
BULLETIN 2007-001-EL

APRIL 19, 2007

(Revised)

CLARIFICATION OF RULE 30-308(4) OF THE 20TH EDITION OF THE CEC ADOPTED FOR USE IN BC

This Bulletin clarifies the requirement of Subrule 30-308(4) which was added to the 2006 CE Code. This new requirement becomes mandatory upon adoption of the 20th edition of the CEC for use in BC. Rule 30-308(4) mandates a dedicated disconnecting means for a typical 347 V fluorescent luminaire installed on a branch circuit exceeding 150 volt-to-ground.

This Code requirement is intended to protect qualified persons working on operating 347 V fluorescent lighting in conformance with provisions of Rule 2-304.

Users of the Code must be aware that Rule 30-308(4) is not intended for the fluorescent lighting installed in hazardous location, as in accordance with Rule 2-302 no repairs or alterations are permitted on any live equipment installed in hazardous locations. The requirement of Rule 30-308(4) is interpreted that except where a certified fluorescent luminaire is already equipped with a specific internal disconnecting means that will allow opening all conductors supplying the ballasts, a disconnecting means must be provided during the installation for each fluorescent luminaire utilizing single or double-ended lamps when such luminaire is installed on branch circuits with voltages exceeding 150 volts-to-ground. A legible, permanent and conspicuous field marking clearly identifying the specific purpose of this disconnecting means must also be provided adjacent to the disconnecting means.

It is interpreted that requirement of Rule 30-308(4) is applied for new installations only, as Rule is written for "fluorescent luminaires installed on branch circuits with voltages exceeding 150 volts-to-ground." Any retrofit work on an existing luminaire (already installed on a branch circuit) with a voltage more than 150 volts-to-ground (a typical lamp replacement), that would not require a re-certification of the luminaire, will not trigger compliance with Rule 30-308(4). If, however, a retrofit of the existing 347 V luminaire will warrant a re-certification of the luminaire, then a disconnecting means and a label conforming to Rule 30-308(4) would be required.

The intent of this Rule is to provide disconnecting means at the point of connection of a fluorescent luminaire to the branch circuit conductors in each case, when the luminaire is not equipped with such disconnecting means in accordance with provisions of the Technical Information Letter - TIL B78. Code users should note that the approved fluorescent luminaires incorporating such disconnecting means will be available on the market.

The CSA International offers a certification program to provide approval of such luminaires to the Technical Information Letter - TIL B78. This TIL has been published by the CSA International to certify the luminaires utilizing single or double-ended lamps with internal disconnecting means that will allow to open all conductors supplying the ballasts.

(Attachment: TIL B78 by the CSA International)

A.Z. Tsisserev, P.Eng.
ELECTRICAL SAFETY MANAGER,
CHIEF ELECTRICAL INSPECTOR & CITY ELECTRICIAN

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CERTIFICATION Notice

An URGENT Bulletin from CSA International

Ref No: N06-033

Date: May 15, 2006

Lighting Products No. 47

See Attachment 1 for Effective Dates.

Call us today!

We can help you stay on top of changes that will affect your Certification!
1-866-797-4272

Announcing: Publication of Technical Information Letter (T.I.L.) No. B-78, Interim Requirements for Ballast Disconnect Means in Fluorescent Luminaires installed on Branch Circuits with Voltage Exceeding 150-Volts-to-Ground

See Attachment 2 for affected Class Numbers.

Who is affected?

Manufacturers of fluorescent lamp luminaires with voltages exceeding 150-Volts-to-ground.

What do you do?

1. Testing may be required to comply with these revisions. Please contact CSA engineering staff to arrange for testing of your products.
2. If none of the revisions are applicable to your product designs, please notify your CSA engineering staff or the listed Technical Contact to update your Certification Records to show compliance with the new requirements.
3. Please respond no later than stated in Attachment 1. When responding, please include the appropriate supporting documentation*. If testing is needed, we will inform you of the samples required.

*Technical information and materials as well as company name, address, factory locations and CSA file number or master contract number (if assigned) when applying.

Need additional technical information?

Contact Ziggy Psarski
by phone 416.747.4180, fax 416.747.4149
or e-mail ziggy.psarski@csa-international.org

Background and Rationale:

The committee for the Canadian Electrical Code Part I approved a new Rule 30-308(4) which states: "Each fluorescent luminaire installed on branch circuits with voltages exceeding 150 volts-to-ground, shall be:

- (a) provided with a disconnecting means integral with the luminaire that simultaneously opens all circuit conductors between the branch circuit conductors and the conductors supplying the ballast(s); and
- (b) marked in a conspicuous, legible, and permanent manner adjacent to the disconnecting means, identifying the specific purpose."

Technical Information Letter No. B-78 (see Attachment 3) specifies the details of implementing compliance with the above new rule.

See Attachment 1 for Effective dates and Application Due Dates

In the event your models do not comply with the effective standards, arrangements must be made to bring them into compliance.

