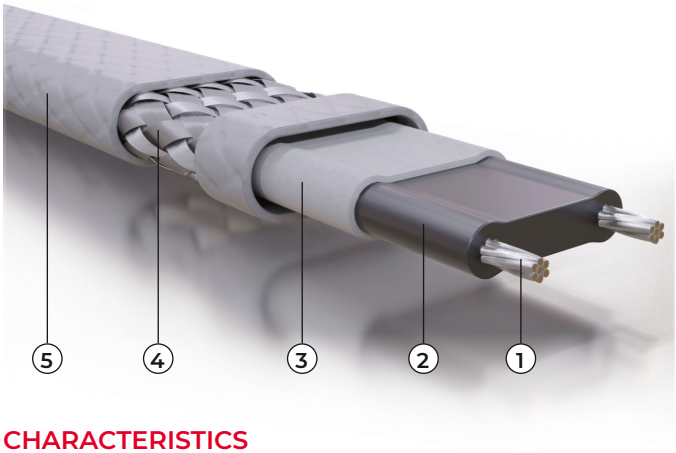
PRODUCT DATASHEET
FLX™
SELF-REGULATING HEAT TRACING



APPLICATION
FLX self-regulating trace heaters are designed to provide freeze protection and temperature maintenance to metallic and nonmetallic pipes, tanks and equipment. FLX is rated for heat outputs of 10, 16, 26 and 33 W/m at 10°C (3, 5, 8 and 10 W/ft at 50°F) when powered at 110 to 120 Vac or 208 to 277 Vac. FLX is a proven, simple, practical solution for both metal and plastic pipes.

RUGGED AND RELIABLE
FLX is protected by a tinned copper braid and a polyolefin outer jacket to provide grounding and additional mechanical protection. An optional fluoropolymer outer jacket is available if additional environmental protection is required.

Built with proven and proprietary compounding, extrusion, and cross-linking technology, FLX allows for continuous operation and extended life expectancy.

EASY TO DESIGN
Whether the application is a small project or a complex network of piping and equipment, designing an electric heat traced freeze protection system is easy with FLX. The step-by-step design guide leads the reader through determining the heating requirements and number of circuits required to establish a bill of materials.

With parallel circuitry, FLX does not require exact piping lengths to be known in advance and can be cut to length in the field. Heat tracing circuits for field-routed piping can be quickly and easily designed on site.

EASY TO INSTALL
FLX is installed directly on metallic or nonmetallic piping under conventional thermal insulation with ordinary hand tools. Kits for power connection, end termination and splicing, plus other accessories, are designed for quick and easy installation.

Simply pull FLX from the supply reel, install directly on the pipe and complete circuit fabrication. Tee splices may be installed anywhere along the circuit to match the layout of the piping.

CHARACTERISTICS
1. 1.3 mm^2 (16 AWG) Nickel-Plated Copper Bus Wire
2. E-Beam Cross-Linked Polyolefin Semiconductive Heating Matrix
3. E-Beam Cross-Linked Polyolefin Primary Dielectric Insulation
4. Tinned Copper Metallic Braid
5. Polyolefin Outer Jacket (Fluoropolymer optional)

RATINGS
Supply voltages ..... 110-120 or 208-277 Vac
Max. continuous exposure temperature
- Power on ..... 65°C (150°F)
- Power off ..... 85°C (185°F)

Minimum bend radius
- @ -15°C (5°F) ..... 10 mm (0.38")
- @ -60°C (-76°F) ..... 32 mm (1.25")

30 mA Ground-Fault Protection Required [1]

BASIC ACCESSORIES
Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heat tracing. All trace heaters require a connection kit to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the "Freeze Protection Systems Accessories" product specification sheet (Form CPD1017).

CERTIFICATIONS/APPROVALS
LISTED

Notes

1. The National Electrical Code and the Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment.

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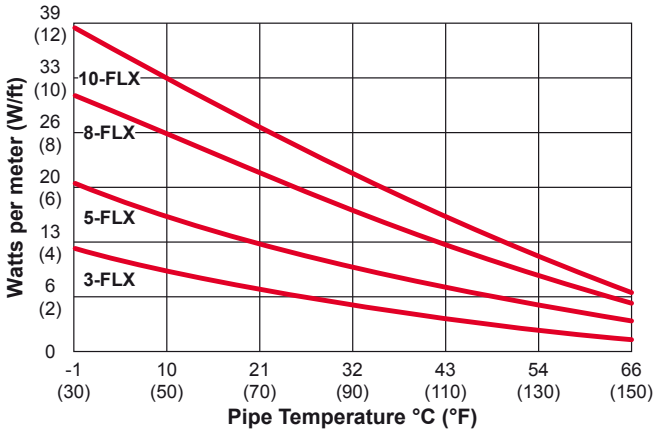
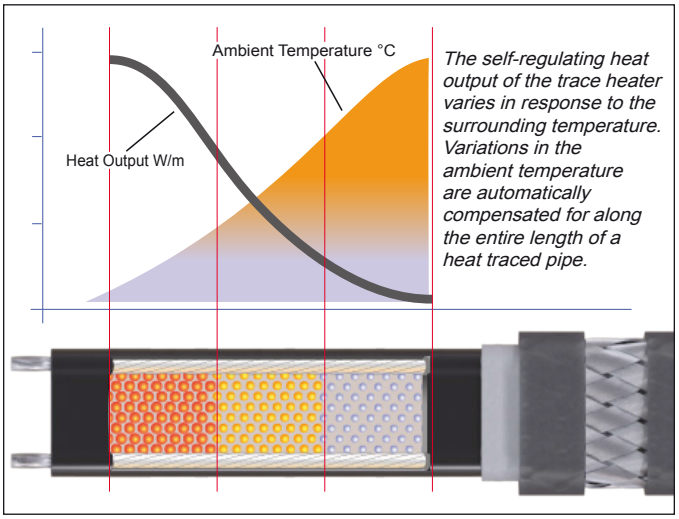
POWER OUTPUT CURVES[1]



SELF-REGULATING HEAT OUTPUT



The self-regulating heat output of the trace heater varies in response to the surrounding temperature. Variations in the ambient temperature are automatically compensated for along the entire length of a heat traced pipe.

CIRCUIT BREAKER SIZING [2]

Maximum circuit lengths for various circuit breaker amperages are shown below. Circuit breaker sizing and ground-fault protection should be based on applicable local codes. For information on design and performance on other voltages, contact TC-E. Ground-fault protection of equipment should be provided for each branch circuit supplying electric heating equipment.

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
3-FLX-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)
5-FLX-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)
8-FLX-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)
10-FLX-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
3-FLX-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)
5-FLX-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)
8-FLX-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)
10-FLX-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)

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 TC-E.
3. The maximum circuit length is for one continuous length of trace heater, not the sum of segments of cable. Refer to CompuTrace® design software or contact TC-E for current loading of segments.