Fichier : Sujet ULC C100
ULC-G.5.2
CCF7
S500F/SC2

Le 28 octobre 2014

BULLETIN D'ACCRÉDITATION 2014-07

Deuxième édition de l'autre document reconnu ULC/ORD-C100-13 – Smoke Control Systems Equipment

Destinataires: Membres du Comité consultatif d'ULC
Membres du Conseil canadien des directeurs provinciaux et des commissaires des incendies
Membres du sous-comité de Normes ULC sur les postes de contrôle
Abonnés aux services de certification d'ULC pour UUKLC, UUKL7, UUKL8 et autres parties intéressées

Le présent bulletin fait suite au bulletin de certification ULC 2013-01 dans lequel les Laboratoires des assureurs du Canada annonçaient la publication de la deuxième édition de l'autre document reconnu ULC/ORD-C100-13 – Smoke Control Systems Equipment. L'autre document reconnu ULC/ORD-C100-13 indique les exigences relatives à la conception, à la construction et au rendement de l'équipement de système de désenfumage, y compris les appareils tels que le poste de contrôle du système, les postes de contrôle à distance, les dispositifs d'interface opérateur et le poste de désenfumage pour les pompiers. La deuxième édition consiste en une version comportant des mises à jour, puisque le contenu de la première édition a été partiellement intégré dans la norme CAN/ULC-S527-11.

Toutes les nouvelles soumissions relatives à l'équipement de système de désenfumage feront l'objet d'une enquête conformément aux exigences énoncées dans l'autre document reconnu ULC/ORD-C100-13.

Puisque les modifications apportées à l'autre document reconnu auront une incidence sur les produits certifiés par ULC, une revue des dossiers industriels sera entreprise afin d'assurer la conformité des produits avec les nouvelles exigences et/ou les exigences révisées. Pour obtenir des détails concernant la revue des dossiers industriels et les modifications apportées à l'autre document reconnu (résumé des exigences), consultez le site Web de la revue des dossiers industriels d'UL (http://ifr.ul.com/). Les clients répertoriés des produits touchés recevront une lettre personnalisée concernant la revue des dossiers industriels. Un résumé des exigences de cette édition est joint au présent bulletin à titre de référence.

La date d'entrée en vigueur des nouvelles exigences et des exigences révisées de la deuxième édition de l'autre document reconnu ULC/ORD-C100-13 a été fixée au 16 juin 2016. À partir de cette date, les produits actuellement inscrits devront être conformes à ces exigences.

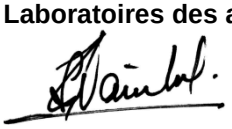
Il est possible de commander ce document au coût de 165 $ CAN (format PDF) ou de 198 $ (copie papier) en se rendant sur le site Web de Normes ULC à l'adresse www.ulc.ca et en cliquant sur Acheter des publications de Normes ULC.

Le présent bulletin d'accréditation peut être transmis à des tiers pouvant être intéressés par la publication du présent document.

Si vous avez des questions portant sur le sujet abordé ci-dessus, veuillez communiquer avec M. Gunsimar Paintal, par téléphone au numéro 416 288-2217, ou par courriel à l'adresse Gunsimar.Paintal@ul.com.

Cordialement,

Laboratoires des assureurs du Canada Inc.



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« Ce document est signé sur la compréhension que cette traduction est fidèle au contexte de la version anglaise. »

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SUMMARY OF REQUIREMENTS

Si vous souhaitez passer en revue le résumé des exigences en français, reportez-vous à la norme CAN/ULC-S527-11 FRN contre la section spécifique / point identifié ci-dessous dans le tableau annexé.

The following is a brief summary of the new and revised paragraphs in the Other Recognized Document, Smoke Control Equipment, ULC/ORD-C100-13 which have a future Effective Date of June 16, 2016 and the action that may be required to determine compliance.