In the event we do not receive a response as to your currently certified models, prior to the above applicable effective date(s), the certification of such models will be discontinued.

Visit us at www.csa-international.org

Click on "Contact Us" for the online phone listing of our Offices and Partners
Visit us at www.shopcsa.ca to purchase a Standard!



ATTACHMENT 1

Effective Dates

Effective Date: June 1, 2007 for fluorescent luminaires utilizing double-ended lamps

Effective Date: June 1, 2010 for fluorescent luminaires utilizing pin-base compact fluorescent lamps

Effective immediately, applications for retrofit kits intended to provide disconnecting means for existing fluorescent luminaires shall be processed using the requirements of the subject Technical Information Letter No. B-78.

Applications Due Dates

October 1, 2006 for fluorescent luminaires that utilize double-ended lamps.

June 1, 2009 for fluorescent luminaires that utilize pin-base compact fluorescent lamps

Note:

Applications for certification of new luminaires received after "Application due date" shall be processed using the requirements of the subject Technical Information Letter No. B-78.

Definitions:

Double-ended fluorescent lamp – straight or U-bent linear fluorescent lamp (includes T2, T5, T8, T12 lamps)

Pin-base compact fluorescent lamp – multitube or multibend single ended lamps (includes compact fluorescent lamps with tube configurations such as twin, quad, multi and 2D). For the purpose of this T.I.L. "T9 circline" type lamp or "T5 circular" type lamp with a single base shall be considered in the same way as the pin-based compact fluorescent lamps.

ATTACHMENT 2

Affected Class Numbers

Class No:

3422 01 : LUMINAIRES - Gas-tube Luminaires

3422 02 : LUMINAIRES - Gas-tube Luminaires

3423 01 : LUMINAIRES - Luminaires - Recessed Type

3425 05 : LUMINAIRES - Luminaires – Miscellaneous

3425 03 : LUMINAIRES - Luminaires - Enclosed and Gasketed

3425 06 : LUMINAIRES - Fixtures - Recessed Type

ATTACHMENT 3

TECHNICAL INFORMATION LETTER NO. B-78

CSA International

Product Group: Lighting Products

Date: May 15, 2006

Issued By: Ziggy Psarski

Approved By: Davey Li

EQUIPMENT: Luminaires

ITEM: Interim Certification Requirements for Ballast Disconnect Means in Fluorescent Luminaires for Installation on Branch Circuits with Voltages Exceeding 150 Volts-to-Ground

REFERENCES:

- | | |
|---------------------------------|---|
| CAN/CSA-C22.2 No. 0-M91 (R2001) | - General Requirements – Canadian Electrical Code, Part II |
| C22.2 No. 182.3-M1987 | - Special Use Attachment Plugs, Receptacles and Connectors |
| C22.2 No. 250.0-04 | - Luminaires |
| CAN/CSA-E60598-1-02 | - Luminaires – Part 1: General Requirements and Tests |
| CAN/CSA-E598-2-1-98 | - Luminaires – Part 2: Particular requirements – Section 1: Fixed General-Purpose Luminaires. |

Background & Rationale

This Technical Information Letter (T.I.L.) has been prepared to document interim certification requirements for ballast disconnecting means for the following luminaries for installation on branch circuits with voltage exceeding 150 volts-to-ground:

- (a) luminaires employing double-ended fluorescent lamps;
- (b) luminaires employing pin-base compact fluorescent lamps; and
- (c) retrofit kits intended to provide disconnecting means for existing fluorescent luminaries.

The requirements were developed for fluorescent luminaries for compliance with the new Rule 30-308(4) of the Canadian Electrical Code, Part I.

Rule 30-308(4) reads as follows:

“Each fluorescent luminaire installed on branch circuits with voltages exceeding 150 volts-to-ground, shall be:

- (a) provided with a disconnecting means integral with the luminaire that simultaneously opens all circuit conductors between the branch circuit conductors and the conductors supplying the ballast(s); and
- (b) marked in a conspicuous, legible, and permanent manner adjacent to the disconnecting means, identifying the specific purpose.”

Scope

This T.I.L. applies to luminaires specified in “Background & Rationale” above for use in non-hazardous locations and shall be used in conjunction with CSA Standards C22.2 No. 250.0, CAN/CSA-E60598-1, and CAN/CSA-E598-2-1.

Definitions

Double-ended fluorescent lamp – straight or U-bent linear fluorescent lamp, including T2, T5, T8, and T12 lamps.

Pin-base compact fluorescent lamp – multitube or multibend single ended lamps (including compact fluorescent lamps with tube configurations such as twin, quad, multi and 2D). For the purpose of this definition “T9 circline” type lamp or “T5 circular” type lamp with a single base shall be considered in the same way as the pin-based compact fluorescent lamps.

