

BSX™ Self-Regulating Heating Cable

Product Specifications

Application . . .

Freeze Protection or Process Temperature Maintenance

BSX self-regulating heating cables are designed to provide freeze protection or process temperature maintenance to metallic and nonmetallic piping, tanks and equipment. The heat output of BSX cable varies in response to the surrounding conditions along the entire length of a circuit. Whenever the heat loss of the insulated pipe, tank or equipment increases (as ambient temperature drops), the heat output of the cable increases. Conversely, when the heat loss decreases (as the ambient temperature rises or product flows), the cable reacts by reducing its heat output. BSX cables are approved for use in ordinary (nonclassified) areas and hazardous (classified) areas.

Ratings . . .

Available watt densities	3, 5, 8, 10 w/ft @ 50°F (10, 16, 26, 33 w/m @ 10°C)
Supply voltages.....	110-120 or 208-277 Vac
Max. maintenance temperature	150°F (65°C)
Max. continuous exposure temperature	
Power-off	185°F (85°C)
Minimum installation temperature	-60°F (-51°C)
Minimum bend radius	
@ 5°F (-15°C)	0.38" (10mm)
@ -76°F (-60°C)	1.25" (32 mm)
T-rating ¹	T6 185°F (85°C)

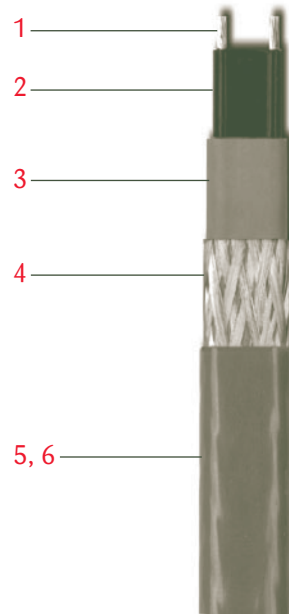
Basic Accessories² . . .

Power Connection: All BSX cables require a Terminator, PCA or ECA power connection kit for terminating the circuit before connecting to power.

End-of-Circuit Termination: BSX cables require the ET-6 end cap for terminating at the end of the circuit.

Notes . . .

1. T-rating per the National Electrical Code and Canadian Electrical Code.
2. Information on additional accessories to complete a heater circuit installation and to comply with approval requirements may be found in the "Self-Regulating Cables Systems Accessories" product specification sheet (Form TEP0010).



Construction . . .

- 1 Nickel-Plated Copper Bus Wires (16 AWG)
- 2 Radiation Cross-Linked Semiconductive Heating Matrix
- 3 Radiation Cross-Linked Dielectric Insulation
- 4 Tinned Copper Braid
- 5 Polyolefin overjacket provides additional protection to cable and braid where exposure to aqueous inorganic chemicals is expected.

Options . . .

- 6 FOJ Fluoropolymer overjacket over tinned copper braid provides additional protection to cable and braid where exposure to organic chemicals or corrosives is expected.



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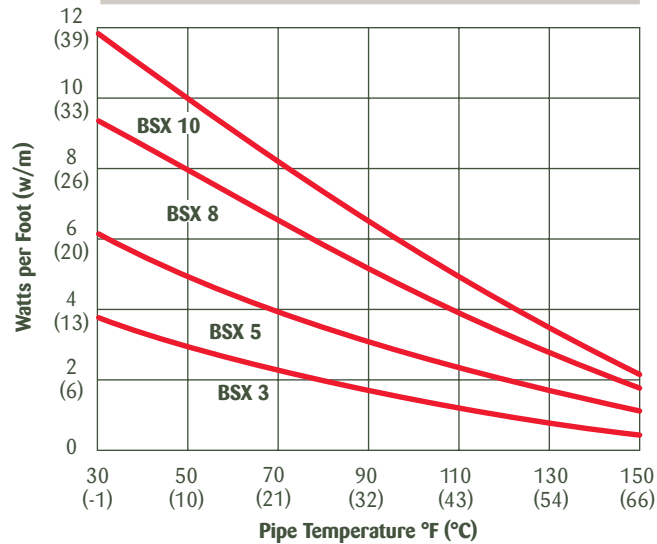
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www.thermon.com In Canada call **1-800-563-8461**

Power Output Curves¹ . . .

