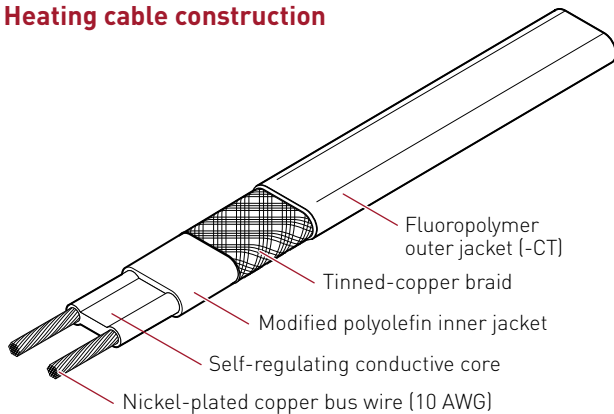


Raychem LBTV

SELF-REGULATING HEATING CABLES

Electrical freeze protection for long pipelines in both nonhazardous and hazardous locations

Heating cable construction



PRODUCT OVERVIEW

LBTV self-regulating heating cables provide freeze protection and low-temperature maintenance for longline applications. They maintain process temperatures up to 150°F (65°C), and they can withstand intermittent exposure to temperatures up to 185°F (85°C).

The cables are configured for use in nonhazardous and hazardous locations, including areas where corrosives may be present.

LBTV heating cables also provide long circuit length capability. They can be used for continuous circuit lengths up to 1125 feet (342 m) powered from a single source, and they are especially well-suited for tracing long pipelines containing temperature-sensitive fluids or where high reliability is required.

Raychem LBTV cables meet the requirements of the U.S. National Electrical Code and the Canadian Electrical Code. For additional information, contact your Pentair Industrial Heat Tracing Solutions representative or call (800) 545-6258.

APPLICATION

Area classification	Nonhazardous and hazardous locations
Traced surface type	Metal and plastics
Chemical resistance	Organic and aqueous inorganic chemicals and corrosives

SUPPLY VOLTAGE

200–277 Vac

TEMPERATURE RATING

Maximum maintain or continuous exposure temperature (power on)	150°F (65°C)
Maximum intermittent exposure temperature, 1000 hours (power on or off)	185°F (85°C)
Minimum installation temperature	-40°F (-40°C)


TEMPERATURE ID NUMBER (T-RATING)

T6, 185°F (85°C)
Temperature ID numbers are consistent with North America national electrical codes.


APPROVALS

Hazardous Locations

 Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G
Class III

 Class I, Div. 1 and 2, Groups A, B, C, D
Class II, Div. 1 and 2, Groups E, F, G
Class III

Zone Approvals

 CLI, ZN1, AEx e II T6

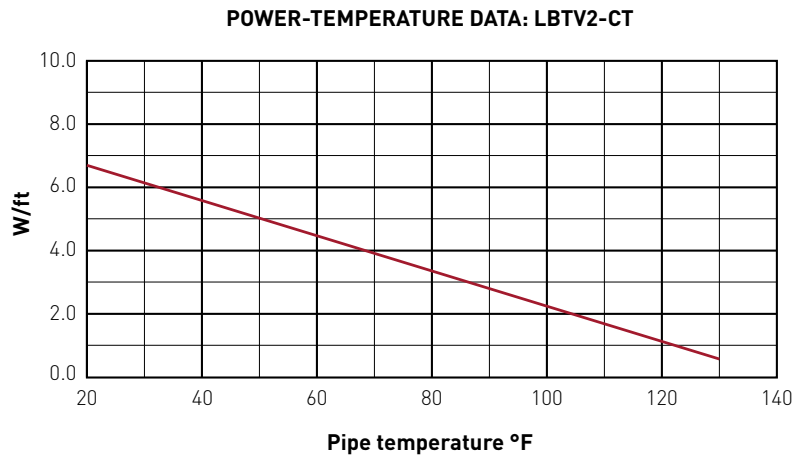
 Ex e II T6

DESIGN AND INSTALLATION

For proper design and installation, use TraceCalc Pro design software or the Design section of the Advanced Industrial Solutions Heat-Tracing Products & Services Catalog (H56550). Literature is available via the Pentair Industrial Heat Tracing Solutions web site, www.pentairthermal.com

NOMINAL POWER OUTPUT RATING ON METAL PIPES

	Adjustment factors	
	Power output	Circuit length
208 V	0.93	0.88
277 V	1.08	1.11



Note: To choose the correct heating cable for your application, use the Design section of the Advanced Industrial Solutions Heat-Tracing Products & Services Catalog (H56550). For more detailed information, use TraceCalc Pro design software.

MAXIMUM CIRCUIT LENGTHS BASED ON CIRCUIT BREAKER SIZES

	Ambient temperature at start-up	Maximum circuit length (in feet) per circuit breaker						
		240 V						
		15 A	20 A	30 A	40 A	50 A	60 A	70 A
LBTV2-CT	40°F (4°C)	305	410	630	875	1125	1125	1125
	20°F (-7°C)	250	335	510	700	915	1125	1125
	0°F (-18°C)	210	280	425	585	755	955	1125
	-20°F (-29°C)	180	240	365	500	645	810	995
	-40°F (-40°C)	160	210	320	440	560	700	855

PRODUCT CHARACTERISTICS

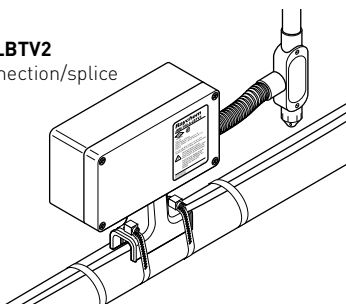
LBTV2-CT

Minimum bend radius	@68°F (20°C): 0.5 in (12.7 mm)
Weight (lb per 10 ft, nominal)	1.7
Bus wire size	10 AWG
Outer jacket color	Black
Heating cable dimensions	0.71 in x 0.33 in (18 mm x 8.4 mm)

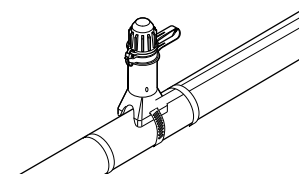
CONNECTION KITS

These connection kits must be used to ensure proper functioning of the product and compliance with warranty, code, and approvals requirements.

JBM-100-LBTV2
Power connection/splice



E-100-LBTV2
End seal



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 Pentair Industrial Heat Tracing Solutions, 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. Many Raychem control and monitoring systems meet the ground-fault protection requirement.



WWW.PENTAIRTHERMAL.COM

NORTH AMERICA

Tel: +1.800.545.6258
Fax: +1.800.527.5703
Tel: +1.650.216.1526
Fax: +1.650.474.7711
thermal.info@pentair.com

EUROPE, MIDDLE EAST, AFRICA

Tel: +32.16.213.511
Fax: +32.16.213.603
thermal.info@pentair.com

ASIA PACIFIC

Tel: +86.21.2412.1688
Fax: +86.21.5426.2937
cn.thermal.info@pentair.com

LATIN AMERICA

Tel: +1.713.868.4800
Fax: +1.713.868.2333
thermal.info@pentair.com

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