



# 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 self-regulating is protected by a tinned copper braid and a polyolefin outer jacket to provide grounding and additional mechanical protection for the cable. 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

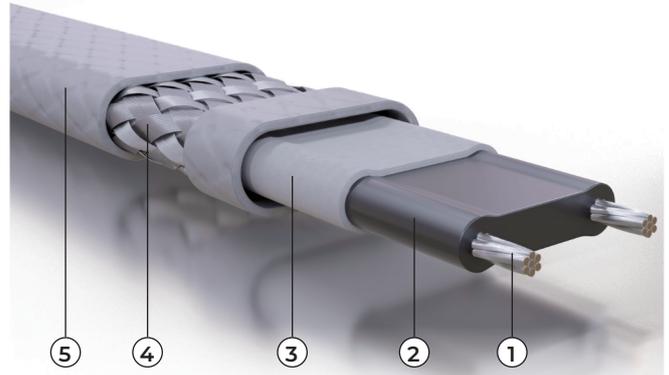
Whether the application is a small project or a complex network of piping and equipment, designing an electric heat traced freeze protection system is easy with FLX. The step-by-step design guide leads the reader through determining the heating requirements and number of circuits required to establish 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<sup>2</sup> (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

#### RATINGS

Supply voltages <sup>1</sup> .....	230 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")

#### 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 CPD1017U).

#### CERTIFICATIONS/APPROVALS

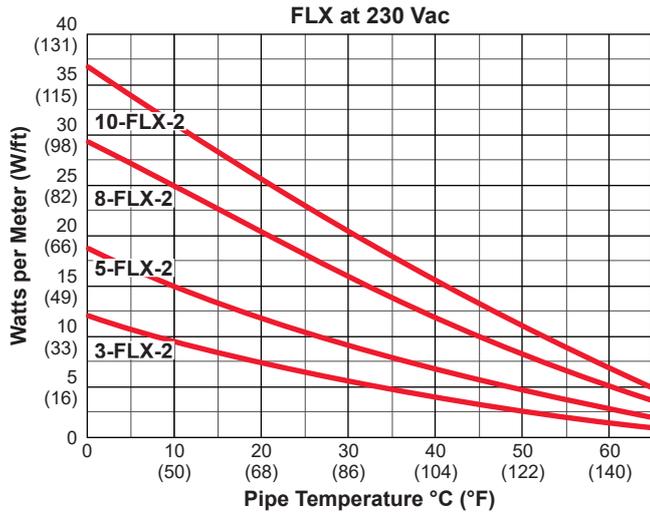


#### Notes

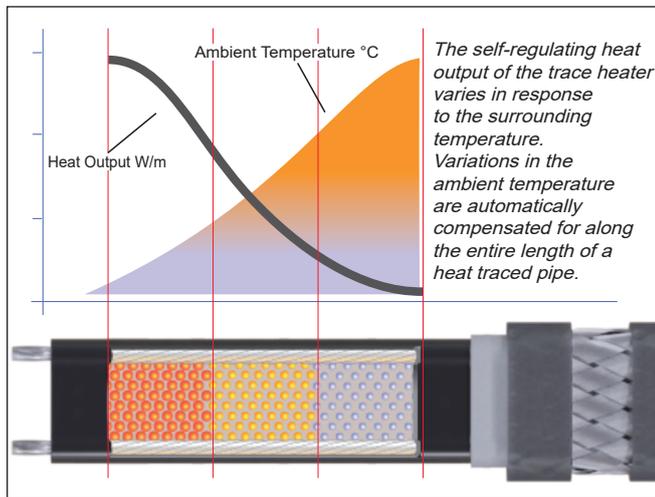
1. Trace heater may be energized at other voltages; contact Thermon for design assistance.



**POWER OUTPUT CURVES<sup>1</sup>**



**SELF-REGULATING HEAT OUTPUT**



**CIRCUIT BREAKER SIZING<sup>2</sup>**

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

230 Vac Service Voltage		Max. Circuit Length <sup>4</sup> vs. Breaker Size m (ft)					
Catalog Number	Start-Up Temp. <sup>3</sup> °C (°F)	Type B			Type C		
		16 A	25 A	32 A	16 A	25 A	32 A
3-FLX-2	10 (50)	191 (627)	220 (722)	220 (722)	191 (627)	220 (722)	220 (722)
	0 (32)	191 (627)	220 (722)	220 (722)	191 (627)	220 (722)	220 (722)
	-20 (-4)	156 (512)	220 (722)	220 (722)	156 (512)	220 (722)	220 (722)
	-40 (-40)	127 (417)	199 (653)	220 (722)	127 (417)	199 (653)	220 (722)
5-FLX-2	10 (50)	117 (384)	176 (577)	176 (577)	117 (384)	176 (577)	176 (577)
	0 (32)	117 (384)	176 (577)	176 (577)	117 (384)	176 (577)	176 (577)
	-20 (-4)	98 (322)	153 (502)	176 (577)	98 (322)	153 (502)	176 (577)
	-40 (-40)	80 (262)	126 (413)	161 (528)	80 (262)	126 (413)	161 (528)
8-FLX-2	10 (50)	93 (305)	146 (479)	147 (482)	93 (305)	146 (479)	147 (482)
	0 (32)	93 (305)	146 (479)	147 (482)	93 (305)	146 (479)	147 (482)
	-20 (-4)	74 (243)	116 (381)	147 (482)	74 (243)	116 (381)	147 (482)
	-40 (-40)	61 (200)	95 (312)	122 (400)	61 (200)	95 (312)	122 (400)
10-FLX-2	10 (50)	66 (217)	104 (341)	132 (433)	77 (253)	120 (394)	132 (433)
	0 (32)	58 (190)	91 (299)	117 (384)	71 (233)	111 (364)	132 (433)
	-20 (-4)	46 (151)	71 (233)	92 (302)	55 (180)	87 (285)	111 (364)
	-40 (-40)	37 (121)	58 (190)	75 (246)	45 (148)	71 (233)	91 (299)

**Notes**

- For more precise power output values as a function of pipe temperature, refer to CompuTrace®.
- Maximum circuit lengths shown are based on an instantaneous trip current characteristic per IEC 60898 at the referenced start-up temperature and a 10°C maintenance temperature. For maximum circuit lengths with other trip current characteristics, contact Thermon.
- While a heat tracing system is generally designed to keep the contents of a pipe at the desired maintain temperature, the trace heater may be energized at lower temperatures. For design data with lower start-up temperatures than represented above contact Thermon for design assistance.
- 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 Thermon for current loading of segments.