Paragraphs	General Subject and Comment
Section 4 SYSTEM REQUIREMENTS	
4.2 Power Supply	
4.2.4 – 4.2.5	Utilizing a secondary power supply is optional and if provided, the transfer to secondary power, trouble annunciation and operation at secondary power need to meet the requirements of these clauses. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
4.2.6	Delineates determination of rated loads for input and output circuits. A INPUTS: (i) Control units and accessories shall be capable of activating a minimum of 10 *input circuits* or 50 %, whichever is greater. For systems less than 10 circuits, all *input circuits* shall be activated, (ii) When these requirements have been exceeded, the system may be allowed to ignore additional inputs, and shall continue to operate with no degradation or loss of existing information, B *OUTPUT CIRCUITS*: In all cases, the system shall be capable of activating 100 % of the control unit and accessories outputs. C ADDITIONAL ACTIVATION: In each case all other system functions shall continue to operate. If product is already Listed to ULC S527-11, product is considered compliant and no testing is required. Otherwise, review/testing is required.
4.2.7	Visual power on indication, visible after the product is installed, shall be present on all FSCSs and operator interfaces used for smoke control. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
4.2.8	Specifies that visual power on indication for primary powered remote equipment without an operation interface is not required when the external Warning label in clause 9.3.4 of S527-11 is employed.

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Paragraphs	General Subject and Comment
5 INSTRUCTIONS AND DRAWINGS	
	NOTE: In Canada, there are two official languages, French and English. Attention is drawn to the fact that some Canadian authorities may require markings to be in either or both official languages. Markings and/or instructions in both official languages may be required when submitting products for the purpose of testing for compliance to this Standard.
5.1	Section now requires instructions and drawings meet the 2011 edition of S527 If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
6 CONSTRUCTION	
6.1	Section now requires construction meet the 2011 edition of S527. See the construction section at the end of this document. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
7 MARKING	
7.1	Section now requires product marking meet the 2011 edition of S527. NOTE: In Canada, there are two official languages, French and English. Attention is drawn to Table 2 of S527-11 for the specific texts to be utilized and new requirements addressing mandatory marking languages. All applicable caution and warning statements covered in section 9.3 in S527-11 are now required to be marked in both English and French languages. If product is already Listed to ULC S527-11 edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8 PERFORMANCE TESTS	
8.1	Performance hardware testing. See the hardware test section at the end of this document.
8.2 FSCS	A fire fighter's smoke control station shall be provided to indicate the complete status of the system in an easy to understand manner and to manually override an automatic smoke-control sequence. Additional requriements are covered in 8.2.2 – 8.2.6. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.3 OPERATION	8.3.1.3 Response time shall be as follows: A Automatic processing and beginning smoke-control strategies, shall not be greater than 10 s from the actuation of a manual command or initiation of a fire alarm condition;

Paragraphs	General Subject and Comment
	B *Trouble signals* shall be annunciated within 90 s of the occurrence of the adverse condition; and C The *response time* to be used by the control unit relative to the individual components to reach their desired state after the smoke-control system has commanded them to alter their existing state shall not exceed 60 s for fans, and 75 s for dampers. Failure to reach the desired state within these *response times* shall result in a *specific trouble indication* at the *FSCS,* within 90 seconds of the failure to receive positive confirmation. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
	8.3.1.4 Where the fire alarm control unit and accessories used to initiate a smoke control strategy are separate from the FSCS, the interconnecting wiring shall be in accordance with Subsection 8.5, Circuit Protection. *Trouble signals* shall be indicated at the FSCS and the fire alarm *display and control centre*. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
	8.3.1.5 Interconnecting wiring between the FSCS, addressable controllers, transponders, point logic controllers, and operator interfaces intended to control smoke-control shall be in accordance with Subsection 8.5, Circuit Protection. *Trouble signals* shall be indicated at the FSCS and, when employed, operator interface(s). See Figure 1. Exception: Ground-fault annunciation is not required where operation is not affected by a single ground fault. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
	8.3.1.6 Where the smoke control unit and accessories are separate from the FSCS, the interconnecting wiring shall be in accordance with Subsection 8.5, Circuit Protection. *Trouble signals* shall be indicated at the FSCS. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
	8.3.1.7 *Output circuits* of controllers and *transponders* that are pneumatic, hydraulic, dry contact, or non-addressable are not required to be electrically supervised for *open circuit faults*, *short circuit faults* or *ground faults*. The products controlled by these *output circuits* are required to comply with Shared Systems in CAN/ULC-S527, Standard for Control Units for Fire Alarm Systems. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.3.2 MANUAL OVERRIDE	8.3.2.1 Capability for manual operation of the *smoke control system* by authorized personnel shall be provided to override any automatic smoke control sequence in progress. If product is already Listed to the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.

