

PSB



All Purpose Self-Regulating Heating Cable PSB

Features

Outer jacket

- Polyolefin (CR) / Fluoropolymer (CT).

Bus wire

- Nickel plated copper.

Minimum start-up temperature

- -55 °C (-67 °F).

Maximum operating temperature (power on)

- 65 °C (150 °F).

Maximum operating temperature (power off)

- 85 °C (185 °F).

Nominal voltage

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

Bending radius, minimum

- 25 mm (1 in.).

Installation temperature, minimum

- -55 °C (-67 °F).

Classification

- Class I, Division 2, Groups A, B, C, D

- Class II, Division 2, Groups E, F, G

- Class III

Certification

- CAN/CSA-C22.2 No. 130-03

- CSA C US 1862457;

Class: 2878-01, 2878-81

Class: 2872-01, 2872-81

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, roof and gutter.

Models

Nominal output W/ft.	Product #		Outer jacket/Mechanical shield		Cable dimension approx. (mm)
	120V ^{1,3}	240V ^{1,2,3}	CR	CT	
3	3PSB1-XX	3PSB2-XX	✓	✓	11.6 x 5.8
5	5PSB1-XX	5PSB2-XX	✓	✓	11.6 x 5.8
8	8PSB1-XX	8PSB2-XX	✓	✓	11.6 x 5.8
10	10PSB1-XX	10PSB2-XX	✓	✓	11.6 x 5.8

¹ XX = Outer jacket/Mechanical shield.

CR Protective braid and a polyolefin outer jacket.

CT Protective braid and a fluoropolymer outer jacket.

² For operations at 208V or 277V, 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.

BARTEC



CR Model

CT Model





Heating circuit length

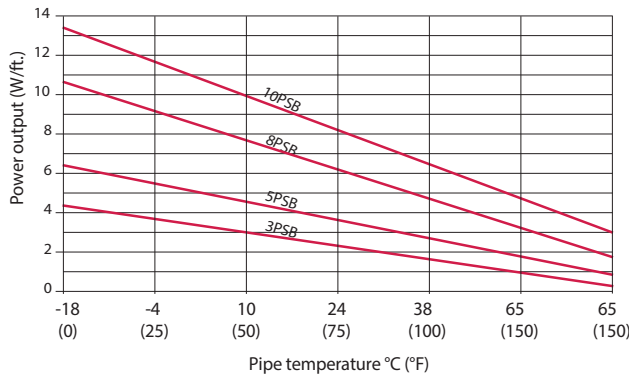
The following table shows the maximum circuit length in ft. for the different PSB trace heater types with standard circuit breaker amperages. Breaker sizes should be based on the National Electrical Code, Canadian Electrical Code or any other local or applicable code. Use only circuit breakers with type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

Start-up temperature	Circuit breaker capacity ¹ (A)	120V Maximum heating circuit (ft.) for				Start-up temperature	Circuit breaker capacity ¹ (A)	240V Maximum heating circuit (ft.) for			
		3PSB1	5PSB1	8PSB1	10PSB1			3PSB2	5PSB2	8PSB2	10PSB2
10 °C (50 °F)	10	246	174	118	95	10 °C (50 °F)	10	463	331	197	125
	15	344	262	177	141		15	673	499	299	190
	20	344	282	217	164		20	673	551	397	253
	25	344	282	217	164		25	673	551	430	315
	30	344	282	217	164		30	673	551	430	328
	35	344	282	217	164		35	673	551	430	328
0 °C (32 °F)	40	344	282	217	164	0 °C (32 °F)	40	673	551	430	328
	10	213	151	105	85		10	407	292	177	112
	15	322	230	157	128		15	610	436	266	167
	20	344	282	210	164		20	673	551	354	226
	25	344	282	217	164		25	673	551	430	282
	30	344	282	217	164		30	673	551	430	328
-10 °C (14 °F)	35	344	282	217	164	-10 °C (14 °F)	35	673	551	430	328
	40	344	282	217	164		40	673	551	430	328
	10	190	135	95	75		10	361	259	157	102
	15	289	203	141	115		15	545	390	240	151
	20	344	272	190	151		20	673	518	318	203
	25	344	282	217	164		25	673	551	397	253
-18 °C (0 °F)	30	344	282	217	164	-18 °C (0 °F)	30	673	551	430	305
	35	344	282	217	164		35	673	551	430	328
	40	344	282	217	164		40	673	551	430	328
	10	177	125	85	69		10	335	240	148	92
	15	266	187	131	105		15	502	358	220	141
	20	344	249	174	141		20	669	479	295	187
-29 °C (-20 °F)	25	344	282	217	164	-29 °C (-20 °F)	25	673	551	430	282
	30	344	282	217	164		30	673	551	430	328
	35	344	282	217	164		35	673	551	430	328
	40	344	282	217	164		40	673	551	430	328
	10	157	112	79	62		10	302	213	131	85
	15	240	167	118	95		15	453	322	200	128
-40 °C (-40 °F)	20	318	226	157	128	-40 °C (-40 °F)	20	604	430	266	171
	25	344	282	200	161		25	673	538	335	213
	30	344	282	217	164		30	673	551	400	256
	35	344	282	217	164		35	673	551	430	299
	40	344	282	217	164		40	673	551	430	328
	10	144	102	72	59		10	272	194	121	75
-40 °C (-40 °F)	15	217	154	108	89	-40 °C (-40 °F)	15	410	292	184	115
	20	289	203	144	118		20	548	390	243	154
	25	344	256	180	148		25	673	489	305	194
	30	344	282	217	164		30	673	551	367	233
	35	344	282	217	164		35	673	551	430	272
	40	344	282	217	164		40	673	551	430	312

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
- MCB 100% utilization

Cable heat output depending on the environment

- In Snow and Ice** - 13W/ft. @ 32 °F (42W/m @ 0 °C)
- In Dry Air** - 8W/ft. @ 32 °F (26W/m @ 0 °C)

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

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

Due to the cable's self-regulating properties, the power density can reach up to 11W/ft. (120V) and 13W/ft. (240V) when buried in snow or ice: "wet density".

Adjustment factors	Heating cable correction factors/ Multipliers	Nominal output	Heating circuit length
208V	3PSB2	0.90	0.96
	5PSB2	0.93	0.94
	8PSB2	0.95	0.92
	10PSB2	0.97	0.92
277V	3PSB2	1.23	1.09
	5PSB2	1.19	1.10
	8PSB2	1.11	1.14
	10PSB2	1.06	1.16

Accessories

See Accessories section.