The power outputs shown apply to cable installed on insulated metallic pipe (using the procedures outlined in IEEE Standard 515-2004) at the service voltages stated below. For use on other service voltages, contact Thermon.

Catalog Number 120 VacNominal	Catalog Number 240 VacNominal	Power Output at 50°F (10°C) w/ft (m)
BSX 3-1	BSX 3-2	3 (10)
BSX 5-1	BSX 5-2	5 (16)
BSX 8-1	BSX 8-2	8 (26)
BSX 10-1	BSX 10-2	10 (33)



Circuit Breaker Sizing² . . .

Maximum circuit lengths for various circuit breaker amperages are shown below. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Catalog Number	120 Vac Service Voltage Start-Up Temperature °F (°C)	Max. Circuit Length ³ vs. Breaker Size ft (m)		
		20A	30A	40A
BSX 3-1	50 (10)	360 (110)	360 (110)	360 (110)
	0 (-18)	325 (99)	360 (110)	360 (110)
	-20 (-29)	285 (87)	360 (110)	360 (110)
	-40 (-40)	260 (79)	360 (110)	360 (110)
BSX 5-1	50 (10)	240 (73)	300 (91)	300 (91)
	0 (-18)	205 (62)	300 (91)	300 (91)
	-20 (-29)	185 (56)	275 (84)	295 (90)
	-40 (-40)	165 (50)	250 (76)	265 (81)
BSX 8-1	50 (10)	190 (58)	240 (73)	240 (73)
	0 (-18)	150 (46)	225 (69)	240 (73)
	-20 (-29)	135 (41)	200 (61)	240 (73)
	-40 (-40)	120 (37)	180 (55)	215 (66)
BSX 10-1	50 (10)	160 (49)	200 (61)	200 (61)
	0 (-18)	110 (34)	170 (52)	200 (61)
	-20 (-29)	100 (30)	150 (46)	200 (61)
	-40 (-40)	90 (27)	135 (41)	180 (55)

Certifications/Approvals . . .



Factory Mutual Research
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups B, C and D
Class II, Division 2, Groups F and G
Class III, Divisions 1 and 2
Class I, Zones 1 and 2, AEx e II (requires FOJ)



Underwriters Laboratories Inc.
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups B, C and D
Class II, Division 2, Groups F and G
Class III, Divisions 1 and 2
Class I, Zones 1 and 2, AEx e II (requires FOJ)



Canadian Standards Association
Ordinary Locations
Hazardous (Classified) Locations
Class I, Divisions 1 & 2, Groups A, B, C and D
Class II, Divisions 1 & 2, Groups E, F and G
Ex e II

Notes . . .

- For more precise power output values as a function of pipe temperature, refer to CompuTrace®.
- Based on the trip current characteristic of Type QOB or Type QO equipment protection devices. For devices with other trip current characteristics, contact Thermon.
- The maximum circuit length is for one continuous length of cable, not the sum of segments of cable. Refer to CompuTrace® design software or contact Thermon for current loading of segments.

Catalog Number	240 Vac Service Voltage Start-Up Temperature °F (°C)	Max. Circuit Length ³ vs. Breaker Size ft (m)		
		20A	30A	40A
BSX 3-2	50 (10)	725 (221)	725 (221)	725 (221)
	0 (-18)	650 (198)	725 (221)	725 (221)
	-20 (-29)	575 (175)	725 (221)	725 (221)
	-40 (-40)	515 (157)	725 (221)	725 (221)
BSX 5-2	50 (10)	480 (146)	600 (183)	600 (183)
	0 (-18)	395 (120)	590 (180)	600 (183)
	-20 (-29)	350 (107)	525 (160)	590 (180)
	-40 (-40)	315 (96)	475 (145)	530 (162)
BSX 8-2	50 (10)	385 (117)	480 (146)	480 (146)
	0 (-18)	285 (87)	425 (130)	480 (146)
	-20 (-29)	255 (78)	380 (122)	480 (146)
	-40 (-40)	230 (70)	345 (116)	430 (131)
BSX 10-2	50 (10)	280 (85)	400 (122)	400 (122)
	0 (-18)	225 (69)	340 (104)	400 (122)
	-20 (-29)	200 (61)	300 (91)	400 (122)
	-40 (-40)	180 (55)	275 (84)	365 (111)

