MIQ™
Mineral Insulated 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. 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 ..... 1,100°F (593°C)
Max. watt density[2] ..... up to 80 w/ft (262 w/m)
Minimum bend radius..... 6 x cable O.D.

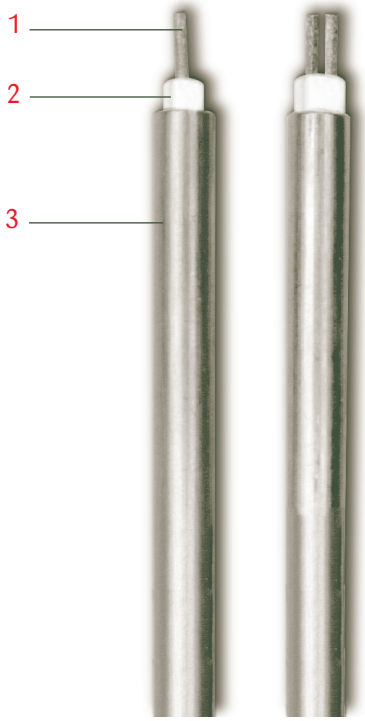
MIQ Heater Sets . . .

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[3] 4' (1,220 mm) nonheating cold lead with 8" (203 mm) long thermoplastic insulated pigtails.

The nonheating section of the unit is sealed and fitted with a high pressure, liquid-tight 1/2", 5/8" or 3/4" NPT stainless steel gland[4] for connection into the supply junction box.

Notes . . .

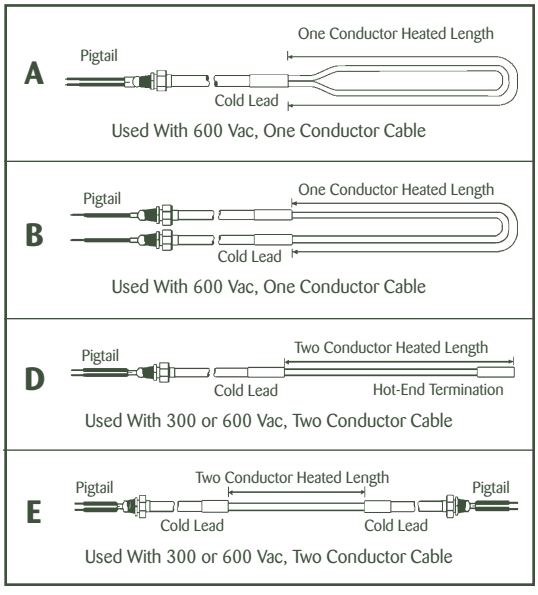
1. Definition as stated in IEEE Standard 515-2004. Specific voltage depends on circuit length and design conditions.
2. Watt density limitations are correlated to maintain temperatures. Maximum watt density for CSA certified application is 50 w/ft (164 w/m).
3. Cold lead will be sized for the circuit operating current in accordance with relevant NEC or CEC code requirements.
4. Cold lead gland is 1/2" NPT except for 2-conductor sets with larger wire sizes for which a 5/8" or 3/4" NPT gland is provided.



Construction . . .

1 Solid Alloy or Copper Conductor(s)
2 Compacted Magnesium Oxide Insulation
3 Seamless Alloy 825 Sheath

Heater Set Types



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MIQ™
Mineral Insulated Cable

Product Specifications

Available MIQ Cables[1] . . .

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

Catalog Number	Resistance[2]		Nominal Diameter	
	ohms/ft	ohms/m	in	mm
MIQ-11EOH-2S	11.0	36.1	0.220	5.59
MIQ-90E1H-2S	9.0	29.5	0.225	5.72
MIQ-60E1H-2S	6.0	19.7	0.230	5.84
MIQ-40E1H-2S	4.0	13.1	0.240	6.10
MIQ-20E1H-2S	2.0	6.56	0.255	6.48
MIQ-10E1H-2S	1.0	3.28	0.255	6.48
MIQ-70E2H-2S	0.70	2.30	0.265	6.73
MIQ-50E2H-2S	0.50	1.64	0.280	7.11
MIQ-30E2H-2S	0.30	0.98	0.300	7.62
MIQ-20E2H-2S	0.20	0.66	0.255	6.48
MIQ-15E2H-2S	0.15	0.49	0.265	6.73
MIQ-10E2H-2S	0.10	0.33	0.280	7.11
MIQ-70E3H-2S	0.070	0.23	0.295	7.49
MIQ-50E3H-2S	0.050	0.16	0.310	7.87
MIQ-40E3H-2S	0.040	0.13	0.325	8.26
MIQ-30E3H-2S	0.030	0.098	0.345	8.76
MIQ-20E3H-2S	0.020	0.066	0.270	6.86
MIQ-16E3H-2S	0.016	0.052	0.280	7.11
MIQ-13E3H-2S	0.013	0.043	0.290	7.37
MIQ-10E3H-2S	0.0104	0.0341	0.300	7.62
MIQ-81E4H-2S	0.00818	0.02684	0.300	7.62

