MCN

400°C

Mineral Insulated Heating Cable

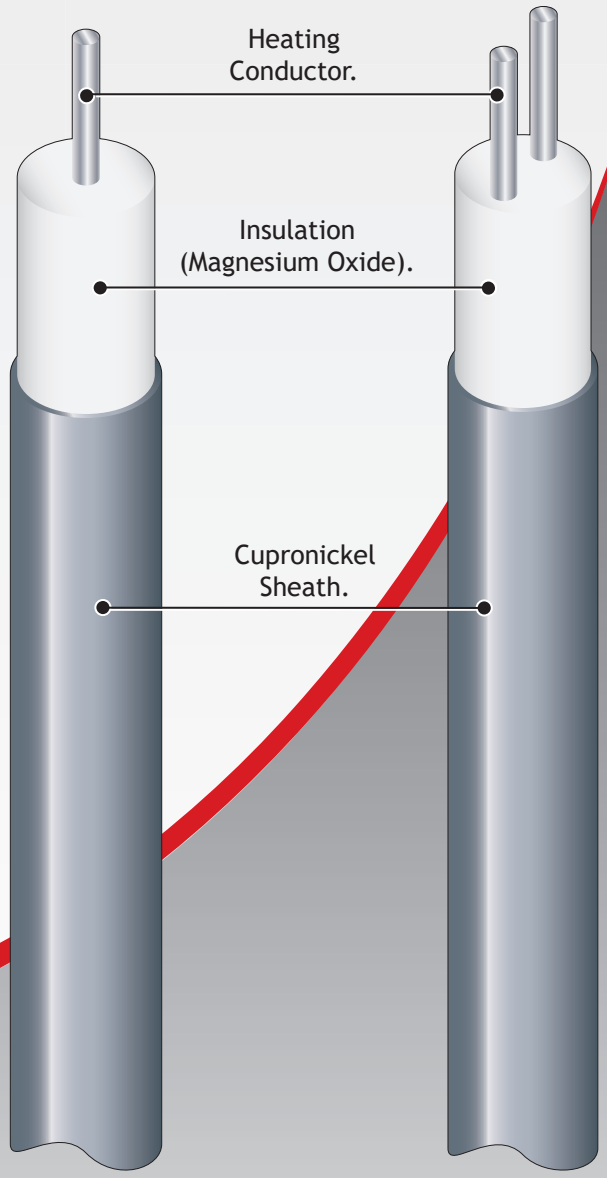
MINERALINSULATED

Cupronickel Sheathed

- Twin core or single core.
- Factory terminated.
- Suitable for use in safe and hazardous areas.
- Available for different voltages.

FEATURES

The **MCN** range of cupronickel sheathed Mineral Insulated (MI) heating cable has been developed to meet the specific need for a cable having a high temperature capability and electrical resistance values needed for long circuit lengths. To meet the requirement, HTL has combined a cupronickel sheath with heating conductors to enable an operating temperature of 400°C with resistance values from 4Ω/km up to 28000Ω/km per conductor. MI cables have excellent mechanical strength and are resistant to corrosion. They are series resistance heaters which must be designed to provide the required heat output.



Single Conductor Cable

Dual Conductor Cable

CE 2776

IEC IECEx Ex

HEAT TRACE

The Heat Tracing Authority™

MCN 21052024

SPECIFICATION

MAXIMUM WITHSTAND: 400°C (752°F)

AMBIENT TEMPERATURE RANGE: -80°C to +40°C (-112°F to +104°F)

MINIMUM INSTALLATION TEMPERATURE: -80°C (-112°F)

APPROVAL DETAILS:

ATEX - CML 18ATEX3389
IECEx - CML 18.0206

ATEX & IECEx MARKINGS:

Ⓔx II 2 G D
Ex 60079-30-1 IIC T1 to T6 Gb
Ex 60079-30-1 IIIC T450°C to T85°C Db

EN IEC 60079-0:2018
EN 60079-30-1:2017

IEC 60079-0: 2017
IEC/IEEE 60079-30-1: 2015

HEATING CABLE ORDERING CODE

Digit	M	CN	-	B	16K2400	/	60	/	400	/	240	/	E1
		1		2	3		4		5		6		7

Digit number	Description	
1	Sheath Material	CN - Cupronickel
2	Cable Configuration	See Cable Configurations
3	Cable Reference	See Tables 1, 2, 3 & 4
4	Cable Length	In meters (m)
5	Cable Wattage	In watt (W)
6	Operational Voltage	In volt (V)
7	Gland Size	See Table 4 - Gland Size

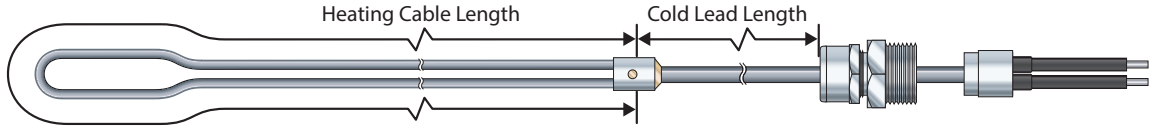
HEATING CABLE DECODING

Digit	1	6	K	2400
	1	2	3	4

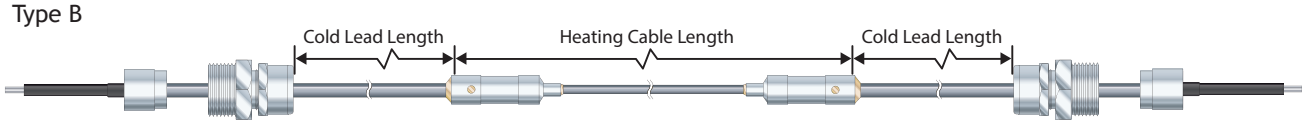
Digit number	Description	
1	Number of Conductors	1 or 2
2	Maximum Voltage Rating	3=300V, 6=600V
3	Conductor Material	K,N
4	Cable Resistance×1000	2400=2.4Ω/m×1000

CABLE CONFIGURATIONS

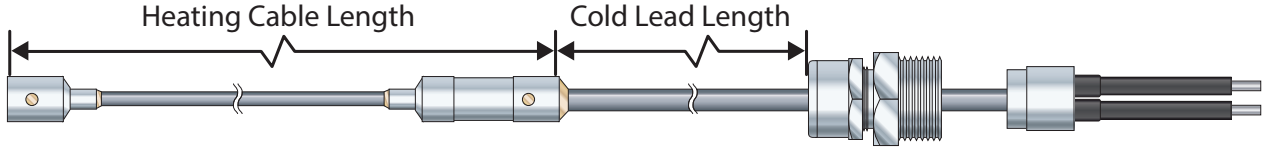
Type A



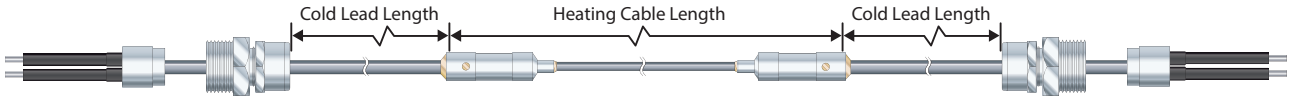
Type B



Type D



Type E



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SPECIFICATION

TABLE 1 - CABLE REFERENCES (SINGLE CONDUCTOR 600V)

