

STANDARD INFORMATION

Standard: ULC S306

Standard ID: Intrusion Detection Units [ULC S306:2020 Ed.3]

Previous Standard ID: Intrusion Detection Units [ULC S306:2003 Ed.2]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **August 6, 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 Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- New requirements for movement detector, laser based
- New requirements for instructions and drawings
- New requirements for enclosures
- New requirements for internal wiring
- New requirements for various tests

Specific details of new/revise 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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
	Info	INSTRUCTIONS AND DRAWINGS
5	Info	General
		<i>New clause added;</i>
5.4		The installation instructions of equipment intended to be installed outdoors shall indicate that alarms triggered by conditions such as weather, blowing leaves and brush, or related environmental conditions, etc., need to be considered when assessing the installation and application. The installation instructions of outdoor type equipment shall recommend that the intrusion detection unit is not to be connected to an alarm initiating circuit but may be connected to a trouble alarm circuit if nuisance trips are not tolerable (or like statement).
		<i>New clause added;</i>
5.5		When intrusion detection units incorporate serviceable laser device(s) or serviceable components, copies of user and servicing information (operator and service manuals) for the product shall be provided.
		<i>New clause added;</i>
5.6		Laser based intrusion detection units that provide user access for operation, maintenance, or servicing of the unit shall include a detailed list of the procedures to be performed for each function. The procedures shall provide adequate instructions for proper assembly, maintenance, and safe use, including clear warnings concerning precautions to avoid possible exposure to hazardous laser radiation.
		<i>New clause added;</i>
5.7		The user's manuals for laser based intrusion detection units shall provide information on the safety of the laser. This includes: the class of the laser, beam divergence for collimated beams, pulse duration(s), maximum radiant output, and reference to the standard that was used to evaluate the laser, such as CAN/CSA-E60825-1, Safety of Laser Products – Part 1: Equipment Classification and Requirements.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
5.9		If during the “stability” testing, a unit false alarms, due to a specific type of destabilizing element, it is required that the documentation indicate that the subject unit should not be installed where that type of destabilizing element exists. (e. g. turbulent air, high frequency noise, fog, outdoors, etc.)
8	Info	Enclosure
8.1	Info	General
		<i>New clause added;</i>
8.1.8		Laser based products shall have a protective housing which, when in place, prevents physical access or accidental exposure to laser radiation (including errant laser radiation) in excess of the accessible emissions limits (AEL) for Class 1.
		<i>New clause added;</i>
8.1.9		Any parts of the housing or enclosure of a laser product (including embedded laser products) that can be removed or displaced for service and which would allow access to laser radiation in excess of the AEL assigned and are not interlocked shall be secured in such a way that removal or displacement of the parts requires the use of a tool or tools.
13	Info	Internal Wiring
		<i>New clause added;</i>
13.3		Insulation, such as coated fabric and extruded tubing, shall not be affected physically or electrically by the temperature or other environmental conditions to which it may be subjected in actual use.
		<i>New clause added;</i>
13.4		Wireways shall be smooth and entirely free from sharp edges, burrs, fins, moving parts, and the like, which may cause abrasion of the conductor insulation. Holes in sheet-metal walls through which insulated wires pass shall be provided with a bushing if the wall is 1.07 mm or less in thickness. Holes in walls thicker than 1.07 mm shall have smooth, well-rounded edges.
		<i>New clause added;</i>
13.5		All splices and connections shall be mechanically secured and bonded electrically.
		<i>New clause added;</i>
13.6		Stranded conductors clamped under wire-binding screws or similar parts shall have the individual strands soldered together or equivalently arranged to insure reliable connections.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
13.7		A splice shall be provided with insulation equivalent to that of the wires involved if permanence of required electrical spacing between the splice and uninsulated metal parts is not assured.
		<i>New clause added;</i>
13.8		A printed wiring assembly employing insulating coatings or encapsulation shall be tested for dielectric voltage withstand before and after being treated. If it is impractical to use untreated samples, finished samples shall be subjected to the Dielectric Voltage Withstand Test, Section 43, after they are subjected to the Humidity Test, Section 33; Temperature Test, Section 45; and other applicable tests described in this Standard. Electrical connections between circuits under test shall be disconnected prior to testing.
		<i>New section added;</i>
14		Separation of Circuits
14.1		Internal wiring of circuits which operate at different potentials shall be separated by barriers, clamps, routing, or other equivalent means, unless all conductors are provided with insulation which is rated for the highest potential involved.
14.2		If a barrier is used to provide separation between the wiring of different circuits, it shall be of metal or of insulating material. A barrier of insulating material shall be not less than 0.8 mm in thickness. Any clearances between the edge of a barrier and a compartment wall shall be not less than 1.6 mm.
15	Info	Bonding for Grounding
		<i>New clause added;</i>
15.1		An exposed (Refer to 15.2) non-current-carrying metal part, which is liable to become energized, of a unit operating at more than 30 V rms or of a unit equipped with auxiliary function contacts rated at more than 30 V rms shall be reliably bonded to the point of connection of the field-equipment grounding terminal or lead, if provided or required, and to the metal surrounding the knockout, hole, or bushing provided for field power-supply connections.



