

# MIQ™ Mineral Insulated Heating Cable

## Product Specifications

### 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.

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

MIQ cables are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX directive and the IEC Ex scheme.

### Ratings . . .

|  |                |
|--|----------------|
| Rated voltage <sup>1</sup> .....                   | 600 Vac        |
| Maximum maintenance temperature <sup>2</sup> ..... | 500°C          |
| Maximum continuous exposure temperature            |                |
| Power-off .....                                    | 600°C          |
| Maximum Watt density <sup>2</sup> .....            | 260 W/m        |
| Minimum installation temperature.....              | -60°C          |
| Minimum bend radius.....                           | 6 x cable O.D. |
| T-rating <sup>3</sup>                              |                |
| Based on stabilised design <sup>4</sup> .....      | T1 to T6       |

### MIQ Heater Sets . . .

Thermon MIQ cable sets are available in various factory-fabricated configurations designed for the cable type and number of conductors, (contact Thermon for additional information). The standard assemblies consist of an engineered length of heating cable joined to a standard 1,2 or 2,1 meter nonheating cold lead with 305 mm long thermoplastic insulated pigtails.

The nonheating section of the circuit is sealed and fitted with a suitable rated M20 brass gland for connection into the supply junction box.

### Notes . . .

1. Specific voltage depends on circuit length and design conditions.
2. Watt density limitations are correlated to maintain temperatures.
3. T-rating per internationally recognised testing agency guidelines.
4. Thermon heating cables are approved for the listed T-ratings using the stabilised design method. This enables the cable to operate in hazardous areas without limiting thermostats. The T-rating may be determined using CompuTrace® Electric Heat Tracing Design Software or contact Thermon for design assistance.
5. Ex d flameproof system must be specified, contact Thermon.



### Construction . . .

- 1 Solid Alloy or Copper Conductor
- 2 Compacted Magnesium Oxide Insulation
- 3 Seamless Alloy 825 Sheath

### Certification/Approval . . .

**CENELEC** European Organisation for Electrotechnical Standardisation  
Hazardous (Classified) Locations

**CE** 1725 **Ex** II 2 G Ex d IIC T1 to T6<sup>5</sup>  
II 2 G Ex de IIC T1 to T6  
II 2 D Ex ID A21 IP66 T450°C to T85°C

**IEC Ex** International Electrotechnical Commission  
IEC Certification Scheme for Explosive Atmospheres  
FMG 09.0006

Contact Thermon for specific information on additional certifications.

### Product Features . . .

- Allows cable to be installed at temperatures to -60°C
- Corrosion resistance and high resistance to mechanical abuse
- High performance output



**THERMON . . . The Heat Tracing Specialists®**  
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**ISO 9001**  
REGISTERED

**Available Cables . . .**

| Product Type | Resistance <sup>1</sup><br>Ohm/km<br>at 20°C | Cable<br>Diameter<br>(mm) |
|--------------|--|---------------------------|
| MIQ-20E1H-1S | 6560   | 4,3                       |
| MIQ-16E1H-1S | 5250   | 4,3                       |
| MIQ-13E1H-1S | 4270   | 4,3                       |
| MIQ-10E1H-1S | 3280   | 4,3                       |
| MIQ-85E2H-1S | 2790   | 4,3                       |
| MIQ-70E2H-1S | 2300   | 4,3                       |
| MIQ-50E2H-1S | 1640   | 4,3                       |
| MIQ-38E2H-1S | 1250   | 4,3                       |
| MIQ-30E2H-1S | 980  | 4,3                       |
| MIQ-25E2H-1S | 820  | 4,3                       |
| MIQ-20E2H-1S | 660  | 4,4                       |
| MIQ-17E2H-1S | 560  | 4,6                       |
| MIQ-15E2H-1S | 490  | 4,3                       |
| MIQ-10E2H-1S | 330  | 4,3                       |
| MIQ-80E3H-1S | 260  | 4,3                       |
| MIQ-70E3H-1S | 230  | 4,3                       |
| MIQ-60E3H-1S | 200  | 4,3                       |
| MIQ-40E3H-1S | 130  | 4,4                       |
| MIQ-30E3H-1S | 98   | 4,7                       |
| MIQ-20E3H-1S | 66   | 5,1                       |
| MIQ-10E3H-1S | 33   | 4,3                       |
| MIQ-65E4H-1S | 21,4   | 4,6                       |
| MIQ-40E4H-1S | 13,4   | 4,8                       |
| MIQ-25E4H-1S | 8,5  | 5,3                       |
| MIQ-16E4H-1S | 5,3  | 5,7                       |

**Notes . . .**

1. All resistances shown are per km length of cable at 20°C and are subject to a ±10% manufacturing tolerance.

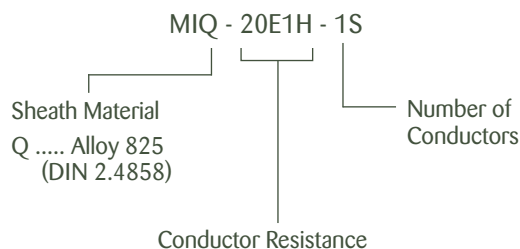
**Circuit Breaker Sizing and Type . . .**

Maximum circuit lengths for MIQ heating cables will be a function of cable resistance, cable set power and operating voltage. Circuit length, breaker sizing and earth-fault protection should be based on applicable local codes.

Earth-fault protection of equipment should be provided for each branch circuit supplying electric heating equipment.

**Product Reference Legend . . .**

Example:



**Available MIQ Cold Leads . . .**

| Cold Lead Size<br>(mm <sup>2</sup> ) | Current Rating<br>(A) | Gland Size |
|--------------------------------------|-----------------------|------------|
| 2,5                                  | 22                    | M20        |
| 6,0                                  | 40                    | M20        |

