

## Hazardous Locations

### Fuses for Use in Classified (Hazardous) Locations (based upon the NEC®)

The characteristics of various atmospheric mixtures of hazardous gases, vapors and dusts depend on the specific hazardous material involved. Therefore, it is necessary that equipment be identified not only for the class of location but also for the specific gas, vapor or dust that will be present (500.5).

#### Class I Division 1

Fuses located in Class 1 Division 1 locations are required to be provided with enclosures that are identified as a complete assembly for use in Class I locations [501.115(A)].

#### Class I Division 2

Fuses located in Class I Division 2 locations should be selected based upon the application and enclosure type. Only certain fuse types are permitted to be used in general purpose enclosures. 501.105(B)(5), 501.115(B)(3) & 501.115(B)(4) address the use of fuses in Class I Division 2 locations. (See Figure 1)

- Any plug or cartridge type fuse, as allowed by Chapters 1 through 4 of the NEC®, is suitable for the protection of motors, appliances, and lamps, provided the fuse is installed in an enclosure identified for the location.
- Fuses for the protection of motors, appliances, and lamps installed in general purpose enclosures must also meet one of the following:
  - They are non-indicating, filled and current-limiting type. Bussmann offers many fuses that meet the criteria for non-indicating, filled, current-limiting type (See Note 1 and Note 2)
  - They are the type in which the element is immersed in oil or other approved liquid. Bussmann does not offer this type of product.
  - The element is hermetically sealed against gases and vapors. Bussmann does not offer hermetically sealed fuses for this type of application.
- Fuses protecting meters, instruments and relays can be any plug or cartridge type if they meet the following criteria:
  - Fuse is installed in a circuit not subject to overloading
  - Fuse is installed on the load side of a switch complying with 501.105(B)(1)
- Fuses installed in a luminaire and used as supplementary protection can be any listed cartridge type.

Since there are so many potential variables governing the proper selection of a fuse for use in general purpose enclosures, the quickest and most appropriate selection is a current-limiting, non-indicating, filled fuse. This fuse type is suitable for all applications mentioned above so the chance for misapplication is minimized. In addition, a rejection style fuse will help ensure only the proper fuse type is installed in the future. For 30A and less power or control applications the Bussmann Class CC fuses meet the necessary criteria. (See Note 1)

#### Class II and Class III

Class II, Division 1 — Fuses must be provided with enclosures identified for the location [502.115(A)].

Class II, Division 2 — Fuses must be provided with enclosures that are dust-tight or otherwise identified for the location [502.115(B) and 502.135(B)(3)].

Class III — Fuses must be provided with dust-tight enclosures [503.115].

Note 1: Bussmann non-indicating, filled, current-limiting fuses.



**Class CC:** LP-CC 12 - 30A, KTK-R 12 - 30A, FNQ-R 8/10 - 30A\*

**Class CF:** Class CF: TCF1RN to TCF100RN, FCF1RN to FCF100RN

**Class T:** J1N 1 - 1200A, J1S 1 - 800A

**Class J:** JKS 1 - 600A, LPJ\_SP 1 - 600A

**Class G:** SC 1/2 - 60A

**Class RK1:** KTN-R 1 - 600A, KTS-R 1 - 600A, LPN-RK\_SP\* 3/2 - 6 1/4 and 70 - 600A, LPS-RK\_SP\* 65 - 600A

**Class RK5:** FRN-R 3/2 - 7 1/2 and 225 - 600A, FRS-R\*\* 65 - 600A

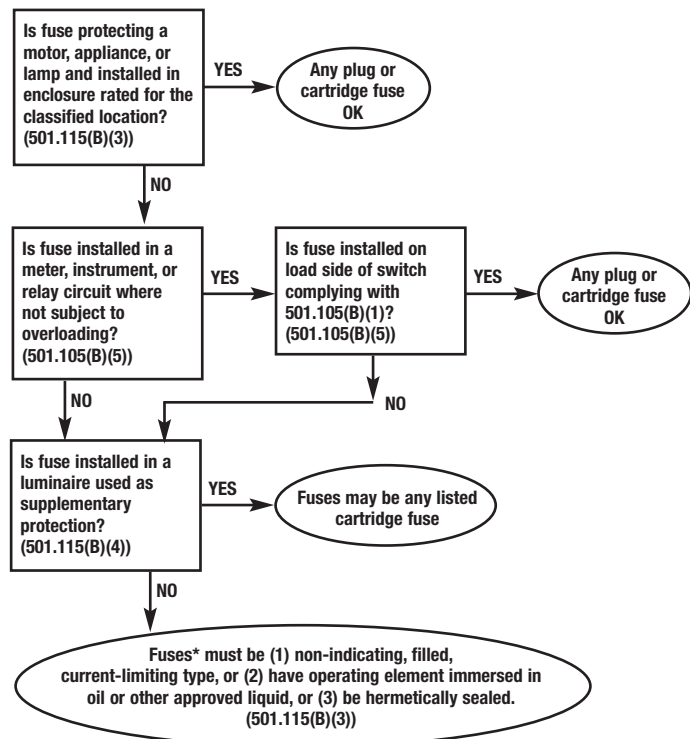
**Class L:** KRP-C\_SP 601 - 6000A, KTU 601 - 6000A, KLU 601 - 4000A

\*Fuses from July 1996 or date code C28 to present only.

\*\*Fuses from October 1997 or date code D40 to present only

Note 2: How to verify a fuse as current-limiting. 600V or less current-limiting fuses are listed, and marked "current-limiting".

Figure 1 – NEC Article 501 – Fuses for use in Class I Division 2 Locations



\*For the protection of motors, appliances, and lamps installed in general purpose enclosures.