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

Catalog Number	Resistance[2]		Nominal Diameter	
	ohms/ft	ohms/m	in	mm
MIQ-20E1H-1S	2.0	6.56	0.170	4.32
MIQ-16E1H-1S	1.6	5.25	0.170	4.32
MIQ-13E1H-1S	1.3	4.26	0.170	4.32
MIQ-10E1H-1S	1.0	3.28	0.170	4.32
MIQ-85E2H-1S	0.85	2.79	0.170	4.32
MIQ-70E2H-1S	0.70	2.30	0.170	4.32
MIQ-50E2H-1S	0.50	1.64	0.170	4.32
MIQ-38E2H-1S	0.38	1.25	0.170	4.32
MIQ-30E2H-1S	0.30	0.98	0.170	4.32
MIQ-25E2H-1S	0.25	0.82	0.170	4.32
MIQ-20E2H-1S	0.20	0.66	0.175	4.45
MIQ-17E2H-1S	0.17	0.56	0.180	4.57
MIQ-15E2H-1S	0.15	0.49	0.170	4.32
MIQ-10E2H-1S	0.10	0.33	0.170	4.32
MIQ-80E3H-1S	0.080	0.26	0.170	4.32
MIQ-70E3H-1S	0.070	0.23	0.170	4.32
MIQ-60E3H-1S	0.060	0.20	0.170	4.32
MIQ-40E3H-1S	0.040	0.13	0.175	4.45
MIQ-30E3H-1S	0.030	0.098	0.185	4.70
MIQ-20E3H-1S	0.020	0.066	0.200	5.08
MIQ-10E3H-1S	0.010	0.03395	0.170	4.32
MIQ-65E4H-1S	0.00651	0.02135	0.180	4.57
MIQ-40E4H-1S	0.00409	0.01342	0.190	4.83
MIQ-25E4H-1S	0.00258	0.00846	0.210	5.33
MIQ-16E4H-1S	0.00162	0.00531	0.225	5.72

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

Catalog Number	Resistance[2]		Nominal Diameter	
	ohms/ft	ohms/m	in	mm
MIQ-11EOL-2S	11.0	36.1	0.160	4.06
MIQ-90E1L-2S	9.0	29.5	0.160	4.06
MIQ-75E1L-2S	7.5	24.6	0.160	4.06
MIQ-60E1L-2S	6.0	19.7	0.160	4.06
MIQ-50E1L-2S	5.0	16.4	0.160	4.06
MIQ-40E1L-2S	4.0	13.1	0.160	4.06
MIQ-32E1L-2S	3.20	10.5	0.160	4.06
MIQ-27E1L-2S	2.75	9.02	0.160	4.06
MIQ-25E1L-2S	2.50	8.20	0.160	4.06
MIQ-20E1L-2S	2.00	6.56	0.160	4.06
MIQ-17E1L-2S	1.70	5.58	0.160	4.06
MIQ-14E1L-2S	1.40	4.59	0.160	4.06
MIQ-10E1L-2S	1.00	3.28	0.165	4.19
MIQ-70E2L-2S	0.70	2.30	0.180	4.57
MIQ-50E2L-2S	0.50	1.64	0.190	4.83
MIQ-30E2L-2S	0.30	0.98	0.170	4.32
MIQ-25E2L-2S	0.25	0.82	0.170	4.32
MIQ-20E2L-2S	0.20	0.66	0.170	4.32
MIQ-15E2L-2S	0.15	0.49	0.175	4.45
MIQ-10E2L-2S	0.10	0.33	0.190	4.83
MIQ-70E3L-2S	0.070	0.23	0.205	5.21
MIQ-50E3L-2S	0.050	0.16	0.225	5.72

Circuit Breaker Sizing and Type . . .

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
Ordinary Locations
Hazardous (Classified) Locations
- Class I, Division 1 Groups B, C and D[3]
- 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

Canadian Standards Association
Ordinary Locations
Hazardous (Classified) Locations
- Class I, Division 1 Groups B, C and D[3]
- Class I, Division 2, Groups A, B, C and D
- Class II, Divisions 1 and 2, Groups E, F and G
- Class IIII, Divisions 1 and 2

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