CABLE REF	DIAMETER (mm)	RESIST.at 20°C (Ω/m)*	NOMINAL LENGTH (m)	NOMINAL WEIGHT (Kg/m)
16C4	5.9	0.004	190	161.0
16C7	5.3	0.007	240	117.8
16C11	4.9	0.011	290	101.7
16C17	4.6	0.017	300	89.9
16C25	3.7	0.025	500	58.2
16C40	3.4	0.04	600	48.4
16C63	3.2	0.063	650	42.0
16K82	5.7	0.082	200	163.2
16K122	5.2	0.122	250	130.1
16K160	4.9	0.16	280	112.5
16K188	4.7	0.188	300	102.3
16K250	4.4	0.25	350	87.9
16K312	4.2	0.312	380	78.6
16K400	4.0	0.4	430	68.8
16K478	3.8	0.478	470	62.8
16K630	3.7	0.63	500	58.6
16K1000	3.4	1.0	600	48.5
16K1600	3.2	1.6	600	42.6
16K2400	3.1	2.4	600	38.9
16K4150	3.0	4.15	600	36.0

* Resistance is total for both conductors in series.

TABLE 2 - CABLE REFERENCES (DUAL CONDUCTOR 600V)

CABLE REF	DIAMETER (mm)	RESIST.at 20°C (Ω/m)*	NOMINAL LENGTH (m)	NOMINAL WEIGHT (kg/km)
26K160	11.2	0.16	55	565.4
26K240	9.9	0.24	70	433.4
26K300	9.3	0.3	80	378.4
26K380	9.0	0.38	85	348.7
26K480	8.6	0.48	90	314.6
26K620	8.0	0.62	105	270.0
26K960	7.5	0.96	120	232.9
26K1480	7.1	1.48	135	205.7
26K1890	6.8	1.89	145	187.6
26K2340	6.4	2.34	165	165.7
26K3100	6.2	3.1	175	154.6
26K4800	5.8	4.8	200	134.4
26K8300	5.4	8.3	235	115.8
26K22000	5.0	22	270	98.6
26K56000	4.8	56	295	90.6

* Resistance is total for both conductors in series.

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TABLE 3 - CABLE REFERENCES (DUAL CONDUCTOR 300V)

CABLE REF	DIAMETER (mm)	RESIST.at 20°C (Ω/m)*	NOMINAL LENGTH (m)	NOMINAL WEIGHT (kg/km)
23K160	10.4	0.16	60	497.6
23K240	9.4	0.24	85	366.6
23K300	8.4	0.3	95	315.9
23K380	8.0	0.38	105	281.9
23K480	7.7	0.48	115	257.0
23K620	7.1	0.62	135	216.7
23K960	6.5	0.96	160	178.0
23K1480	6.0	1.48	190	149.2
23K1890	5.7	1.89	210	133.7
23K2340	5.5	2.34	225	123.7
23K3100	5.3	3.1	240	114.0
23K4800	4.9	4.8	285	96.7
23K8300	4.6	8.3	320	84.4
23K22000	4.3	22	370	73.1
23K56000	4.0	56	420	63.0

Note: For the required voltage 600 V above application, please contact us.

* Resistance is total for both conductors in series.

TABLE 4 - GLAND SIZE

	Design A, D, E			Design B		
Max.voltage	Max.current	Gland size		Max.current	Gland size	
(V)	(amps)	(NPT)	(Metric)	(amps)	(NPT)	(Metric)
600	15	1/2”	M20	20	1/2”	M20
600	20	1/2”	M20	25	1/2”	M20
600	30	3/4”	M25	40	3/4”	M25
600	50	3/4”	M25	70	3/4”	M25
600	70	3/4”	M25	100	3/4”	M25

Note1: 2-meter-long cold lead is supplied with heating cable. For special requirement, please contact us.

TABLE 5 - CORROSION RESISTANCE

SUBSTANCE	
Sulphuric Acid	Not Recommended
Hydrochloric Acid	Check for Specific Data
Hydrofluoric Acid	Check for Specific Data
Phosphoric Acid	Check for Specific Data
Nitric Acid	Check for Specific Data
Organic Acid	Check for Specific Data
Alkalis	Check for Specific Data
Sea Water	Good-Excellent
Chloride	Good-Excellent

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