



PRODUCT SPECIFICATIONS

MIQ™ MINERAL INSULATED HEATING CABLE

APPLICATION

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 ¹ 300 and 600 Vac
Maximum maintenance temperature ² 500°C
Maximum continuous exposure temperature
Power-off 600°C
Maximum Watt density ² 260 W/m
Minimum installation temperature -60°C
Minimum bend radius 6 x cable O.D.

CONSTRUCTION

- 1 Solid alloy or copper conductor
- 2 Compacted magnesium oxide insulation
- 3 Seamless alloy 825 (DIN 2.4858) sheath

MIQ CATALOG REFERENCE NUMBER

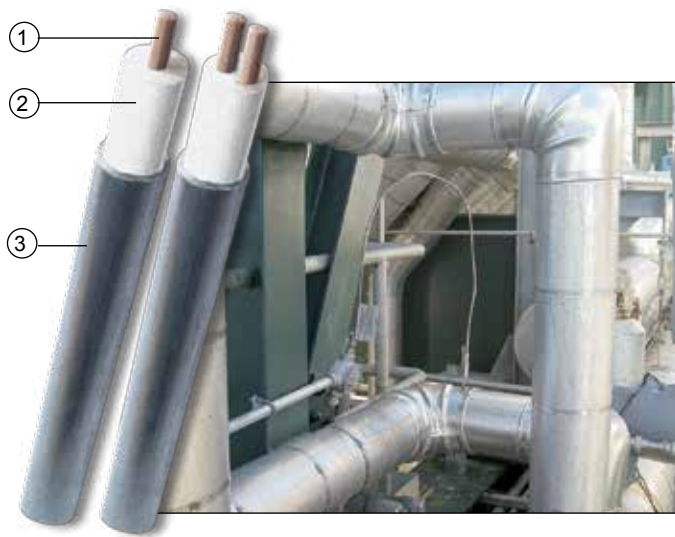
A complete catalogue reference number includes the following components:

D / MIQ-60E3H-1S / 60M / 1334 / 230 / 1.2M / 12 / 6 / 1

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	
Hazardous (Classified) Location Rating ⁴	

Notes

1. Specific voltage depends on circuit length and design conditions.
2. Watt density limitations are correlated to maintain temperatures.
3. See details on page 2 for more information.
4. If the field is blank, then the heating cable set is intended for ordinary (non-classified) 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.

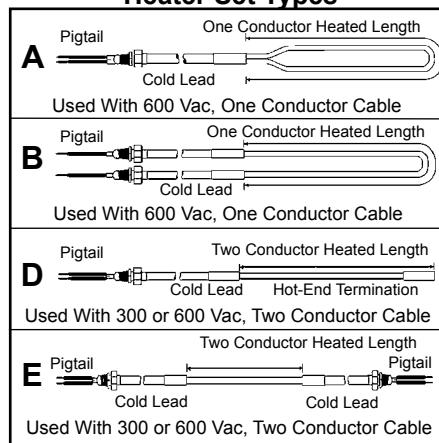


MIQ HEATER SETS

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

The nonheating section of the unit is sealed and fitted with a high pressure, liquid-tight M20, M25 or M32 brass gland ³ for connection into the supply junction box.

Heater Set Types



THERMON The Heat Tracing Specialists®

ISO 9001
REGISTERED

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**AVAILABLE CABLES****600 Vac Cable—Two Conductor—Heater Set Type D or E**

Catalog Number	Resistance ¹ ohms/km	Nominal Diameter mm
MIQ-11E0H-2S	36100	5.2
MIQ-90E1H-2S	29500	5.7
MIQ-60E1H-2S	19700	5.8
MIQ-40E1H-2S	13100	6.1
MIQ-20E1H-2S	6600	6.5
MIQ-10E1H-2S	3300	6.5
MIQ-70E2H-2S	2300	6.7
MIQ-50E2H-2S	1640	7.1
MIQ-30E2H-2S	980	7.6
MIQ-20E2H-2S	660	6.5
MIQ-15E2H-2S	490	6.7
MIQ-10E2H-2S	330	7.1
MIQ-70E3H-2S	230	7.5
MIQ-50E3H-2S	164	7.9
MIQ-40E3H-2S	131	8.3
MIQ-30E3H-2S	98	8.8
MIQ-20E3H-2S	66	6.9
MIQ-16E3H-2S	52	7.1
MIQ-13E3H-2S	43	7.4
MIQ-10E3H-2S	34	7.6
MIQ-81E4H-2S	27	7.6

600 Vac Cable—One Conductor—Heater Set Type A or B

Catalog Number	Resistance ¹ ohms/km	Nominal Diameter 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	1650	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	4.6
MIQ-40E4H-1S	13	4.8
MIQ-25E4H-1S	8	5.3
MIQ-16E4H-1S	5	5.7

Notes

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

300 Vac Cable—Two Conductor—Heater Set Type D or E

Catalog Number	Resistance ¹ ohms/km	Nominal Diameter mm
MIQ-11E0L-2S	36100	4.1
MIQ-90E1L-2S	29500	4.1
MIQ-75E1L-2S	24600	4.1
MIQ-60E1L-2S	19700	4.1
MIQ-50E1L-2S	16400	4.1
MIQ-40E1L-2S	13100	4.1
MIQ-32E1L-2S	10500	4.1
MIQ-27E1L-2S	9020	4.1
MIQ-25E1L-2S	8200	4.1
MIQ-20E1L-2S	6560	4.1
MIQ-17E1L-2S	5580	4.1
MIQ-14E1L-2S	4590	4.1
MIQ-10E1L-2S	3280	4.2
MIQ-70E2L-2S	2300	4.6
MIQ-50E2L-2S	1640	4.8
MIQ-30E2L-2S	980	4.3
MIQ-25E2L-2S	820	4.3
MIQ-20E2L-2S	660	4.3
MIQ-15E2L-2S	490	4.4
MIQ-10E2L-2S	330	4.8
MIQ-70E3L-2S	230	5.2
MIQ-50E3L-2S	164	5.7

AVAILABLE MIQ COLD LEADS

Cold Lead Size AWG (mm ²)	Heater Sets A/D/E Current Rating (A)	Gland Size	Heater Set B Current Rating (A)	Gland Size
12 (3,3)	20	M20	25	M20
10 (5,3)	30	M25	40	M20
8 (8,4)	45	M32	50	M25

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.

CERTIFICATIONS/APPROVALS

II 2 G Ex d IIC T1 to T6 2
II 2 G Ex de IIC T1 to T6
II 2 D Ex tD A21 IP66 T450°C to T85°C



International Electrotechnical Commission
IEC Certification Scheme for Explosive Atmospheres
FMG 09.0006



Factory Mutual Research
Ordinary and Hazardous (Classified) Locations