Paragraphs	General Subject and Comment
8.6 TROUBLE SIGNALS	8.6.4 *Trouble signal* shall occur within 90 s of initiation of a fault condition. If product is Listed to S527-99 or S527-11, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.7 SOFTWARE-CONROLLED UNITS	8.7.1 Software control units shall meet the requirements of Software Controlled Control Units in CAN/ULC-S527, Standard for Control Units for Fire Alarm Systems. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.8 BATTERY TESTS	Where a product employs emergency rechargeable power supply batteries to power the product for 15 minutes or the manufacturer's specification (whichever is the greater period) the product shall meet the requirements of 8.8. New requirement requiring review and testing.
CONSTRUCTION REQUIREMENTS REFERENCED TO S527-11 This section addresses the clauses of S527 -11 which are more stringent than either S527-99 or S527-87. The latter is the edition of S527 referenced in ORD-C100-1993	
8.4 ENCLOSURES (S527-11)	
8.4.1.6 and 8.4.1.7 (S527-11)	Clauses have replaced 7.4.1.6 in S527-99 to allow for sharp edges if they are needed for product to perform its intended function. No action required.
8.4.3 (S527-11)	Stability If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.4.6 – 8.4.14 (S527-11)	8.3.6.2 B/C covers new requirements for mounting screw openings 8.3.7 addresses enclosure top openings 8.3.8.1 through 8.3.8.2 provides requirements for enclosure side openings 8.3.9 addresses enclosure bottom openings 8.3.12.8 through 8.3.12.11 adds requirements for non-metallic enclosures 8.3.14.4 through 8.3.14.6 adds requirements for viewing windows If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/evaluation is required.
8.5 MECHANICAL ASSEMBLY (S527-11)	
8.5.1 – 8.5.5 (S527-11)	New requirements address security of mounting of parts to prevent loosening and turning. Additionally prohibits use of friction to secure parts and requires all subassemblies, modules and printed wiring boards to be held in their intended

Paragraphs	General Subject and Comment
	place by mechanical means. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/evaluation is required.
8.6 FIELD WIRING CONNECTIONS (S527-11)	
8.6.1.3 (S527-11)	Duplicate terminals or leads where applicable. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/evaluation is required.
8.6.2.5 (S527-11)	The wiring terminals of a product intended for mounting in an outlet box shall be located or protected so that, upon installation, the wiring in the outlet box is not forced against the terminals or other sharp edges so as to damage the conductor insulation, and/or the terminals or stripped leads do not come into contact with the walls of the outlet box. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/evaluation is required.
8.8 COMPONENTS – ELECTRICAL (S527-11)	
8.8.7.2 (S527-11)	8.7.7.2 Opening or shorting of capacitors shall either have no adverse effect on normal operation or be indicated by a trouble signal. Exception: Where it is not practical to have a component failure indicated, a reliable component shall be used. The reliability of the component may be based on de-rating or on reliability data recorded for the particular component. Suitable sources are: A The capacitor de-rating parameters specified in Table 13, Capacitor De-rating Parameters; B MIL-HDBK-338, Electronic Reliability Design Handbook; and C Component reliability data based on actual performance in a similar application such that the failure rate is equal to or less than 0.5 failures per million hours of operation. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.9 PRINTED-WIRING BOARDS (S527-11)	
8.9.1 (S527-11)	Printed-wiring boards shall be suitable for the application and meet the requirements of UL 796, Printed Wiring Boards. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.9.2 (S527-11)	All printed-wiring boards shall be rated for direct support of current-carrying parts, and be suitable for the soldering process used.

