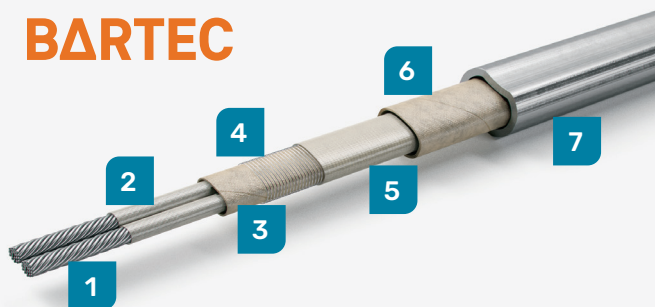




BARTEC



Construction

1. Conductors: stranded copper wire, 3mm², nickel-plated
2. High-temperature glass fibre and mica insulation
3. Heating element
4. Parallel circuit connection
5. High-temperature glass fibre and mica insulation
6. High-temperature glass fibre and mica insulation
7. Aluminum outer jacket

The aluminum outer jacket provides excellent heat distribution, robust physical protection and resistance to moisture and corrosion.

Product Overview

The BPL is a power limiting trace heater that can be used for freeze protection or temperature maintenance on instrument tubing, pipework and vessels requiring high power output or high exposure temperatures of up to 425°C (797°F). It can be cut to length on-site and can replace mineral-insulated (MI) cables for applications where the cut-to-length feature is preferred.

Application

- Freeze protection and temperature maintenance in instrument tubing, pipework and vessels
- For hazardous and non-hazardous locations (Class 1, Division 2)
- Can replace MI cables in certain applications where the cut-to-length feature is preferred

Features

Nominal voltage

- 110–120V, 208–277V (for 277V applications, please contact factory)

Power output

- +10°C (+50°F): 5–20W/ft. (16–66W/m)

Max. exposure temp.

- Continuous 350°C (662°F)
- Intermittent 425°C (797°F)

Min. start-up temp.

- -40°C (-40°F)

Min. installation temp.

- -40°C (-40°F)

Min. bending radius

- 1in. (25mm)

Ratings

Classification

- Class I, Division 2, Group A, B, C, D
- Class II, Division 2, Group E, F, G
- Class III
- Ex 60079-30-1 IIC T* Gb
- Ex 60079-30-1 IIIC T#°C Db
- T1 to T3 (see table maximum pipe/work piece temperature)

Certification

- CSA 70144884
- IECEx CML 22.0058





Maximum circuit length

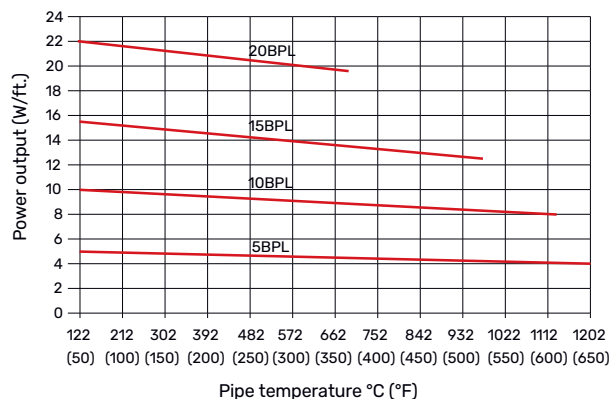
Start-up temp.	Circuit breaker capacity ¹ (A)	Maximum heating circuit length (ft.) for							
		120V				240V			
		5BPL1-AL	10BPL1-AL	15BPL1-AL	20BPL1-AL	5BPL2-AL	10BPL2-AL	15BPL2-AL	20BPL2-AL
10°C (50°F)	20	291	178	121	85	567	340	246	170
	30	291	210	162	97	567	405	344	278
	40	291	210	162	131	567	405	344	278
-18°C (0°F)	20	275	162	108	78	550	324	229	164
	30	275	194	152	87	550	388	328	262
	40	275	194	152	124	550	388	328	262
-40°C (-40°F)	20	259	146	114	72	518	307	213	147
	30	259	178	145	81	518	372	311	255
	40	259	178	145	118	518	372	311	255

Start-up temp.	Circuit breaker capacity ¹ (A)	Maximum heating circuit length (ft.) for							
		208V				277V			
		5BPL2-AL	10BPL2-AL	15BPL2-AL	20BPL2-AL	5BPL2-AL	10BPL2-AL	15BPL2-AL	20BPL2-AL
10°C (50°F)	20	518	324	194	146	639	328	203	147
	30	518	356	275	227	639	442	321	229
	40	518	356	275	227	639	442	344	301
-18°C (0°F)	20	502	308	185	136	623	311	193	144
	30	502	340	266	217	623	426	308	223
	40	502	340	266	217	623	426	328	288
-40°C (-40°F)	20	470	292	178	130	606	314	190	138
	30	470	324	259	211	606	410	301	216
	40	470	324	259	211	606	410	311	282

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 conversion factors	Power output	Zone length BPL1-AL	in.	mm	Zone length BPL2-AL	in.	mm
110V	0.84	5BPL1-AL	31.5	800	5BPL2-AL	48.0	1220
208V	0.75	10BPL1-AL	27.6	700	10BPL2-AL	35.4	900
277V	1.33	15BPL1-AL	24.6	625	15BPL2-AL	29.9	760
		20BPL1-AL	19.7	500	20BPL2-AL	25.6	650

Power temperature curves 120V and 240V





Max. pipe/work piece temperatures (120V or 240V)¹

Product #	W/m	Area classification: hazardous ²						Safe ³	
		T3		T2		T1			
		°C	°F	°C	°F	°C	°F	°C	°F
5BPL-AL	15	160	320	289	552	350	662	350	662
10BPL-AL	30	100	212	246	475	323	613	323	613
15BPL-AL	50	30	86	178	352	276	529	276	529
20BPL-AL	70	-	-	80	176	185	365	185	365

¹ For 277V applications, contact factory representative

² Surface temperature limits in accordance with EN60079

³ Surface temperature limited by construction materials (maximum exposure temperature, intermittent)

The maximum pipe and work piece temperature have to be ensured by design calculation (Stabilized design) or by temperature limiter (Controlled design)

Models

Nominal output W/ft.	Cable dimension approx. (mm)	Product #		
		120V	208V	240V
4	10.7 × 7.7	-	5BPL2-AL	-
5	10.7 × 7.7	5BPL1-AL	-	5BPL2-AL
7.5	10.7 × 7.7	-	10BPL2-AL	-
10	10.7 × 7.7	10BPL1-AL	-	10BPL2-AL
12.5	10.7 × 7.7	-	15BPL2-AL	-
17	10.7 × 7.7	15BPL1-AL	-	15BPL2-AL
17.5	10.7 × 7.7	-	20BPL2-AL	-
22	10.7 × 7.7	20BPL1-AL	-	20BPL2-AL

When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

E.g., to order a 500ft. cable, write 500 for quantity with product code.

Accessories

See Accessories section.