### Guide to Hazardous Locations

#### Explosive Dust Atmospheres

**Ex Marking**

**US (NEC® 500) and CA (CEC Annex J18)**

- **Type of protection**
  - I.S.
  - Pressurization
  - Dust-Ignitionproof
- **Equipment Category**
  - Class I, Division 2
  - Class II, Division 1 & 2
  - Class III, Division 1 & 2
  - Zone 20
  - Zone 21
  - Zone 22
  - Group E, F, G

**Typical Zone**

- **Division 1**
  - T1
  - T2
  - T3
  - T4
  - T5
- **Division 2**
  - T6

**Equipment Grouping**

- **Class I**
  - Groups A, B, C, D
  - Groups E, F, G
- **Class II**
  - Groups A, B, C, D
  - Groups E, F, G
- **Class III**
  - Groups A, B, C

**Area Classification**

- **Group**
  - A (flammable gas)
  - B (flammable vapor)
  - C (flammable dust)
- **Class**
  - I
  - II
  - III
- **Division**
  - 1
  - 2
- **Category**
  - 1
  - 2
  - 3
  - 4

**Ingress Protection (IP) Codes**

### FM Approvals

**FM Approvals is your global conformity assessment solution**

**Market**

- **U.S.**
- **Canada**
- **Other (EU)**

**Recognized product certification marks**

- **FM**
- **US**
- **CAN/CSA**
- **IEC**
- **EN**
- **ANC/UL**

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**Acronyms**

- **ATEX**
- **AIS**
- **CEC**
- **EPL**
- **FM Approvals**
- **GM**
- **ISO**
- **NFPA**

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**Temperature**

- For Class II, the temperature class is determined with a minimum dust layer thickness on the equipment.
- The temperature must not be greater than 120°C for equipment that can be reinstalled and 105°C for the equipment not subject to overloading.

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**Intrinsically safe installation (I.S.)**

- For installations with phases up to 100kV, temperature must not exceed 75°C below the dust ignition temperature.
- For installations with phases up to 20kV, temperature must not be greater that 2/3 of the dust ignition temperature.

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**Approximate U.S. enclosure type equivalent to IP**

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