



MSB

Medium Temperature Self-Regulating Heating Cable MSB

BARTEC

Features

Outer jacket

- Fluoropolymer (CT).

Bus wire

- Nickel plated copper, 16 AWG.

Minimum start-up temperature

- -60 °C (-76 °F).

Maximum operating temperature (power on)

- 110 °C (230 °F).

Maximum continuous exposure temperature (power off)

- 110 °C (230 °F), continuous.
- 130 °C (266 °F), power off for 1000 hr cumulative.

Nominal voltage

- 120V, 240/208V, 277V.

Bending radius, minimum

- 25 mm (1 in.).

Installation temperature, minimum

- -60 °C (-76 °F).

Classification

- Ex 60079-30-1 IICT3, T4 Gb
- Ex 60079-30-1 IIICT170 °C, T130 °C Db
- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III, T4 3MSB, 5MSB
- Class III, T3 10MSB, 15MSB, 20MSB

Standards

- CSA C22.2.130.16; -WS
- Ex CAN/CSA 60079-30 IIC T3, T4b
- 60079-30 IIIC T170 °C, T 130 °C Db
- IEEE 515.1-2012, 515-2017

Certification

- IECEx DEK 17.0004U
- CSA C US 1862457

Rating

- Wet rated, for outdoor use (WS).

Warranty

- 1-year basic warranty on the heating cable.

Application

- Freeze protection, heat tracing instrumentation, pipes, vessel and tanks, chemical and petrochemical industries, food processing, automotive.





Models

Nominal output W/ft.	Product #		Cable dimension approx. (mm)
	120V ^{1,3}	240V ^{1,2,3}	
3	3MSB1-CT	3MSB2-CT	10.2 x 4.8
5	5MSB1-CT	5MSB2-CT	10.2 x 4.8
10	10MSB1-CT	10MSB2-CT	10.2 x 4.8
15	15MSB1-CT	15MSB2-CT	10.2 x 4.8
20	20MSB1-CT	20MSB2-CT	10.2 x 4.8

¹ CT Protective braid and a fluoropolymer outer jacket.

² For operations at 208V, please consult Bartec correction factors/multipliers.

³ When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.
E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

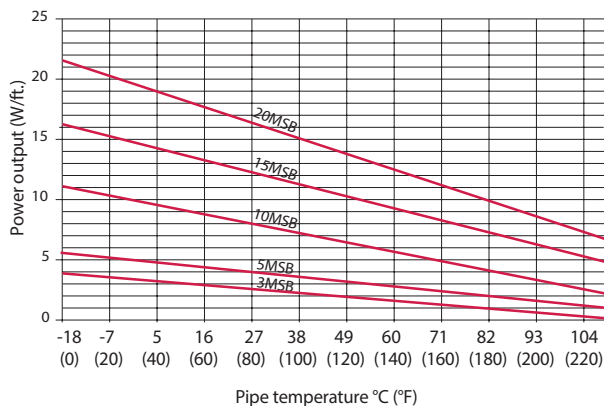
Heating circuit length

The following table shows the maximum circuit length in ft. for the different MSB trace heater types with standard circuit breaker amperages. Breaker sizes should be based on the National Electrical Code, Canadian Electrical Code or any other local or applicable code. Use only circuit breakers with type C tripping characteristics.

Start-up temperature	Circuit breaker capacity ¹ (A)	120V Maximum heating circuit (ft.) for					240V Maximum heating circuit (ft.) for				
		3MSB1	5MSB1	10MSB1	15MSB1	20MSB1	3MSB2	5MSB2	10MSB2	15MSB2	20MSB2
10 °C (50 °F)	20	394	279	157	115	89	755	538	302	220	171
	30	394	322	226	138	128	761	627	443	276	253
	40	394	322	226	138	128	761	627	443	276	253
-18 °C (0 °F)	20	338	243	135	98	79	20	646	469	259	190
	30	394	322	203	138	118	30	761	627	390	276
	40	394	322	226	138	128	40	761	627	443	276
-29 °C (-20 °F)	20	322	233	128	95	75	20	614	446	246	180
	30	394	322	194	138	112	30	761	627	371	272
	40	394	322	226	138	128	40	761	627	443	276
-40 °C (-40 °F)	20	305	322	121	92	72	20	584	427	236	174
	30	394	322	184	135	105	30	761	627	354	259
	40	394	322	226	138	128	40	761	627	443	276

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.

Power output 120V/240V under nominal conditions (on insulated steel pipes)



Maximum heating circuit on the following conditions:

- 120/240 Voltage
- Voltage drop max. 10%
- Single cable fed 1 end

Bartec correction factors/multipliers for operation of heating cables in 208V and 277V

To calculate the corrected power output for operation in 208 or 277V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V or 277 (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Adjustment factors	Heating cable correction factors/ Multipliers	Nominal output	Heating circuit length
208V	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
277V	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

Accessories

See Accessories section.