CLAUSE	VERDICT	COMMENT
39	Info	Jarring Test <i>New clause added;</i> For products that are not permanently installed in a fixed location, non-momentary dislodgment of the product from the intended mounting means is permitted as a result of the jarring test if the following conditions are met:
39.5		a) The product is supervised such that a tamper event / signal is annunciated when it is removed from its intended mounting position; and b) The product operates as intended and complies with 39.3 after being dropped four consecutive times onto a hardwood floor from a height equal to the maximum mounting height specified by the manufacturer. Reassembly without the use of tools is allowed provided no permanent damage has occurred.
47	Info	Transient Tests
47.3	Info	Input/output (low-voltage) field-wiring transients <i>New clause added;</i> The product is to be energized in the normal standby condition while connected to a source of supply in accordance with 25.3.1. All field-wiring circuits are to be tested as specified in 47.3.2 and 47.3.3. Exception: A circuit or cable that interconnects equipment located within 7.62 m (25 ft) is not required to be subjected to this test.
47.3.1		
47.3.2		<i>New clause added;</i> The signaling equipment connected to these circuits shall: a) Not false alarm, b) Operate as intended, and c) Retain, as appropriate, required stored memory (such as date, type, and location of signal transmission) within the unit when subjected to transient voltage pulses as described in 47.3.3. Supplemental information stored within the unit need not be retained.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
		Each conductor of a circuit is to be subjected to 40 transient pulses induced at the rate of six pulses per minute as follows:
47.3.4		<p>a) Twenty pulses (four at the 2400 peak voltage level and two at each of the other transient voltage levels specified in 47.3.3) between each lead or terminal and earth ground, consisting of ten pulses of one polarity, and ten of the opposite polarity and</p> <p>b) Twenty pulses (four at the 2400 peak voltage level and two at each of the other transient voltage levels specified in 47.3.3) between any two circuit leads or terminals consisting of ten pulses of one polarity and ten pulses of the opposite polarity.</p> <p>CAUTION: Potentially lethal voltages are involved. The transient generator and the intrusion detection unit under test are to be on a non-conductive surface and appropriate safety precautions observed.</p>
		<i>New clause added;</i>
47.3.5		At the conclusion of the test, the equipment shall comply with the requirements of the Normal Operation Test, Section 26.
72	Info	Movement Detector, Passive Infrared Type
72.3	Info	Stability
72.3.3		At normal sensitivity setting, range setting, or both, the detector shall not cause a false alarm when subjected to air turbulence caused by an electric heating coil rated 3 kW placed approximately 900 mm below the face of the detector outside the direct field view and energized for 5 min and de-energized for 25 min for a total of 3 h. <u>If false alarms are generated, markings on the unit or the installation instructions shall warn against use in turbulent air. Ceiling units shall be tested with and without deflectors, if provided.</u>
		<i>New section added;</i>
		Movement Detector, Laser Based
73		A laser based detector system shall produce optical radiation that covers a specific area and detects movement in accordance with Sensitivity and Range Tests and the manufacturers operating and installation instructions.
		See standard for details.



CLAUSE	VERDICT	COMMENT
	Info	MARKING
76	Info	General
		<i>New clause added;</i>
76.12		The Laser devices and/or the Laser based intrusion detection units shall be marked with identification and certification label complying with the requirements of Canadian Radiation Emitting Devices Act, REDR C1370 or CAN/CSA-E60825-1, Safety of laser products – Part 1: Equipment classification, requirements and user’s guide, for Class I Laser Radiation.
		<i>New clause added;</i>
76.13		The marking is be located so that it is visible from the outside of the product.
		<i>New clause added;</i>
76.14		Laser based detectors shall have the following statement marked on the product “Caution – Use of controls or adjustments or performance of procedures other than those specified in the installation and operating instructions may result in hazardous radiation exposure”.