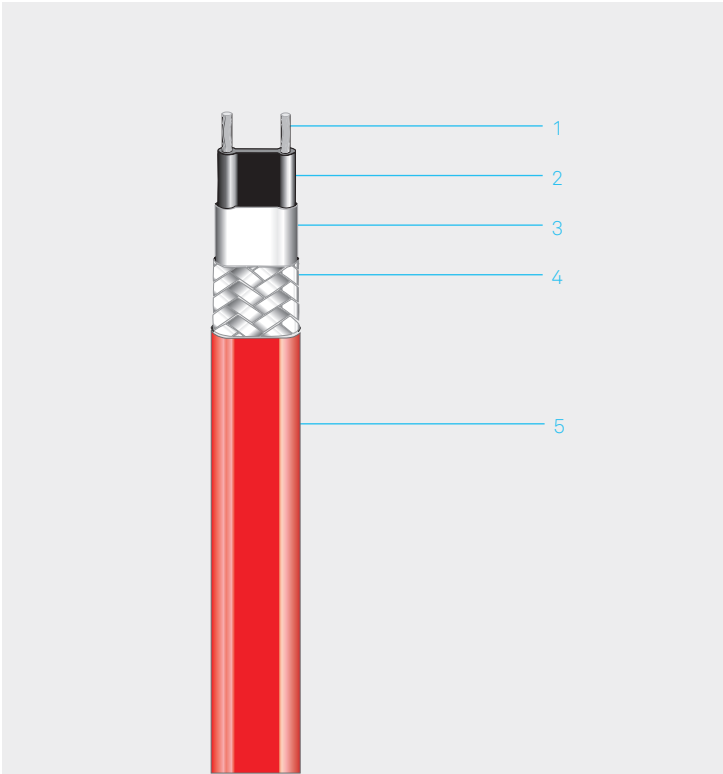


Self-regulating heating cable MSB

Mid temperature, self-regulating parallel heating cable



1	Conductors: stranded copper wire, AWG 16 (1.25 mm ²), nickel-plated
2	Self-regulating polymer heating element
3	Fluoropolymer electrical insulation jacket
4	Nickel plated copper braiding
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 and certificates, see www.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)

Max. length of heating circuit at 120 V

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

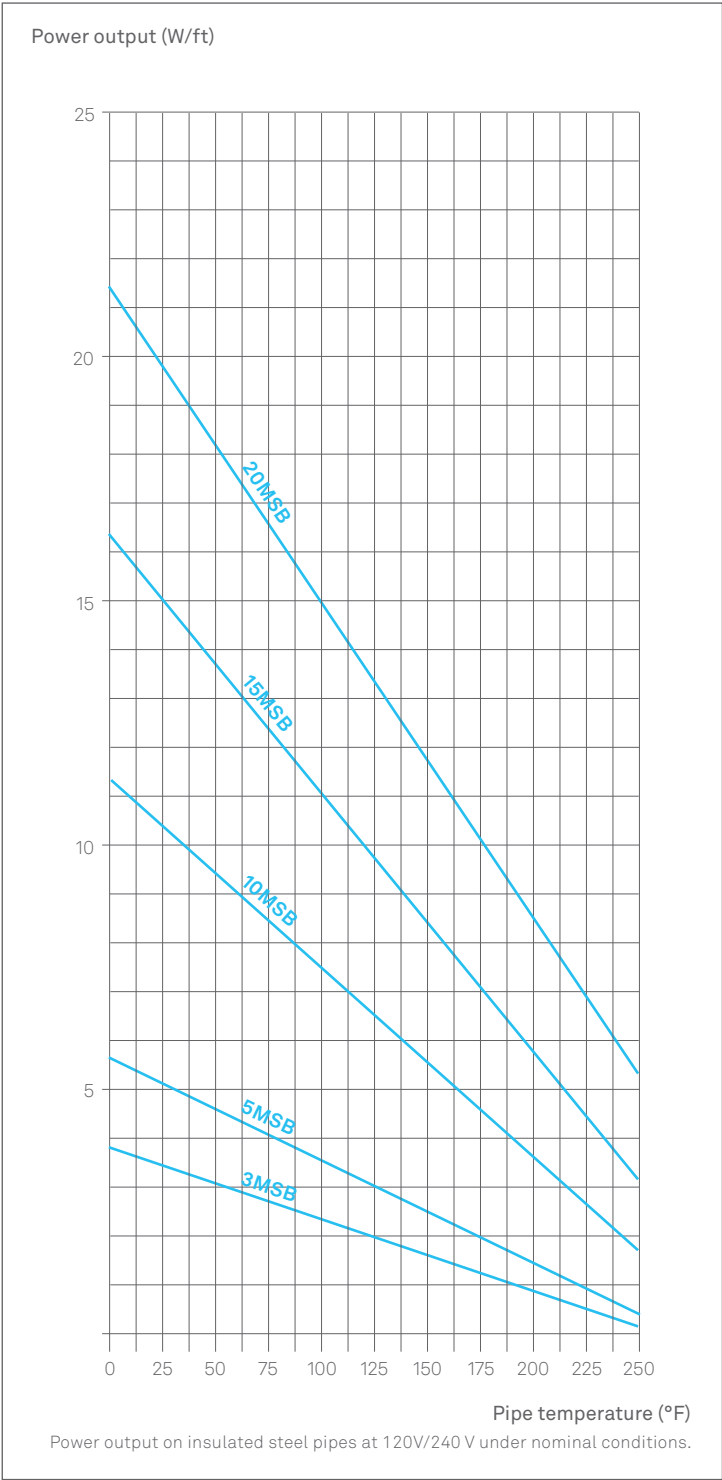
* Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Max. length of heating circuit at 240 V

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

* 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.

MSB characteristics



Power output at at +50°F (+10°F) and 230 V

3MSB	3 W/ft (10 W/m)
5MSB	5 W/ft (15 W/m)
10MSB	10 W/ft (30 W/m)
15MSB	15 W/ft (45 W/m)
20MSB	20 W/ft (60 W/m)

Adjustment factors 208V

	Power output	Circuit length
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

Adjustment factors 277V

	Power output	Circuit length
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 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

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