

## STANDARD INFORMATION

**This SUN establishes the Continuing Certification approach for ULC S304**

**Standard Number:** ULC S304

**Standard Name:** Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems

**Standard Edition and Issue Date:** 3<sup>rd</sup> Edition Dated April 26, 2016

**Date of Revision:** April 26, 2016 and October 10, 2018

**Date of Previous Revision of Standard:** July 1, 2006

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **No action is required for currently certified products to maintain certification.**

**This SUN is being presented to assist users of the standard to appreciate the significance of the changes made to the standard that will apply should the product described be modified after February 10, 2020**

## IMPACT, OVERVIEW, AND ACTION REQUIRED

**Impact Statement:** Effective immediately, this revised standard will be exclusively used for evaluation of new products.

### Overview of Changes:

#### April 26, 2016:

- New requirements for Local Alarm System
- New requirements for Installation and Operating Instructions
- New requirements for Frames and Enclosures
- New requirements for Control Units
- New section for System Communications
- New section for Short Range Radio

#### October 1, 2018:

- Revisions on enclosures and tests to harmonize with UL 1023 and UL 1610
- Revisions on wiring, arm / disarm and power failure to harmonize with CAN/ULC-S302
- Revisions to allow short-range radio frequency (wireless) devices on some applications
- Revisions to Table 11, Control Unit Features Based on Security Level

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



**Client Action Required:**

***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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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  |
|---|---------|--|
| <i>Additions to existing requirements are underlined and deletions are shown lined out below.</i>   |         |  |
| <b><i>The following changes reflect the April 26, 2016 revision</i></b>   |         |  |
| <b><i>Title changed to:</i></b>   |         |  |
| Title   | Info    | <b>Standard for Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems</b>   |
| 6   | Info    | <b>CONSTRUCTION</b>  |
| 6.1   | Info    | <b>General</b>   |
| <b><i>New clause added;</i></b>   |         |  |
| Products that currently meet the requirements of CAN/CSA-C22.2 No. 60950-1, Information, Technology Equipment or CAN/CSA C22.2 No. 60065, Audio, Video, and Similar Electronic Apparatus-Safety Requirements, need only to be evaluated to the following Subsections with respect to the construction requirements: |         |  |
| 6.1.2   |         | A Subsection 6.7, Installation Wiring Connections;<br>B Subsection 6.8, Terminals;<br>C Subsection 6.9, Leads;<br>D Subsection 6.11, Termination of Raceways;<br>E Subsection 6.18, Capacitors;<br>F Subsection 6.20, Switches; and<br>G Subsection 6.22, Semiconductors.  |
| 6.2   | Info    | <b>Frame And Enclosure</b>   |
| 6.2.1   | Info    | <b>General</b>   |
| 6.2.1.6   |         | Among the factors which are taken into consideration when judging the suitability of a non-metallic enclosure with respect to aging are: mechanical strength; resistance to impact; moisture absorptive properties; flammability and resistance to ignition from electrical sources; resistance to distortion at temperatures to |



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|          |         | <p>which the material may be subjected under conditions of normal or abnormal usage; and the effect of exposure to weathering if for outdoor use.</p> <p><u>All these factors shall be considered with respect to aging in accordance with Subsection 6.2.2, Polymeric Materials Test, and the Subsection 6.2.3, Mechanical Strength Tests for Enclosures.</u></p>                                      |
| 6.2.1.18 |         | <p><b><i>New clause added;</i></b></p> <p>All communicators shall be housed in tampered enclosures, compliant with the following clauses within this Standard: 6.2.1.6; 6.2.1.9; 6.2.1.10 and 6.2.1.15.</p>   |
| 6.2.2    |         | <p><b><i>New section added;</i></b></p> <p><b>Polymeric Materials Test</b></p>  |
| 6.2.2.1  |         | <p>Polymeric materials used as an enclosure, or for the support of current-carrying parts shall comply with the applicable requirements in CSA C22.2 No. 0.17, Evaluation of Properties of Polymeric Materials.</p>   |
| 6.2.3    |         | <p><b><i>New section added;</i></b></p> <p><b>Mechanical Strength Tests for Enclosures</b></p> <p>This section contains requirements for enclosures (see standard for details).</p>   |
| 9        |         | <p><b><i>New section added;</i></b></p> <p><b>Control Units</b></p> <p>Control units shall comply with the applicable construction and performance test requirements specified in Sections 6, Construction and 8, Performance, in addition to the requirements of this Section (see standard for details).</p>  |
| 10       |         | <p><b><i>New section added;</i></b></p> <p><b>Direct Wire Systems</b></p> <p>These requirements cover operation and alarm receiving control units (see standard for details).</p>   |
| 13       |         | <p><b><i>New section added;</i></b></p> <p><b>Short Range Radio Frequency (RF) Devices</b></p> <p>These requirements cover the operation of control units and systems that utilize initiating, annunciating, and remote control devices that provide signaling by means of low power radio frequency (RF) in accordance with the applicable Industry Canada Regulations (see standard for details).</p> |