Paragraphs	General Subject and Comment
	If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.10 END-OF-LINE DEVICES (S527-11)	
8.10.1 (S527-11)	End-of-line devices are considered to be device accessories. They shall be constructed so that it shall be securely fastened with no means to open circuit, short to an adjacent circuit node, or cause a risk of electric shock. Mounting on an outlet box cover with terminals, or an equivalent arrangement, has been determined as complying with the intent of this requirement. If product is already Listed to ULC S527-11 edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.11 VOLTAGE-DROPPING RESISTORS (S527-11)	
8.11.1 (S527-11)	A carbon composition resistor shall not be used as a line voltage-dropping resistor in the low voltage supply of a product If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.12 SWITCHES (S527-11)	
8.12.1 (S527-11)	A switch provided as part of a product shall have a current and voltage rating not less than that of the circuit which it controls when the device is operated under any condition of intended service. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.13 OPERATING MECHANISMS (S527-11)	
8.13.1 (S527-11)	Operating parts, such as light-duty relays and similar devices, shall be protected against fouling by dust or by other material that may adversely affect their intended operation, by individual protection or dust-tight cabinets. A relay employing contacts having a wiping action does not require any special protection against fouling by dust. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.13.2 (S527-11)	The assembly of an operating mechanism included as a part of a signal transmitter and/or receiver or accessory shall be such that it will not be adversely affected by any condition of intended operation. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.13.3 (S527-11)	Moving parts shall have sufficient play at bearing surfaces to prevent binding.

Paragraphs	General Subject and Comment
	If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.13.4 (S527-11)	Moving parts shall have sufficient play at bearing surfaces to prevent binding. Provision shall be made to prevent adjusting screws and similar adjustable parts from loosening under the conditions of actual use. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.13.5 (S527-11)	Manually-operated parts shall withstand the stresses to which they will be subjected in operation. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.13.6 (S527-11)	An electromechanical device shall be constructed to provide reliable and positive electrical and mechanical performance under all conditions of intended operation. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
8.14 ACROSS-THE-LINE COMPONENTS (S527-11)	
8.14.1 through 8.14.3 (S527-11)	This is a new section, harmonized with UL 864 , 9th edition. For Control Units already listed to ULC S527-11 or the UL 864 9th edition, no action is necessary. Otherwise, re-evaluation is required.
8.15 LITHIUM BATTERIES (S527-11)	
8.15.1 – 8.15.2 (S527-11)	8.15.1 Lithium batteries shall comply with the requirements in UL 1642, Standard for Lithium Batteries. 8.15.2 A lithium battery shall be protected from abnormal charging currents during use as required in the UL 1642, Standard for Lithium Batteries. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
PERFORMANCE HARDWARE TESTS REFERENCED TO S527-11 This section addresses the clauses of S527 -11 which are more stringent than either S527-99 or S527-87. The latter is the edition of S527 referenced in ORD-C100-1993	
10.4 ELECTRICAL RATINGS TEST (S527-11)	
10.4.1 (S527-11)	New requirement covering power input circuits. For products complying with ULC S527 - 11 or the UL 864 9th edition, no action required. Otherwise, testing is required.

Paragraphs	General Subject and Comment
10.4.2.1 (S527-11)	All external circuits shall be electrically rated to permit proper installation of the product using wiring methods permitted by CSA C22.1, Safety Standard for Electrical Installation, Canadian Electrical Code, Part I. The actual measured values of any circuit shall not exceed the rating for that circuit. If product is already Listed to ULC S527-11, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.4.2.2 (S527-11)	The electrical rating of a circuit shall indicate the maximum circuit voltage under any operating condition including an open circuit and the maximum circuit current (or wattage for an audio product) under any condition of normal operation. If product is already Listed to ULC S527-11 edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.4.2.3 (S527-11)	Where a circuit fault condition will cause a circuit current in excess of the normal current rating, either: A The maximum fault current shall be indicated; or B The minimum size wire capable of handling the fault current shall be indicated. If product is already Listed to ULC S527-11 edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.4.2.4 (S527-11)	There shall be coordination between the maximum fault current and the overcurrent or current limiting protection required in Subsection 8.7.10, Overcurrent Protection. If product is already Listed to ULC S527-11th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.6 VARIABLE VOLTAGE OPERATION TEST (S527-11)	
10.6.2 (S527-11)	The product is to be subjected to the following variable voltage conditions: A 110 % of the rated primary input voltage specified in Subsection 10.1, General. The secondary power source is to be connected to rated voltage; B 110 % of the marked rated nominal standby battery voltage or rated secondary power input voltage specified in Subsection 10.1, General. The primary input voltage is to be disconnected; C 85 % of rated primary input voltage specified in Subsection 10.1, General, or at some lower level of transfer voltage as specified in Clause 4.2.4. The standby battery or, when provided, a secondary power source shall be disconnected; and D 85 % of the marked rated nominal standby battery voltage or rated secondary power input voltage specified in Subsection 10.1, General. The primary input voltage is to be disconnected. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.6.3 – 10.6.8 (S527-11)	10.6.3 In conducting the reduced voltage test, the voltage is to be reduced by a means that will maintain a stable potential of the required value under the most severe conditions of normal loading.

