heaters, the number of cycles of operation is increased to 10 000.
24.101		Devices incorporated in oil-filled radiators in order to comply with 19.114 shall not be self-resetting. Protective devices other than thermal motor protectors, incorporated in cab heaters in order to comply with Clause 19, shall not be self-resetting. Non-self-resetting thermal cut-outs, incorporated in cab heaters that are reset by disconnection of the supply mains are considered to be self-resetting. Compliance is checked by inspection.

CLAUSE	VERDICT	COMMENT
24.102		***New clause added;*** Protective devices other than thermal motor protectors, incorporated in cab heaters in order to comply with Clause 19, shall not close automatically when subjected to low temperatures. Compliance is checked by the following test. Three samples of the protective device are set in open position and kept at a temperature of –35 °C for 18 h. During this period, none of the samples shall change to the make position.
24.102A		***New clause added;*** Motors with inherent overheating protection shall comply with the applicable requirements in CSA C22.2 No. 77. 25 Supply connection and external flexible cords
25	Info	
25.3		***New clause added;*** Supply leads that are provided with the heaters for connection to the supply shall be made of at least No. 16 AWG copper. Provision for connection to the power supply is not required for ceiling mounted heaters that are intended to be attached to and supported by a standard outlet box provided that the following conditions are met: a) The heater shall have a mass of 22.7 kg or less. b) If leads are provided for connection to the supply conductors, they shall be not less than 152 mm in length and, if external to the heater, shall be made of at least No. 14 AWG copper. c) The temperature on the supply wiring in the outlet box shall not exceed 60 °C when the heater is tested according to Clause 11. d) The heater shall be marked as per Clause 7.1B.
25.7		***New clause added;*** Supply cords of portable heaters intended for use in greenhouses and for cab heaters shall be polychloroprene sheathed cord. Portable heaters shall have a supply cord, which shall extend not less than 1.8 m and not more than 2.4 m from the point where the cord enters the heater to the face of the attachment plug.

CLAUSE	VERDICT	COMMENT
		For heaters having a maximum external surface temperature that exceeds 90 °C on any surface, when tested according to Clause 11, thermoset insulated supply cords shall be provided as follows: – for household use, Type HPN, HPD, or the equivalent; and – for other than household use, Type SJOW (90 °C) or the equivalent. Note: On a portable heater, it is assumed that any external surface that can be contacted by the cord is likely to be contacted by the cord. For heaters having a maximum external surface temperature that does not exceed 90 °C on any surface likely to be contacted by the cord, when tested according to Clause 11, thermoplastic insulated supply cords may be provided as follows: – for household use, Types SPT-2 (105 °C), SVT (105 °C), or the equivalent; and – for other than household use, Type SJT (105 °C) or the equivalent. Note: On a portable heater, it is assumed that any external surface that can be contacted by the cord is likely to be contacted by the cord. Supply cords for heaters for other than indoors use, such as cab heaters, greenhouse heaters, etc., shall be suitably rated for the application. Except for the maximum input requirement for 120 V cord-connected heaters specified in Clause 7.1, the ampere rating of the heaters shall be limited to not more than 80% of the attachment plug rating.
29	Info	**Clearances, creepage distances and solid insulation**
29.2		For fan heaters and cab heaters, the microenvironment is pollution degree 3 unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance.
30	Info	**Resistance to heat and fire**
30.2		***New clause added;*** Non-metallic enclosures and supports for electrical components shall comply with the 5VA requirements of CAN/CSA-C22.2 No. 0.17.

CLAUSE	VERDICT	COMMENT
		The following changes reflect Amendment 2:
7	Info	**Marking and instructions**
7.10		***New clause added;*** The different positions of switches and controls on room heaters shall be indicated by figures, letters or other visual means. This requirement also applies to switches that are part of a control. The on position shall be clearly visible to the user when the heater is in its intended position of use.
7.12		The instructions for portable heaters shall include the substance of the following: – do not use this heater in the immediate surroundings of a bath, a shower or a swimming pool. – do not use this heater if it has been dropped; – do not use if there are visible signs of damage to the heater; – use this heater on a horizontal and stable surface, or fix it to the wall, as applicable. WARNING: To reduce the risk of fire, keep textiles, curtains, or any other flammable material a minimum distance of 1 m from the air outlet.
11	Info	**Heating**
11.3		The temperature rise of the felt pad is determined by means of thermocouples attached to small blackened disks of copper or brass, 15 mm in diameter and 1 mm thick. The disks are placed on the surface of the pad. Where the external accessible surfaces are suitably flat and access permits, then the test probe of Figure 104 is used to measure the temperature rises of external accessible surfaces specified in Table 101. The probe is applied with a force of 4 N ± 1 N to the surface in such a way that the best possible contact between the probe and the surface is ensured. The measurement is performed after a contact period of 30 s. The probe may be held in place using a laboratory stand clamp or similar device. Any measuring instrument giving the same results as the probe may be used.