| CLAUSE  | VERDICT | COMMENT  |
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| <i>The following changes reflect the October 1, 2018 revision</i> |         |  |
| 6   | Info    | <b>Construction</b>  |
| 6.7   | Info    | <b>Installation Wiring Connections</b>   |
| 6.7.2   |         | Protected premises equipment may be powered from a Class 2 transformer, be cord connected to the alternating current line, or be permanently connected by fixed or other equivalent means to prevent accidental disconnection. <u>Equipment for Security Level III and IV applications shall be permanently connected, or be cord-connected to the alternating current line. Equipment for Security Level I and II applications may use plug-in type Class 2 transformers.</u>   |
| 8   | Info    | <b>Performance</b>   |
| 8.15  | Info    | <b>Electrical transient tests</b>  |
| 8.15.5  | Info    | <b>Radio Frequency Interference</b>  |
|   |         | When subjected to the tests described in Clauses 8.15.5.2 through 8.15.5.3 and while energized from a source of <u>rated voltage and frequency and interconnected as described in the installation wiring diagrams / instructions, a commercial burglar alarm control unit shall:</u>  |
| 8.15.5.1  |         | <p>A Not false alarm;<br/>           B Not falsely actuate outputs;<br/> <del>C Not rest during alarm condition</del><br/> <u>C Not interrupt the execution of non-supplementary program operation;</u><br/>           D Experience no electrical or mechanical failure of any components of the product;<br/>           E Operate as intended following the test; and<br/>           F As appropriate, retain required stored memory (such as date, type, and location of a signal transmission) within the unit.</p> <p>Exception: This requirement does not apply to a product that is only intended for Security Level 1 applications.</p> |
| 9   | Info    | <b>Control Units</b>   |
| 9.2   | Info    | <b>Arm / Disarm</b>  |
|   |         | Control units incorporating an arm/disarm delay feature shall meet the following requirements:   |
| 9.2.1   |         | <p><u>A For equipment used in Security Level I applications, the maximum disarm delay shall not exceed 180 s;</u><br/> <u>B For equipment used in Security Levels II, III and IV applications, the alarm arm/disarm delay shall be adjustable:</u></p> <ol style="list-style-type: none"> <li><u>1) the arm delay range shall include the value of 45 s;</u></li> <li><u>2) the disarm delay range shall include the time established in Clause 9.7.1.2 and the value of 60s;</u></li> </ol>   |



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|  |         | C When an arm/disarm delay circuit is the first circuit activated, all other related protective circuits shall also be delayed; and<br>D The arm/disarm delay sequence shall be audible.  |
| 9.2.8  |         | <b><i>New clause added;</i></b><br>For Security Levels II, III and IV applications, protected premises control units shall be capable of transmitting all arm and disarm signals to the signal receiving centre.  |
| 12   | Info    | <b>Power Supplies</b>   |
| 12.4   | Info    | <b>Power Failure</b><br>With standby power connected, the burglar alarm control unit shall comply with the following:<br><br>A Neither loss nor restoration of commercial power shall cause an alarm signal;<br>B <u>With Exception No. 1 provided in Clause 12.4.1, the control unit shall be capable of transmitting commercial power loss signals within 12 h or when the 50% of the standby power capacity has been depleted, whichever comes first; and</u><br>C <u>Should an alarm occur during a period of commercial power loss, the control unit shall be capable of transmitting commercial power loss signal to the signal receiving centre at the same time as the alarm signal, if such power loss signal has not been previously transmitted.</u> |
| 13   | Info    | <b>Short Range Radio Frequency (RF) Devices</b>   |
| 13.1   | Info    | <b>General</b><br><b><i>New clause added;</i></b>   |
| 13.1.2.1   |         | In a 2-way RF communication system, the initiating device transmission shall be repeated until a confirmation is received from the transceiver.   |
| 13.1.2.2   |         | In a 1-way RF communication system, the transmission shall include several repetitions of the transmitted message in order to increase probability of successful delivery of the message at the receiver.<br><b><i>New clause added;</i></b>  |
| 13.1.6   |         | Short-range radio frequency (RF) devices are permitted for use in Security Level I, II and III applications. One-way or two-way RF system is permitted in Security Level I applications and only two-way RF system is permitted in Security Levels II and III applications.   |
| Table 11   |         | <b>Control Unit Features Based on Security Level</b><br>Table revised, see standard for details.  |
| 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. |         |   |