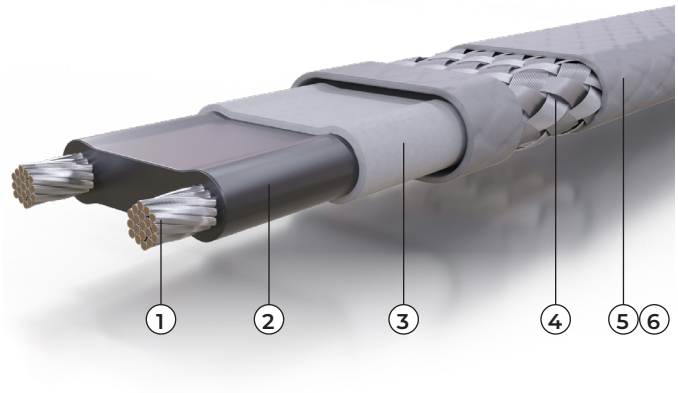
PRODUCT DATASHEET
BSX™
SELF-REGULATING HEAT TRACING



APPLICATION
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 ..... 10, 16, 26, 33 W/m @ 10°C (3, 5, 8, 10 W/ft @ 50°F)
Supply voltages ..... 110-120 or 208-277 Vac
Max. maintenance temperature ..... 65°C (150°F)
Max. continuous exposure temperature
Power-off ..... 85°C (185°F)
Minimum installation temperature ..... -51°C (-60°F)
Minimum bend radius
@ -15°C (5°F) ..... 10 mm (0.38”)
@ -60°C (-76°F) ..... 32 mm (1.25”)
T-rating [1]
10, 16, 26 W/m (3, 5, 8 W/ft) ..... T6 85°C (185°F)
33 W/m (10 W/ft) ..... T5 100°C (212°F)

Notes
1. T-rating per the National Electrical Code and Canadian Electrical Code.

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 for 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.

BASIC ACCESSORIES
Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heating cables.

All cables require a connection kit to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the “Heating Cable Systems Accessories” product specification sheet (Form TEP0010).

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For the Thermon office nearest you visit us at www.thermon.com

Form TEP0067-0521

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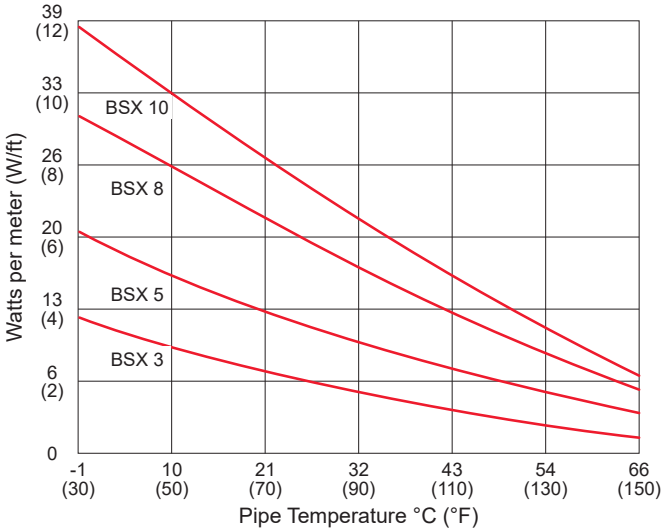
POWER OUTPUT CURVES [1]

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

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



CERTIFICATIONS/APPROVALS

FM Approvals
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

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

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

1. For more precise power output values as a function of pipe temperature, refer to CompuTrace®.
2. Based on the trip current characteristic of Type QOB or Type QO equipment protection devices. For devices with other trip current characteristics, contact Thermon.
3. 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.

CIRCUIT BREAKER SIZING [2]

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.

120 Vac Service Voltage		Max. Circuit Length [3] vs. Breaker Size m (ft)		
Catalog Number	Start-Up Temperature °C (°F)	20 A	30 A	40 A
BSX 3-1	10 (50)	108 (354)	108 (354)	108 (354)
	0 (32)	108 (354)	108 (354)	108 (354)
	-20 (-4)	96 (315)	108 (354)	108 (354)
	-40 (-40)	79 (259)	108 (354)	108 (354)
BSX 5-1	10 (50)	73 (240)	88 (289)	88 (289)
	0 (32)	73 (240)	88 (289)	88 (289)
	-20 (-4)	61 (200)	88 (289)	88 (289)
	-40 (-40)	50 (164)	76 (249)	81 (266)
BSX 8-1	10 (50)	58 (190)	81 (266)	81 (266)
	0 (32)	57 (187)	81 (266)	81 (266)
	-20 (-4)	44 (144)	67 (220)	79 (259)
	-40 (-40)	37 (121)	55 (180)	65 (213)
BSX 10-1	10 (50)	48 (157)	66 (217)	66 (217)
	0 (32)	42 (138)	63 (207)	66 (217)
	-20 (-4)	33 (108)	50 (164)	66 (217)
	-40 (-40)	27 (89)	41 (135)	55 (180)

240 Vac Service Voltage		Max. Circuit Length [3] vs. Breaker Size m (ft)		
Catalog Number	Start-Up Temperature °C (°F)	20 A	30 A	40 A
BSX 3-2	10 (50)	214 (702)	214 (702)	214 (702)
	0 (32)	214 (702)	214 (702)	214 (702)
	-20 (-4)	192 (630)	214 (702)	214 (702)
	-40 (-40)	158 (518)	214 (702)	214 (702)
BSX 5-2	10 (50)	146 (479)	178 (584)	178 (584)
	0 (32)	146 (479)	178 (584)	178 (584)
	-20 (-4)	117 (384)	175 (574)	178 (584)
	-40 (-40)	96 (315)	145 (476)	163 (535)
BSX 8-2	10 (50)	117 (384)	154 (505)	154 (505)
	0 (32)	108 (354)	154 (505)	154 (505)
	-20 (-4)	84 (276)	127 (417)	154 (505)
	-40 (-40)	69 (226)	104 (341)	131 (430)
BSX 10-2	10 (50)	96 (315)	133 (436)	133 (436)
	0 (32)	85 (279)	127 (417)	133 (436)
	-20 (-4)	67 (220)	101 (331)	133 (436)
	-40 (-40)	55 (180)	83 (272)	111 (364)