ULC
STANDARD

ULC-S306-03

INTRUSION DETECTION UNITS

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The intended primary application of this Standard is stated in its scope. It is important to note that it remains the responsibility of the user of the Standard to judge its suitability for the particular application.

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NOTICE OF PARTIAL DEFERRAL

Second Edition of ULC-S306-03, Intrusion Detection Units

Since the release of the 2nd edition of this Standard in December 2003, issues have been identified with regards to the implementation of Subsection 8.3 (Glass Breakage Detector) in the 2nd edition.

Therefore, with the approval of the ULC Committee on Security and Burglar Alarm Equipment and Systems, this Notice of Partial Deferral takes effect immediately as follows:

1. Implementation of the Second edition of ULC-S306-03, Intrusion Detection Units, except for Subsection 8.3 (Glass Breakage Detector); and

2. Deferral of the implementation of Subsection 8.3 (Glass Breakage Detector) from the 2nd edition and reinstatement Subsection 8.3 (Glass Breakage Detector) from the 1st edition of CAN/ULC-S306-M89 (Standard for Intrusion Detection Units) until such time as the ULC Committee on Security and Burglar Alarm Equipment and Systems has resolved the concerns that have been raised. Subsection 8.3 from the 1st edition is attached to this Notice of Partial Deferral.

Should you require any additional information, please contact Mahendra (Mike) Prasad at 416-757-5250 Ext. 61242 or email: mahendra.prasad@ca.ul.com

Yours truly,

G. Rae Dulmage
Director, Standards Department

8.3 GLASS BREAKAGE DETECTOR

8.3.1 General

8.3.1.1 Glass breakage detectors shall detect breakage of any portion of a glass window(s) it is protecting. The detector may operate on the direct mounting or remote mounting (acoustic) principle.

8.3.1.2 The installation instructions shall specify types and minimum size of glass for which the protection is to be provided.

(Amendment No. 1, Dated May 1992, Revised Clause 8.3.1.2)

8.3.1.3 When installed as intended and adjusted properly, the system shall alarm when the protected glass is given a sharp blow.

(Amendment No. 1, Dated May 1992, Revised Clause 8.3.1.3)

8.3.1.4 The impact produced by a 535 g steel ball striking the centre of an 0.46 m square piece of 3 mm float glass with a 0.4 J impact is acceptable as the point at which the detector SHALL NOT produce an alarm. Any impact greater than 0.4 J MAY produce an alarm and actual glass breakage at any impact level SHALL produce an alarm. The detector is to be set at a minimum sensitivity and the distance from the glass to the detector is 3 m.

8.3.1.5 The unit shall not alarm at least 95 times out of 100 consecutive attempts at the impact specified in Clause 8.3.1.4, with each attempt being conducted at 1 second interval. Allow 15 seconds for the circuitry to stabilize after every twenty attempts.

8.3.1.6 The frame supporting the glass shall be metal and sufficiently substantial so that it will not move when the glass is struck with the ball. The glass shall be held with 1.6 mm neoprene gasket or similar resilient material around and both sides of the glass to ensure that the glass has reasonably even pressure on the clamping surface.

8.3.1.7 A field tester (glass break simulator) shall be provided to facilitate proper field installation. The field tester shall not be adjustable.

(Amendment No. 1, Dated May 1992, Added Clauses 8.3.1.4 through 8.3.1.7)

8.3.2 Sensitivity-Attack Test

8.3.2.1 The alarm point and the breakage point shall be determined by successively greater impacts, each impact not more than 10% greater than the previous impact, beginning with a magnitude which does not cause alarm. Multiple trials shall be performed and the results averaged.

8.3.3 Stability

8.3.3.1 The system shall demonstrate a high degree of stability with sensitivity equal to or greater than that specified in Clauses 8.3.1.2 and 8.3.1.3.

8.3.3.2 At normal sensitivity the system shall not be adversely affected by noise or building vibration.

8.3.4 Temperature Test

8.3.4.1 Detectors shall be tested at their maximum and minimum rated temperatures for a period of 12 h and the sensitivity and range tests repeated. Detectors intended to be mounted directly on surfaces exposed to outside temperatures shall be tested at -20 to +66°C. The maximum sensitivity reduction shall not be greater than 10% of normal sensitivity.

8.3.5 Adhesive Test

8.3.5.1 Direct mounting devices installed in accordance with the installation instructions the detector shall remain firmly attached when subjected to conditions specified in Clauses 8.3.5.3 through 8.3.5.8.

8.3.5.2 Following each test condition described in Clauses 8.3.5.3 through 8.3.5.7, security of the adhesive bond shall be determined by dropping a 19 by 150 by 300 mm, 370 ±60 g pine board from a height of 300 mm in a direction parallel to the glass so as to impact the side of the sensor. The product shall be allowed to return to room temperature prior to this test.

8.3.5.3 The security of the adhesive bond shall not be impaired by soaking in water at 20 to 25°C for a period of 24 h. Prior to inspecting, the sample shall be removed from the water, mounted vertically and allowed to dry.

8.3.5.4 The security of the adhesive bond shall not be impaired by exposure to a temperature of 66°C for a period of 24 h.

8.3.5.5 The security of the adhesive bond shall not be impaired by exposure to a temperature of -40°C for a period of 24 h.

8.3.5.6 The security of the adhesive bond shall not be impaired by exposure to air at 100% relative humidity, maintained at a temperature of 30 ±2°C for a period of 24 h.

8.3.5.7 The security of the adhesive bond shall not be impaired by the application of window cleaning liquids to the detector and surrounding glass surface. The glass surface shall be mounted in a vertical position and the cleaning liquid applied so as to completely saturate the detector and surrounding glass surface. The cleaning liquid shall not be wiped away, and other applications shall be made, with 5 min between applications, until a total of four applications

have been made. The test in Clause 8.3.5.2 shall not be conducted for at least 24 h after the last application. The following window cleaning liquids shall be used:

A Commercial foaming type spray without ammonium hydroxide (NH_4OH); and

B Solution of ammonia water consisting of one part of an ammonium hydroxide (NH_4OH) 30 ±3% solution with eight parts distilled water.

8.3.5.8 The detector shall be capable of supporting a static load of 220 N applied at the point of contact in a direction parallel to the surface of the glass for a period of 1 min.

8.3.5.9 Partial or complete dislodgement of the detector shall be considered as indicating an inadequate adhesive bond.

8.3.5.10 The requirements of Clauses 8.3.5.2 and 8.3.5.8 shall not apply if electrical supervision is provided so as to initiate an alarm or trouble signal in the event of complete or partial dislodgement of the detector.

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