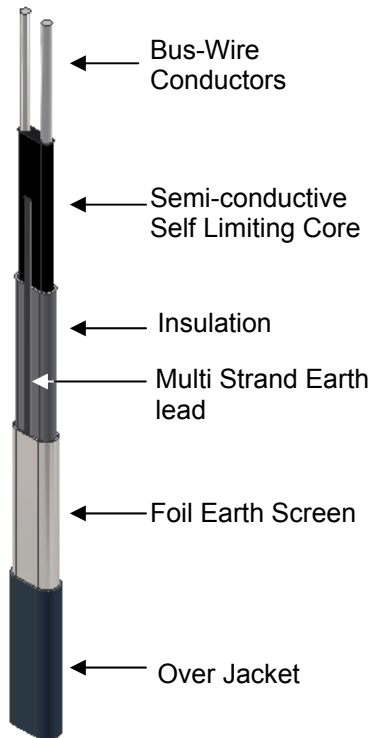




HEATING TAPE TYPE FBT



SELF REGULATING HEATING TAPE – FOR FROST PROTECTION AND LOW TEMPERATURE MAINTENANCE OF COMMERCIAL AND INDUSTRIAL PRODUCT LINES

FBT is a parallel circuit heating cable with self-limiting characteristics designed for Frost Protection and Low Temperature Maintenance of Pipework.

As the pipe temperature falls under no-flow conditions or due to the decrease in external or internal temperature, the electrical conductivity of the semi-conductive polymer core increases, causing the tape's output to increase.

As the pipe temperature increases under flow conditions, or as a result of increasing external or internal temperature, the conductivity reduces and output decreases.

CONSTRUCTION

The heating tape has a core comprising two bus-wire conductors contained within an extruded semi-conductive self limiting heater core with an outer insulating polyolefin sheath.

The tape has an earth protection screen in the form of a Foil Jacket covering a multi strand earth lead.

The tape is finished with a further protective thermoplastic outer sheath over the earth screen.

RANGE

TYPE	VOLTS	Start Up Temperature (°C)	MAX CIRCUIT LENGTH (m)		
			16A CB	20A CB	25A CB
FBT 10 10w/m @10°C	230	-20	128	143	143
		0	160	162	162
		10	198	198	198
FBT 20 20w/m @10°C	230	-20	79	100	107
		0	118	125	125
		10	140	140	140
FBT 30 30w/m @10°C	230	-20	62	76	88
		0	78	98	103
		10	100	113	113
FBT 40 40w/m @10°C	230	-20	36	45	57
		0	46	58	73
		10	52	63	82

Protection Type C to BS EN 60898:1991

The information provided in this technical literature is believed to be accurate and reliable; however, the user must satisfy themselves that the product is suitable for their application and the use of this information, and all use of such information shall be entirely at the user's own risk. Specifications shown in this technical literature are subject to change without notice.

ESH Trace Heating Ltd

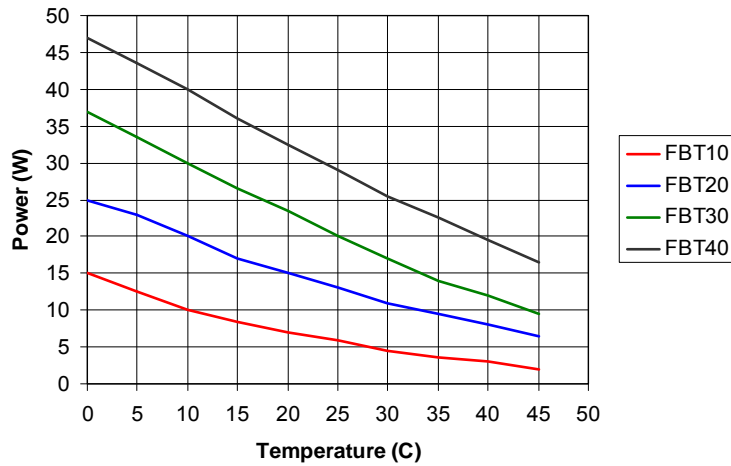
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OUTPUT



SPECIFICATION

Conductors	Tinned Copper(19x0.287) 1.23mm ² .			
Core	Semi-conductive Polymer.			
Outer Sheath	Thermo-plastic elastomer			
	FBT10	FBT20	FBT30	FBT40
Width (mm)	12.60	12.60	14.60	14.60
Thickness (mm)	4.8	4.8	4.8	4.8
Earth Protection	Foil jacket with multi strand Earth lead			
Supply Voltage	230V			
Max Temp	65°C (energised)			
	80°C (un-energised)			
Min Bend Radius	27mm			

HEAT LOSSES to BS EN 62395

To calculate heat loss per metre of pipe:-

$$\text{Heat losses W/m} = \frac{2\pi k (T_p - T_a)}{\ln\left(\frac{D_2}{D_1}\right)}$$

where:-

k = Thermal Conductivity of insulation layer at its mean temperature

T_p = Maintain Temperature

T_a = Minimum Ambient temp

D₁ = Inside Diameter of the Insulation Layer

D₂ = Outside Diameter of the Insulation Layer

Thermal Conductivity (k_e) for Mineral/Glass Fibre & Phenolic Insulation

Mean Temperature °C	10	50	100	200
Mineral/Glass Fibre	0.032	0.037	0.044	0.061
Phenolic	0.021	0.025	0.027	-

A Design Safety Factor Allowance of between 10% and 25% can be added