Paragraphs	General Subject and Comment
	10.6.4 The reduced voltage tests are to be made with the maximum line impedance as indicated in the installation wiring diagram connected to all external circuit(s). 10.6.5 The increased voltage tests are to be made with zero line impedance in each external circuit. 10.6.6 In those cases where different components or units of a combination system obtain power from separate sources, each source is to be independently varied while the system is tested for its normal operation. 10.6.7 A product intended to be used with a standby battery shall have sufficient capacity to maintain a charged battery under all conditions of intended operation, including sufficient capacity to operate the product with the battery disconnected or fully discharged. In any operating mode, the battery charger shall be capable of maintaining the battery in the charged condition when the product input is at a maximum of 85 % of rated voltage or at some lower level of transfer voltage as determined according to Clause 4.2.4. 10.6.8 A charged battery is defined as a battery having the capacity to maintain the product in the normal supervisory and alarm conditions for the time period required in Subsection 10.5, Battery Tests. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.10 VARIABLE AMBIENT TEMPERATURE AND HUMIDITY TEST (S527-11)	
10.10.1.1 (S527-11)	A product shall operate in the intended manner for all conditions of intended use at the test ambient conditions specified in Subsections 10.10.2 (S527-11), Low Temperature Test; 10.10.3 (S527-11), High Temperature Test; and 10.10.4 (S527-11), Humidity Test. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.10.5 Wet Location and Outdoor-Use Test (S527-11)	
10.10.5.1.1 (S527-11)	A product intended for either indoor wet or outdoor wet or outdoor damp installations shall be subjected to the tests indicated in Clauses 10.10.5.1.1 through 10.10.5.4.7, unless indicated otherwise. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.10.5.2 Corrosion Tests (S527-11)	
10.10.5.2.1.1 (S527-11)	A product intended for outdoor wet or outdoor damp locations shall operate as intended following the tests specified in Clauses 10.10.5.2.2.1 through 10.10.5.2.2.2. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.

Paragraphs	General Subject and Comment
10.10.5.3 Dust Test (S527-11)	
10.10.5.3.1 - 10.10.5.3.4 (S527-11)	The intended operation of a product intended for outdoor use shall not be impaired by an accumulation of dust. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.10.5.4 Water Spray Test (S527-11)	
10.10.5.4.1 - 10.10.5.4.7 (S527-11)	The section of equipment intended to be exposed to an indoor or outdoor wet location shall withstand a rain exposure for 1 h without producing a risk of electric shock or affecting the intended operation. The test shall not result in wetting of live parts. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.10.5.5 Gasket Testing (S527-11)	
10.10.5.5.1.1- 10.10.5.5.3.2 (S527-11)	A gasket for a product intended for indoor wet or outdoor wet or outdoor damp locations shall be of a material able to withstand the temperature and use to which it will be subjected. The gasket material shall be resistant to aging. A gasket that will be disturbed during routine servicing, such as during battery replacement, shall be formed of resilient material such as neoprene or silicone rubber. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.10.5.6 Polymeric materials tests (S527-11)	
10.10.5.6.1 (S527-11)	A polymeric material used for (or as part of) the enclosure of a product intended for outdoor wet locations shall meet the requirements of the following tests in CAN/CSA-C22.2 No. 0.17, Evaluation of Properties of Polymeric Materials: A Ultraviolet Light Exposure Test; B Water Exposure and Immersion Test; and C The Resistance to Impact Test, which is to be conducted as specified in CAN/CSA-C22.2 No. 0.17, Evaluation of Properties of Polymeric Materials (at a low temperature of minus 40 ±2 °C). Exception: With regard to Items A and C, the examination of the property-retention parameters for a polymeric material not used as an enclosure, but attached to or exposed on the outside of the product such as a viewing window, need only include dimensional change with regard to affecting the water seal, and translucence such that viewing of required information is prohibited. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.12 ENDURANCE TEST (S527-11)	
10.12.3 (S527-11)	10.12.3.1 (S527-11) A product employing either power-supply circuitry or circuitry for the power-supply battery charger shall operate as intended following 6000 cycles operation as described in Clause 10.12.3.2 (S527-11). Exception: For a product employing only a battery charger, the product shall operate as intended after 500 cycles as specified in Clause 10.12.4.1 (S527-