CLAUSE	VERDICT	COMMENT
11.8		In Table 3, stationary heaters are considered liable to be operated continuously for long periods. The temperature rise limits of motors, transformers and components of electronic circuits, including parts directly influenced by them, may be exceeded when the appliance is operated at 1,15 times rated power input. For liquid-filled radiators, the temperature rise of parts in contact with oil is not measured. However, for unvented liquid-filled radiators, the temperature rise of the outer surface of the liquid container is measured. It shall be at least 50 K less than the boiling point of the liquid. The temperature rise of handles or grips of vents and air shutters shall not exceed the value specified in Table 3 for surfaces of handles, knobs, grips and similar parts which are held for short periods only in normal use. For heaters intended to be mounted under church benches only, the temperature rise of surfaces accessible to the test rod 75 mm diameter test probe in Table 101 shall not exceed 70 K. For heaters intended to be mounted under other benches, the temperature rise of surfaces accessible to the test rod shall not exceed the limits specified in Table 3 for parts that are held for short periods only. For fixed heaters mounted in front of a socket-outlet, the temperature rise of the plug shall not exceed 45 K. During the test for cab heaters, the temperature rise of the walls of the cab heater test box and the test corner shall not exceed 65 K. The temperature rise of surfaces of cab heaters shall not exceed the values shown in Table 102.
19	Info	**Abnormal operation**
19.103		The rear surface of the heater is completely covered with strips down to the floor if – the heater is constructed to stand away from the wall by a distance exceeding 30 mm; – for fixed heaters, the gap between the heater and the wall exceeds 30 mm, and the horizontal distance • between any two fixing points or spaces exceeds 200 mm, or • between any fixing point or spaces and the end of heater exceeds 100 mm, otherwise the rear surface is covered to a distance of approximately one-fifth of the height of the heater from the top.

CLAUSE	VERDICT	COMMENT
		– for fixed heaters, the gap between the heater and the wall exceeds 30 mm, and • the horizontal distance between spacers or fixing points is less than 100 mm, the rear surface of the heater is covered down to the floor where the felt strips can fit and are covered to a distance of approximately one-fifth of the height of the heater where the felt strips are too wide; or • having fixing points or spacers with a vertical distance to the top of less than one-fifth of the height of the heater, the rear surface of the heater is covered from the top for a distance to the fixing points or spacers at the fixing points or spacers and down to the floor at other points.
19.112		Portable heaters are operated as specified in Clause 11 but placed on a soft-wood surface that is covered with felt having the same specific mass and thickness as specified in 19.103 but without any textile material. The heater is overturned by placing it in the most unfavourable position that can be reached by accident. The heater shall be overturned before starting the test or after steady conditions are stablished, whichever sequence gives the most unfavourable result. Thermocouples are attached to the back of small blackened disks of copper or brass, 15 mm in diameter and 1 mm thick. The disks are spaced 50 mm apart and placed between the felt and the overturned appliance in contact with the top surface of the felt. The disks are supported to prevent them from sinking into the felt. The felt or the wood surface shall not smoulder or ignite. The maximum temperature rise of the felt shall not exceed 150K but an over-shoot of 25 K is allowed during the first hour.
19.113		Fan heaters are operated as specified in Clause 11, except that all self-resetting thermal cut-outs and controls that operate during the test of Clause 11 are short-circuited and the fan motor is stalled. If compliance with 19.13 relies on the operation of a non-self-resetting protective device, the time from energising the heating elements to the time that the non-self-resetting protective device operates is recorded for the purposes of 19.117. The test is repeated on three additional samples and the time from energizing the heating elements to the time that the non-self-resetting thermal cut out operates on each sample is recorded. After the test, all samples shall comply with 19.13 and the longest time recorded for the four samples is used for the purposes of 19.117.
19.115		Ceiling mounted heat lamp appliances are operated as specified in Clause 11 but with the highest rated wattage heat lamps fitted as allowed by the construction and with the appliance being supplied at 1,06 times rated voltage.

CLAUSE	VERDICT	COMMENT
21	Info	**Mechanical strength**
21.107		***New clause added;*** Floor level grilles of heaters intended to be built into the floor shall have adequate mechanical strength. Compliance is checked by the following test. The floor level grille is installed as specified in 11.2. A mass, having a flat base with dimensions 300 mm × 150 mm, with a value of 100 kg or the maximum value specified by the manufacturer, whichever is most unfavourable, is placed for 1 min on the central unsupported part of the grille. During the test, the maximum deflection of the grille shall not exceed 3 mm. After the test, the grille shall show no significant permanent deformation and shall not have fallen from its supporting structure. The creepage distances and clearances shall not be reduced below those specified in Clause 29.