Raychem®

XL-Trace®

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Visit www.tycothermal.com for more information on our ten-year extended warranty.

Self-regulating pipe freeze protection and flow maintenance heating cable

Raychem® XL-Trace® is designed for pipe freeze protection and flow maintenance in the following applications:

- Freeze protection of general water piping (aboveground and buried)
- Freeze protection of fire sprinkler system standpipes (aboveground)
- Flow maintenance of greasy waste lines (aboveground and buried)
- Flow maintenance of fuel lines (aboveground)

The heating element in the XL-Trace heating cable consists of a continuous core of conductive polymer extruded between two copper bus wires. The XL-Trace heating cable regulates its power output in response to pipe temperature changes. This self-regulating technology allows XL-Trace heating cable to be overlapped or installed on plastic pipes without overheating.

Low total installed cost

The XL-Trace heating cable's parallel circuitry allows it to be cut to the exact length required, with no wasted cable. Its flexibility allows it to be wrapped around complex fittings and valves. All of these characteristics simplify and streamline the design of a heat-tracing system. Installation is quick and simple.

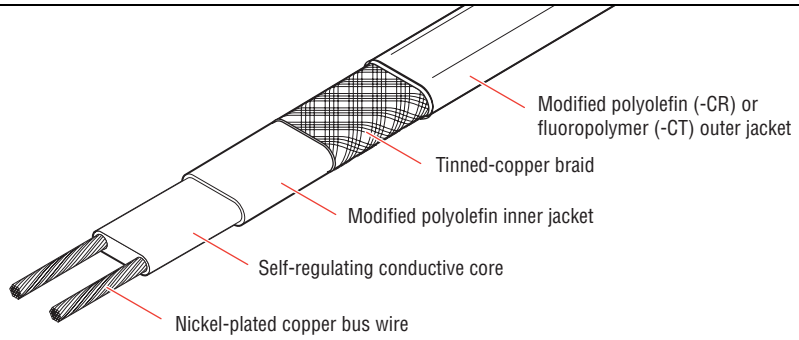
Low total operating cost

Building operators are assured of optimal energy efficiency and low maintenance costs when an XL-Trace system is specified.

The same features that make an XL-Trace system easy to install the first time also simplify additions or changes to the system during building renovations.

For additional information, contact your Tyco Thermal Controls representative or call Tyco Thermal Controls at (800) 545-6258.

Heating cable construction



Catalog Number	5XL1-CR/CT	5XL2-CR/CT	8XL1-CR/CT	8XL2-CR/CT	12XL2-CR/CT
Voltage	120 V	208–277 V	120 V	208–277 V	208–277 V
Maximum Operating Temperature	150°F (65°C)	150°F (65°C)	150°F (65°C)	150°F (65°C)	150°F (65°C)
Minimum Installation Temperature	0°F (–18°C)	0°F (–18°C)	0°F (–18°C)	0°F (–18°C)	0°F (–18°C)
Minimum Bend Radius	1/2 in (12 mm)	1/2 in (12 mm)	1/2 in (12 mm)	1/2 in (12 mm)	1/2 in (12 mm)

Circuit Breaker Sizing for Pipe Freeze Protection and Fuel Line Flow Maintenance: 40°F [4°C] Maintain

120 V

Minimum start-up temperature	CB size	5XL1		8XL1	
		120 V		120 V	
	Amps	ft	m	ft	m
–20°F (–29°C)	15	95	29	76	23
	20	127	39	101	31
	30	190	58	151	46
	40[1]	270	82	210	64
0°F (–18°C)	15	111	34	86	26
	20	148	45	115	35
	30	222	68	172	53
	40[1]	270	82	210	64
32°F (0°C)	15	153	47	111	34
	20	203	62	148	45
	30	270	82	210	64
	40[1]	270	82	210	64
40°F[2] (4°C)	15	167	51	120	37
	20	222	68	160	49
	30	270	82	210	64
	40[1]	270	82	210	64

208, 240, 277 V

Minimum start-up temperature	CB size	5XL2						8XL2						12XL2					
		208 V		240 V		277 V		208 V		240 V		277 V		208 V		240 V		277 V	
	Amps	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m
–20°F (–29°C)	15	165	50	170	52	170	52	131	40	135	41	137	42	113	34	113	34	113	35
	20	220	67	227	69	227	69	175	53	180	55	183	56	150	46	150	46	151	46
	30	330	101	340	104	341	104	262	80	270	82	275	84	226	69	225	69	227	69
	40[1]	470	143	454	138	454	139	370	113	360	110	366	112	301	92	300	92	303	92
0°F (–18°C)	15	193	59	198	60	199	61	149	46	154	47	157	48	123	38	123	38	124	38
	20	257	78	265	81	265	81	199	61	205	63	209	64	165	50	164	50	165	50
	30	385	117	397	121	398	121	299	91	308	94	313	96	247	75	246	75	247	75
	40[1]	470	143	490	149	530	162	370	113	390	119	418	127	329	100	328	100	330	101
32°F (0°C)	15	264	81	272	83	273	83	192	59	198	60	202	62	145	44	144	44	145	44
	20	353	107	363	111	364	111	257	78	264	81	269	82	194	59	192	59	193	59
	30	470	143	490	149	530	162	370	113	390	119	404	123	290	89	288	88	289	88
	40[1]	470	143	490	149	530	162	370	113	390	119	420	128	340	104	360	110	380	116
40°F[2] (4°C)	15	289	88	298	91	298	91	208	63	214	65	218	66	152	46	151	46	151	46
	20	385	117	397	121	398	121	277	85	286	87	291	89	202	62	201	61	201	61
	30	470	143	490	149	530	162	370	113	390	119	420	128	304	93	301	92	302	92
	40[1]	470	143	490	149	530	162	370	113	390	119	420	128	340	104	360	110	380	116