1.0 Fluorescent Luminaires

1.1 Requirements

1.1.1 Each fluorescent luminaire for installation on branch circuits with voltages exceeding 150 volts-to-ground, shall be:

- (a) provided with a disconnecting means integral with the luminaire that simultaneously opens all circuit conductors between the branch circuit conductors and the ballast(s); and
- (b) marked in a conspicuous, legible, and permanent manner adjacent to the disconnecting means, identifying the specific purpose.

1.1.2 Examples of acceptable disconnecting means are:

- (a) plug type connectors incorporated in the ballast leads
- (b) plug type connectors located directly at the ballast
- (c) multipole switches in compliance with Clause 1.1.1(a) above
- (d) cord sets and power supply cords with a maximum length of 1.0 meter
- (e) wiring harnesses suitable for the application.

Refer to Annex A for more detailed examples.

1.1.3 Connectors, switches and wiring harnesses used as a ballast disconnecting means shall be rated for breaking and making the ballast load. Refer to Annex A for examples of acceptable and not acceptable constructions.

- 1.1.4 Switches shall be rated in accordance with Clause 6.4.1.1 of CSA Standard C22.2 No. 250.0.
- 1.1.5 Connector leads shall be integral with the connector and comply with the applicable connector Standard or if assembled by other than the connector manufacturer, shall comply with the lead security test values in Table 3 of CSA Standard C22.2 No. 182.3.
- 1.1.6 Twist-on wire or push-in wire connectors shall not be used as a means of disconnect.
- 1.1.7 Twist-on wire or push-in wire connectors, used to secure plug in wire connectors, shall be rated for the application, but not less than 600 V.
- 1.1.8 Conductors used in the construction of the disconnecting means shall comply with Clause 6.9.2 of CSA Standard C22.2 No. 250.0 and shall be rated minimum 600 V, 90°C.
- 1.1.9 Ballast disconnect means shall comply with Clause 6.13.1.1 of CSA Standard C22.2 No.250.0, concerning accessibility of live parts. There shall be no shock hazard during the intended normal operation and after disconnecting the ballast.
- 1.1.10 Luminaires provided with ballasts accepting a range of voltage inputs, so called universal voltage ballasts, such as 120 V to 277 V, shall comply with this T.I.L. if the input voltage range covers voltages over 150 volts-to-ground.

1.2 Marking

- 1.2.1 In addition to the marking specified in CSA Standard C22.2 No. 250.0 and in the applicable component Standards, the marking BALLAST DISCONNECT shall be provided in the following manner:
 - (a) in a conspicuous, legible, and permanent manner, adjacent to the disconnecting means, identifying the specific purpose;
 - (b) Type S24L1, in accordance with Section 20 of CSA Standard C22.2 No. 250.0; and
 - (c) In French equivalent where applicable.
- 1.2.2 Marking specified in Clause 1.2.3 shall be provided adjacent to the ballast, if:
 - (a) the ballast disconnect means is not accessible directly from the room side of the luminaire; and
 - (b) the ballast is normally accessible from the room side.
- 1.2.3 Following are the markings for Clause 1.2.2:
 - (a) DISCONNECT POWER BEFORE SERVICING and UNPLUG CONNECTOR LOCATED AT _____; or
 - (b) UNPLUG POWER SUPPLY CORD LOCATED AT _____.

2.0 Conversion Kits

- 2.1 Until such time that ballasts are required to include a means of disconnect, the following requirements for conversion kits may be used to convert existing fluorescent luminaires.
- 2.2 Conversion kits may be intended for general use or for specific ballast or luminaire types.

2.3 Conversion kits shall comply with Clause 1.0 above and the following requirements:

(a) they shall be provided with installation instruction, including the following:

”CAUTION: RISK OF SHOCK. DISCONNECT POWER BEFORE INSTALLATION”;

(b) the smallest packaging unit shall be marked with the intended application, if designed for a specific luminaire or ballast type; and

(c) twist-on or push-in wire connectors rated for minimum 600 V shall be included with the conversion kit that requires the use of such connectors for installation.

ANNEX A OF T.I.L. No. B-78

Examples of Acceptable and Unacceptable Components and Disconnecting Means

1.0 Unacceptable Components

Components, such as connectors, rated and marked “not for current interrupting” are not acceptable, unless additional switching means are provided.

2.0 Acceptable Disconnecting Means

- 2.1 A switch interrupting supply to the ballast, connected with a twist-on or push-in wire connector.
- 2.2 A ballast provided with an integral connector and supply leads having a mating connector which complies with Clause 1.1.9 of this T.I.L.
- 2.3. A ballast, provided with leads terminated with a connector and supply leads, having a mating connector.
- 2.4 A ballast provided with 15 A 347 V ac plug and input leads terminated in a receptacle, such as 24-15R, rated 15 A 347 V ac.
- 2.5 A power supply cord with a maximum length of 1.0 meter.
- 2.6 A cord set with a load type receptacle (power inlet) attached to the luminaire.
- 2.7 A wiring harness assembly