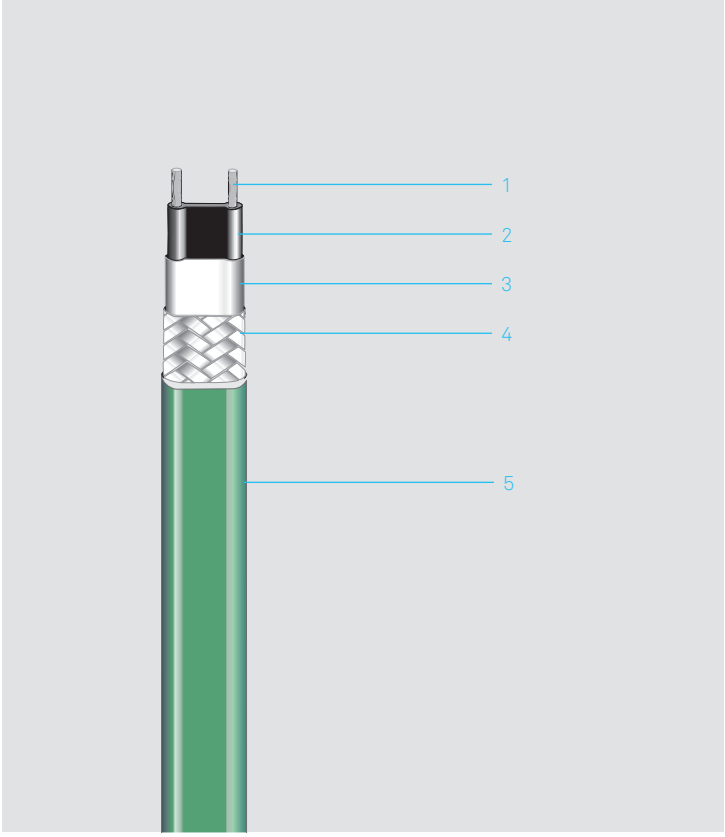
Self-regulating heating cable MSB



1	Conductors: stranded copper wire AWG 16 (1.2mm²), nickel plated
2	Self-regulating polymer heat element
3	Fluoropolymer insulation jacket
4	Nickel plated copper braid
5	Fluoropolymer protective jacket

- Can be cut to length at random thanks to its parallel current supply
- Resistant to chemical influences thanks to its protective Fluoropolymer protective jacket
- Simple installation thanks to its high flexibility

A temperature-dependant resistive element between two parallel copper conductors regulates and limits the heat output of the heating cable. This output regulation is carried out automatically along the entire length of the heating cable according to the prevailing ambient temperature. If the ambient temperature rises, the power output of the cable is reduced. Thanks to the parallel design the heating cable can be cut to any required length. This feature considerably simplifies project planning and installation. The heating cable is cut and terminated directly on the construction site according to the circumstances. If the cable will be damaged, it is not necessary to replace the whole cable. BARTEC MSB is available with different power outputs. The heating system must be designed to ensure that the maximum exposure temperature of +230°F (+110°C) will not be exceeded when it is energized.

Areas of application

The MSB heating cable is suitable for electric trace heating in the industrial area and can be exposed to a temperature of up to +266°F (+130°C) (power off). With the fluoropolymer-protective jacket, the heating cable is resistant to oil, greases and most chemicals. For questions regarding the chemical resistance please contact your BARTEC sales representative.

Explosion protection

Marking	CSA Class I, Div. 2, Groups A, B, C, D CSA Class II, Div. 2, Groups E, F, G CSA Class III Ex 60079-30-1 IIC T3, T4 Gb Ex 60079-30-1 IIIC T170 °C, T 130 °C Db
Certification	CSA 1862457 IECEx DEK 17.0004U
	Other approvals see bartec.com