[1] Use only the FTC-P power connection kits when a 40 A circuit breaker is required

[2] Ambient control or buried

Circuit Breaker Sizing for Greasy Waste Disposal Line: 110°F [43°C] Maintain

Minimum start-up temperature	CB size	8XL2-CT						12XL2-CT					
		208 V		240 V		277 V		208 V		240 V		277 V	
	Amps	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m
0°F (–18°C)	15	149	45	154	47	156	48	123	38	123	38	124	38
	20	199	61	205	62	208	64	165	50	164	50	165	50
	30	298	91	307	94	313	95	247	75	246	75	247	75
	40[1]	398	121	410	125	417	127	329	100	328	100	330	101
20°F (–7°C)	15	173	53	178	54	182	55	136	42	135	41	136	41
	20	231	70	238	73	242	74	182	55	181	55	181	55
	30	346	106	357	109	363	111	272	83	271	83	272	83
	40[1]	462	141	476	145	484	148	363	111	361	110	362	111
40°F (4°C)	15	206	63	213	65	216	66	152	46	151	46	151	46
	20	275	84	284	86	289	88	202	62	201	61	201	61
	30	413	126	425	130	433	132	304	93	301	92	302	92
	40[1]	550	168	567	173	577	176	405	123	402	122	402	123
50°F[2] (10°C)	15	228	70	235	72	239	73	161	49	160	49	160	49
	20	304	93	314	96	319	97	215	66	213	65	213	65
	30	457	139	470	143	479	146	322	98	319	97	319	97
	40[1]	609	186	627	191	638	195	430	131	426	130	426	130
65°F[3] (18°C)	15	272	83	280	85	285	87	177	54	175	53	175	53
	20	362	110	373	114	380	116	237	72	234	71	233	71
	30	543	166	560	171	570	174	355	108	351	107	350	107
	40[1]	724	221	746	228	760	232	430	131	460	140	466	142

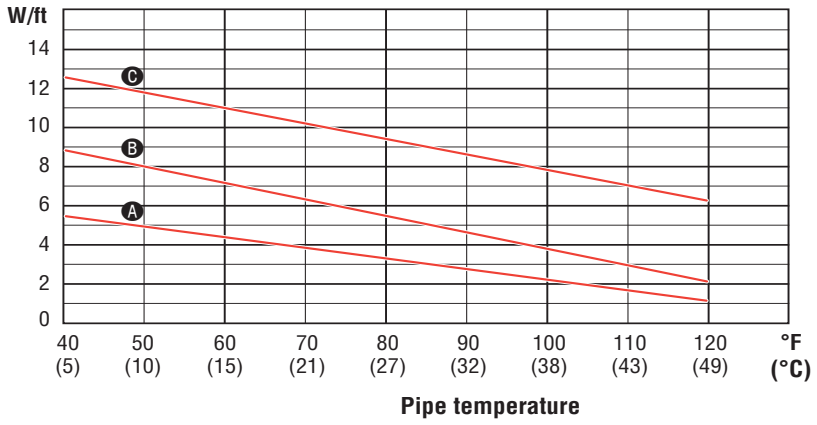
[1] Use only the FTC-P power connection kits when a 40 A circuit breaker is required
[2] Buried pipe applications
[3] Indoor applications

Nominal Power Output on Metal Pipes at 120 V/208 V

Ⓐ 5XL1-CR and 5XL1-CT (120 V)
5XL2-CR and 5XL2-CT (208 V)

Ⓑ 8XL1-CR and 8XL1-CT (120 V)
8XL2-CR and 8XL2-CT (208 V)

Ⓒ 12XL2-CR and 12XL2-CT (208 V)



Bus Wires	16 AWG nickel-plated copper	
Braid/Outer Jacket	Tinned-copper braid with modified polyolefin jacket (-CR) or fluoropolymer jacket (-CT).	
Dimensions	**5XL and 8XL**	**12XL**
Maximum width	0.56 in (14 mm)	0.62 in (16 mm)
Maximum thickness	0.24 in (6 mm)	0.24 in (6 mm)
Nominal Weight	92 lb/1000 ft	104 lb/1000 ft
Connection Kits	Raychem RayClic or FTC connection kits must be used with XL-Trace heating cables. Refer to the *Pipe Freeze Protection and Flow Maintenance Design Guide* (H55838) for proper connection kit selection.	
Approvals	718K Pipe Heating Cable	
Ground-Fault Protection	To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Tyco Thermal Controls, agency certifications, and national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.	

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