Paragraphs	General Subject and Comment
	11). If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.12.4 (S527-11)	10.12.4.1 (S527-11) For a product employing battery charger circuitry, the input circuit is to be connected to a source having a rated voltage defined by Subsection 10.1 (S527-11), General. A load drawing maximum charging current to a discharged battery, as defined in the Subsection 10.5 (S527-11), Battery Test, is to be applied to the charger circuitry for 5 s intervals for a total of 500 cycles. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.12.6.1 (S527-11)	An audible signal device integral with a product shall operate as intended when the product is operated for 8 h of alternate 5 min periods of energization and de-energization, followed by 72 h of continuous energization. For this test, the product is to be connected to a source of rated voltage and frequency. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.13.2 OVERLOAD TEST – SEPARATELY ENERGIZED CIRCUITS (S527-11)	
10.13.2.1 - 10.13.2.3 (S527-11)	When a circuit is specified for use in pilot duty applications, the power factor is to be 0.35, inductive. Circuits rated for use with resistive loads shall use a power factor of 1.0. When no particular load application is specified, the power factor is to be 0.35, inductive. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.15 ELECTROSTATIC DISCHARGE TEST (S527-11)	
10.15.1 - 10.15.4 (S527-11)	When subjected to the tests described in Clauses 10.15.3 (S527-11) and 10.15.4 (S527-11), and while energized from a source of supply in accordance with Clause 10.1.4 (S527-11), a product shall: A Not falsely annunciate alarms or troubles; B Not falsely actuate outputs or releasing device(s); C Not reset during an alarm condition; D Experience no electrical or mechanical failure of any components of the product; E Operate as intended following the test; and F As appropriate retains required stored memory (such as date, type, and location of a signal transmission) within the unit. New requirements. If product is already Listed to ULC S527-11, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.16 RADIO FREQUENCY INTERFERENCE (S527-11)	
10.16.1-10.16.5 (S527-11)	Revise to include requirements to address higher frequencies currently employed in wireless technologies. Testing required, if applicable.

Paragraphs	General Subject and Comment
10.20 ABNORMAL OPERATION TESTS (S527-11)	
10.20.1.1 - 10.20.7 (S527-11)	Rewritten clauses, now in line with UL 864 9th edition, Sec. 75. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.26 LEAKAGE CURRENT TEST (S527-11)	
10.26 (S527-11)	New requirement for cord connected products. Testing required for cord connected products.
10.27 SHORT-RANGE RADIO FREQUENCY (RF) DEVICES TEST (S527-11)	
10.27.1.1 - 10.27.10.2 (S527-11)	These requirements are applicable to systems using initiating device transmitters, repeater transceivers (optional) and receiver units with the transmitters operating on a random basis or using two-way interrogate/response signaling. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.
10.28 LONG-RANGE RADIO FREQUENCY (RF) DEVICE TESTS (S527-11)	
10.28.1.1 - 10.28.8.4 (S527-11)	These requirements cover the operation and performance of products and systems that utilize private long-range radio frequency device transmission paths, both one-way and two-way, between a transmitter unit and a receiver. If product is already Listed to ULC S527-11 or the UL 864 9th edition, product is considered compliant and no testing is required. Otherwise, review/testing is required.