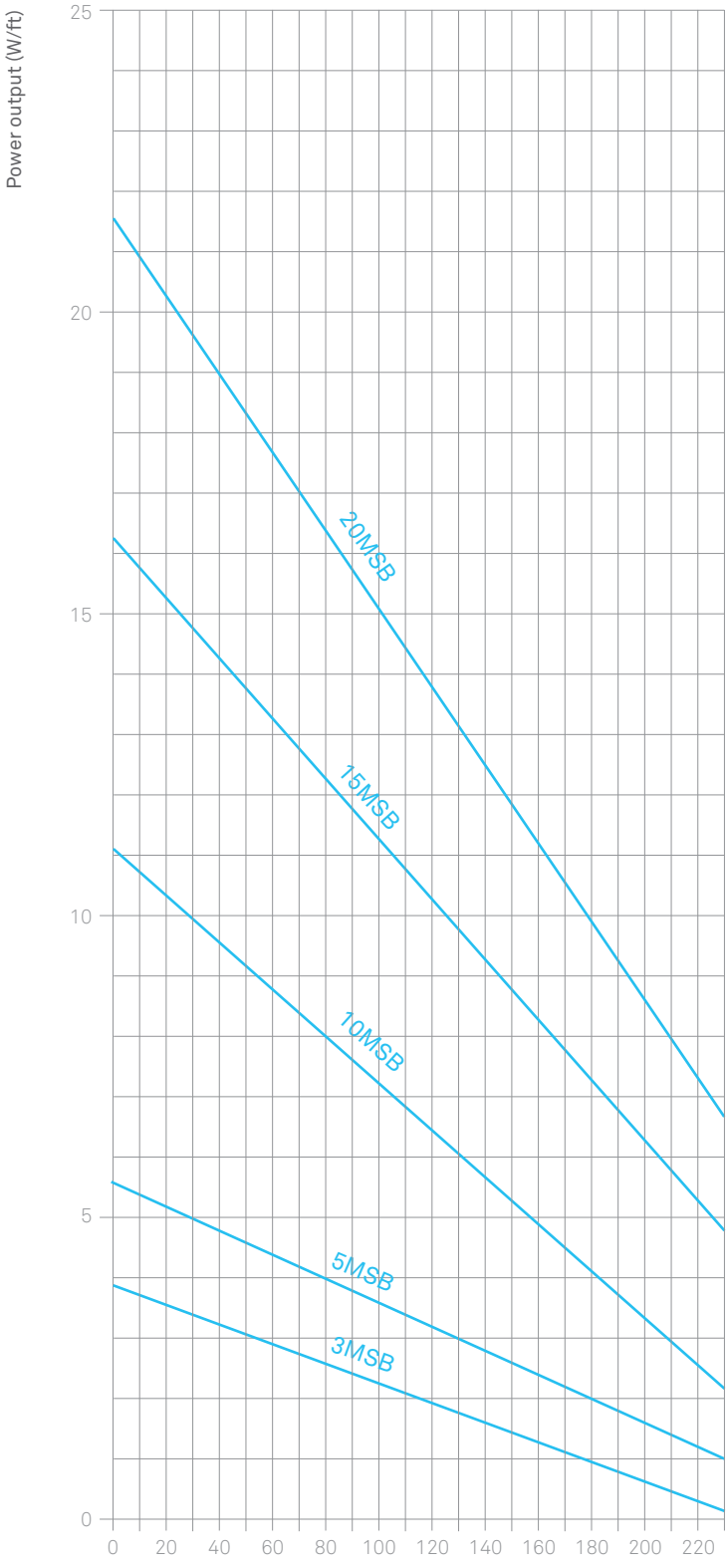
Technical data

Nominal voltage MSB1	120V (110V to 120V)
Nominal voltage MSB2	240V (208V to 277V)
Max. continuous operating temperature, energized	+230°F (+110°C)
Max. continuous exposure temperature, de-energized	+266°F (+130°C)
Min. installation temperature	-76°F (-60°C)
Min. start-up temperature	-76°F (-60°C)
Temperature class	T4: 3MSB2, 5MSB2 T3: 10MSB2, 15MSB2, 20MSB2
Max. braid resistance	<18,2 Ω/km
Dimensions with braiding and jacket	0.40 in x 0.19 in (10,2mm x 4,8mm)
Min. bending radius	0.96 in (25mm)

Power output at +50°F (+10°F)

3MSB	3 W/ft
5MSB	5 W/ft
10MSB	10 W/ft
15MSB	15 W/ft
20MSB	20 W/ft

MSB characteristics



Power output on insulated steel pipes at 120V/240V under nominal conditions.

Max. length of heating circuit at 120 V

Circuit breaker[1]	start-up temperature	3MSB1	5MSB1	10MSB1	15MSB1	20MSB1
20 A	+50°F (+10°C)	394	279	157	115	89
	0°F (-18°C)	338	243	135	98	79
	-20°F (-29°C)	322	233	128	95	75
	-40°F (-40°C)	305	322	121	92	72
30 A	+50°F (+10°C)	394	322	226	138	128
	0°F (-18°C)	394	322	203	138	118
	-20°F (-29°C)	394	322	194	138	112
	-40°F (-40°C)	394	322	184	135	105
40 A	+50°F (+10°C)	394	322	226	138	128
	0°F (-18°C)	394	322	226	138	128
	-20°F (-29°C)	394	322	226	138	128
	-40°F (-40°C)	394	322	226	138	128

Max. length of heating circuit at 240 V

Circuit breaker[1]	start-up temperature	3MSB2	5MSB2	10MSB2	15MSB2	20MSB2
20 A	+50°F (+10°C)	755	538	302	220	171
	0°F (-18°C)	646	469	259	190	148
	-20°F (-29°C)	614	446	246	180	141
	-40°F (-40°C)	584	427	236	174	135
30 A	+50°F (+10°C)	761	627	443	276	253
	0°F (-18°C)	761	627	390	276	223
	-20°F (-29°C)	761	627	371	272	210
	-40°F (-40°C)	761	627	354	259	200
40 A	+50°F (+10°C)	761	627	443	276	253
	0°F (-18°C)	761	627	443	276	253
	-20°F (-29°C)	761	627	443	276	253
	-40°F (-40°C)	761	627	443	276	253

[1] Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Adjustment factors 208V

	Power output	Circuit lenght
3MSB2	0,83	0,99
5MSB2	0,85	0,98
10MSB2	0,92	0,94
15MSB2	0,95	0,93
20MSB2	0,97	0,91

Ordering information 240 V

Type	Heating output	Order no.
3MSB2-CT	3 W/ft	07-5854-710F
5MSB2-CT	5 W/ft	07-5854-715F
10MSB2-CT	10 W/ft	07-5854-730F
15MSB2-CT	15 W/ft	07-5854-745F
20MSB2-CT	20 W/ft	07-5854-760F

Adjustment factors 277V

	Power output	Circuit lenght
3MSB2	1,37	1,03
5MSB2	1,31	1,05
10MSB2	1,19	1,02
15MSB2	1,15	1,12
20MSB2	1,09	1,13

Ordering information 120 V

Type	Heating output	Order no.
3MSB1-CT	3 W/ft	07-5854-110F
5MSB1-CT	5 W/ft	07-5854-115F
10MSB1-CT	10 W/ft	07-5854-130F
15MSB1-CT	15 W/ft	07-5854-145F
20MSB1-CT	20 W/ft	07-5854-160F

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