**APPLICATION**

Process Temperature Maintenance or Freeze Protection

MIQ high performance mineral insulated heating cables are used extensively for high temperature maintenance, high temperature exposure and/or high watt density applications which exceed the limitations of thermoplastic insulated cables. The resistance configurations available can provide tracing for pipes up to 1 mile (1.6 km) long from a single power supply point.

Thermon’s MIQ mineral insulated cables are manufactured using Alloy 825, a high nickel/chromium alloy ideally suited for high temperature service that offers exceptional resistance to stress corrosion in chloride, acid, salt and alkaline environments.

MIQ cables are approved for use in ordinary (nonclassified) areas and hazardous (classified) areas.

**RATINGS**

Rated voltage $^1$ ...........................................300 and 600 Vac
Max. maintenance temperature $^2$ ..................932°F (500°C)
Max. continuous exposure temperature   
  Power-off ........................................... 1,112°F (600°C)
Max. watt density $^2$................................. up to 80 w/ft (262 w/m)
Minimum installation temperature.............-76°F (-60°C)
Minimum bend radius ............................... 6 x cable O.D.

**MIQ CATALOG REFERENCE NUMBER**

A complete catalogue reference number includes the following components:

- **Design (A,B,D,E)**
- **Cable Reference**
- **Length (metric lengths followed by "M")**
- **Watts**
- **Volts**
- **Cold Lead Length (metric lengths followed by "M")**
- **Cold Lead size (AWG)**
- **Cold Lead Voltage Rating**
- **Laser Welded Fitting**
- **Hazardous (Classified) Location Rating $^4$**

**Notes**

1. Definition as stated in IEEE Standard 515. Specific voltage depends on circuit length and design conditions.
2. Watt density limitations are correlated to maintain temperatures. Maximum watt density for CSA certified application is 50 w/ft (164 w/m).
3. Cold lead gland is 1/2" NPT except for 2-conductor sets with larger wire sizes for which a 3/4" NPT gland is provided. Contact Thermon for gland size information.
4. If the field is blank, then the heating cable set is intended for ordinary (nonclassified) locations or D2, AEx de, or Ex de hazardous (classified) locations. If the value in the field is “1”, then the heating cable set is intended for D1, AEx d, or Exd hazardous (classified) locations.

**CONSTRUCTION**

1. Solid alloy or copper conductor(s)
2. Compacted magnesium oxide insulation
3. Seamless alloy 825 sheath
4. Laser Welded Assembly

**MIQ HEATER SETS**

Thermon MIQ cable sets are available in three factory fabricated configurations: Type B, D or E. The standard assemblies consist of a predetermined length of heating cable joined to a standard 4' (1.2 m) or 7' (2.1 m) nonheating cold lead with 12" (305 mm) long thermoplastic insulated pigtails.

The nonheating section of the unit is sealed and fitted with a high pressure, liquid-tight 1/2" or 3/4" NPT stainless steel gland for connection into the supply junction box.

**Heater Set Types**

- **B**
  - Pigtail
  - One Conductor Heated Length
  - Used With 600 Vac, One Conductor Cable

- **D**
  - Pigtail
  - Two Conductor Heated Length
  - Cold Lead
  - Hot-End Termination
  - Used With 300 or 600 Vac, Two Conductor Cable

- **E**
  - Pigtail
  - Two Conductor Heated Length
  - Used With 300 or 600 Vac, Two Conductor Cable

**THERMON** The Heat Tracing Specialists®

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Circuit Breaker Sizing

Maximum circuit lengths for various circuit breaker amperages are shown. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Certifications/Approvals

- Factory Mutual Research
- Underwriters Laboratories Inc.
- Ordinary Locations
  - Class I, Division 1 Groups B, C and D 2
  - Class I, Division 2, Groups A, B, C and D
- Hazardous (Classified) Locations
  - Class I, Division 2, Groups A, B, C and D
  - Class II, Divisions 1 and 2, Groups E, F and G
  - Class III, Divisions 1 and 2
  - Ex d IIC 2
  - Ex de IIC

Canadian Standards Association

- Ordinary Locations
- Hazardous (Classified) Locations
  - Class I, Division 1, Groups B, C and D 2
  - Class I, Division 2, Groups A, B, C and D
  - Class II, Divisions 1 and 2, Groups E, F and G
  - Class III, Divisions 1 and 2
  - Ex d IIC 2
  - Ex de IIC

Notes

1. All resistances shown are per length of cable at 68°F (20°C) and are subject to a ±10% manufacturing tolerance.
2. Flameproof system must be specified, contact Thermon.