



& ASSOCIATES, INC.

heat tracing specialists



MISS-KN

MINERAL INSULATED HEATER CABLE

Heat Trace



1. End Termination
2. Alloy 825 Stainless Steel
3. Hot/Cold Joint
4. Compression Fitting

Description

MI heater cables are seamless die drawn cables that are made to specified lengths to deliver high power output along the entire length of the cable. It's nichrome heating conductors are embedded in highly compressed magnesium oxide dielectric and covered with a stainless Alloy 825 sheath. The sheath is fully annealed and is easily hand formable.

MI heater cables are factory assembled and cannot be cut to length in the field. Both hot and cold sections are made to customer specifications. MI cables can be completely submersed which makes them great for gut tracing applications. MI cables can also be equipped with reversed glands and puller-eyes to assist in cable installation and capping small diameter pipes. MI cables resist the most aggressively corrosive environments. MI heating cable is totally inorganic and will not deteriorate with age. All heating units are factory fabricated to a specified length and rigorously tested to IEEE standards. MISS-KN type MI cables are capable of withstanding temperatures up to 1,200°F.

Applications

MI heater cables are suitable for use in pipe tracing applications where high temperatures are required, pad heating/snow melting where removal of snow and ice are needed for safety. MI heater cables are also useful in large vessel and hopper heating applications. In tank and hopper heating applications MI is attached to sheets of wire mesh to help diffuse the heat into the tank walls. Because MI cables are silver soldered and waterproof they are a great choice in "gut" tracing applications.

Calculation

To determine which conductor in Table 2 will satisfy performance requirements follow the arithmetic below.

$$\text{Conductor } (\Omega/\text{Ft.}) = \frac{\text{Voltage}^2}{\text{Length}^2(\text{Cable W/Ft.})}$$

Compare the answer to the closest available conductor that will yield desired effect. Recalculate using formula above to determine exact output and whether the result is favorable and will not impose any safety or damage potential. No more than 4 W/Ft. is permissible on PVC and polyethylene pipe. Some design complications may arise under certain circumstances due to variables, however there are workarounds such as transformers.

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Ordering Information

Example Configuration		MISS-KN142L-AN-100-03-C1-E				
MISS-KN	Conductor	Form	Hot Section	Cold Section	Options	Options Continued
1200°F	Table 2	AN	See Notes	.5' - 40' Exp.	C1=1/2" Reversed Gland	P=PVC Jacketed Cold Section
		BN			C2=3/4" Reversed Gland	U=NEMA 7 Termination
		CN			E=Puller-Eye End	X=Other, Specify
					G=Glass Wrapped Hot Section	

Note: Hot section length is dependent on several factors including voltage, cable output, conductor, amperage.

Construction

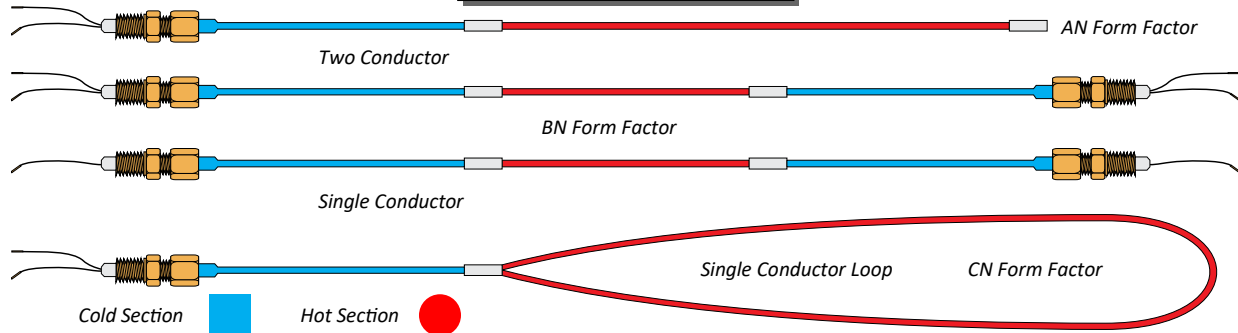


Table 2

300 Volt, 2 Conductor KNXXXL			600 Volt, 2 Conductor KNXXX			600 Volt, 1 Conductor KN		
Size	Ohms/Ft.	O.D.	Size	Ohms/Ft.	O.D.	Size	Ohms/Ft.	O.D.
32SP4458	0.0458	0.185	KN132	0.10	0.265	KN101	0.03	0.26
32SP4583	0.0583	0.184	KN142	0.15	0.245	KN111	0.04	0.24
32SP4734	0.0734	0.184	KN152	0.2	0.245	KN121	0.07	0.20
KN132L	0.10	0.180	62SQ3286	0.286	0.246	KN141	0.10	0.20
KN142L	0.15	0.160	62SQ3505	0.505	0.234	KN151	0.15	0.19
KN152L	0.2	0.146	KN182	0.7	0.265	KN161	0.20	0.19
KN162L	0.3	0.215	62ST2115	1.15	0.239	KN171	0.30	0.19
KN172L	0.5	0.196	KN222	2.0	0.245	KN191	0.50	0.18
KN182L	0.7	0.160	62SA2414	4.14	0.239	KN211	0.70	0.17
KN192L	1.0	0.196	KN252	6.0	0.215	KN221	1.0	0.17
KN222L	2.0	0.180	62SZF2900	9.0	0.215	KN241	2.0	0.16
KN242L	4.0	0.146	KN292	11.0	0.215			
KN252L	6.0	0.135						
32SF2900	9.0	0.140						
KN292L	11.0	0.130						

Note: All values @ 68°F
*Resistance curves apply, consult TAD for design

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