

# MIS/MIQ™

## Mineral Insulated Heating Cable

### Application . . .

#### Process Temperature Maintenance or Freeze Protection

MIS and MIQ high performance mineral 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 MIS mineral insulated cables have a Stainless Steel 321 outer sheath to meet the temperature and exposure requirements of the application. Thermon MIQ mineral insulated cables have an Alloy 600 outer sheath to meet the temperature and exposure requirements of the application.

MIS/MIQ cables are approved for use in ordinary (non-classified) areas and are certified to the ATEX directive for use as Zone 1 and 2 classified products.

### Ratings . . .

Rated voltages <sup>1</sup> .....	800 Vac
Maximum maintenance temperature <sup>2</sup>	
MIS .....	500°C
MIQ .....	600°C
Maximum continuous exposure temperature	
MIS Power-off .....	800°C
MIQ Power-off .....	1000°C
Maximum Watt density <sup>2</sup> .....	250 W/m
Minimum installation temperature .....	-55°C
Minimum bend radius .....	5 x cable O.D.
T-rating <sup>4</sup>	
Based on stabilized design <sup>5</sup> .....	T1 to T6
Connections .....	Laser Welded leads

### Available MI Sheaths . . .

Product Type	Metal Sheath Material	Maximum Exposure Temperature
MIS	Stainless Steel 321	800°C
MIQ	Alloy 600	1000°C

### MI Heater Sets . . .

Thermon MIS/MIQ cable sets are available in various factory-fabricated configurations designed for the cable type and number of conductors. The standard assemblies consists of standard 1 meter (other lengths optional) non-heating cold leads with 200mm long insulated pigtailed.



#### Notes ...

1. Specific voltage depends on circuit length and design conditions.
2. Watt density limitations are correlated to maintain temperatures.
3. When using cable terminations under the insulation the maximum allowable temperature is lower; contact Thermon.
4. T-rating per internationally recognized testing agency guidelines.
5. Thermon heating cables are approved for the listed T-ratings using the stabilized design method. This enables the cable to operate in hazardous areas without limiting thermostats. Contact Thermon for design assistance.

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### Construction . . .

- 1 SS 321 (MIS) or Alloy 600 (MIQ)
- 2 Compacted Magnesium Oxide Insulation
- 3 Metallic Sheath

### Certification/Approval . . .

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

CE Ex II 2 G Ex e II  
ISSeP 06 ATEX 036U

### Product Features . . .

- Allows cable to be installed at temperatures to -55°C
- Corrosion resistance and high resistance to mechanical abuse
- High performance output

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**Available Cables . . .**

Product Type	Resistance <sup>*</sup> Ohm/km at 20°C	Minimum Cold Lead Size mm <sup>2</sup>	Cable Diameter mm
MIS-M1-10K	10000	2,5	3,2
MIS-M1-6300	6300	2,5	3,2
MIS-M1-4000	4000	2,5	3,2
MIS-M1-2500	2500	2,5	3,6
MIS-M1-1600	1600	6,0	3,8
MIS-M1-1000	1000	6,0	4,1
MIS-M1-630	630	2,5	4,5
MIS-M1-400	400	2,5	5,0
MIS-M1-250	250	6,0	5,6
MIS-M1-160	160	6,0	6,5
MIQ-M1-10K	10000	6,0	3,2
MIQ-M1-6300	6300	10,0	3,2
MIQ-M1-4000	4000	16,0	3,2
MIQ-M1-2500	2500	2,5	3,6
MIQ-M1-1600	1600	2,5	3,8
MIQ-M1-1000	1000	2,5	4,1
MIQ-M1-630	630	2,5	4,5
MIQ-M1-400	400	2,5	5,0
MIQ-M1-250	250	2,5	5,6
MIQ-M1-160	160	2,5	5,6

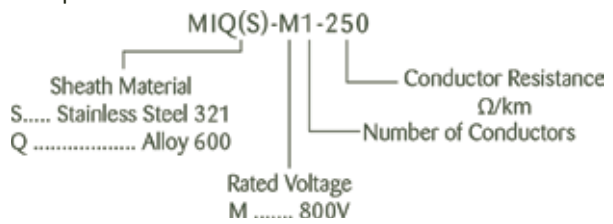
**Circuit Breaker Sizing and Type . . .**

Maximum circuit lengths for MIS/MIQ heating cables will be a function of cable resistance, circuit length 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:



**Notes ...**

\* All resistances shown are at 20°C and are subject to ±10% manufacturing tolerance.

