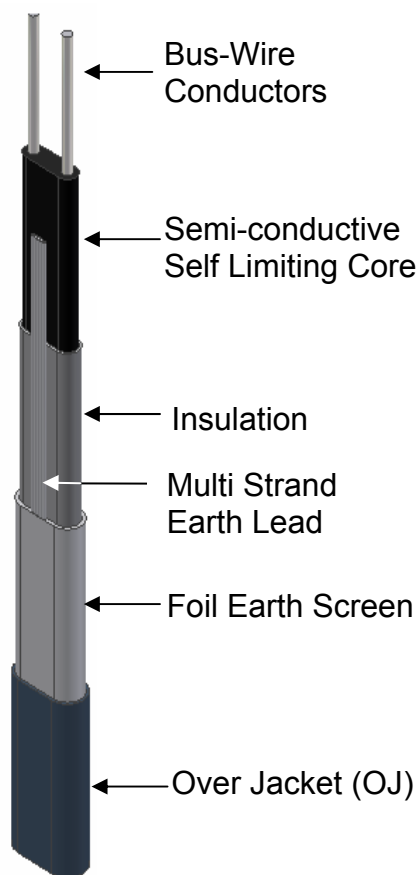




## HEATING TAPE TYPE FBT



### SELF REGULATING HEATING TAPE – FOR FROST PROTECTION AND TEMPERATURE MAINTAINING

FBT is a parallel resistance, cut to length on site self regulating heating tape cable designed for frost protection, process pipework maintaining and hot water temperature maintaining.

Type FBT heating tape adjusts heat output to equal the heat loss from the pipe work. As pipe temperature falls under no-flow conditions or due to decreases in external or internal temperature, FBT increases output. As the pipe temperature increases under flow conditions or as a result of increasing external or internal temperature so output from FBT decreases.

FBT can be used with the 'DOMOCLICK' fast connection system for terminating and jointing on site.

### 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

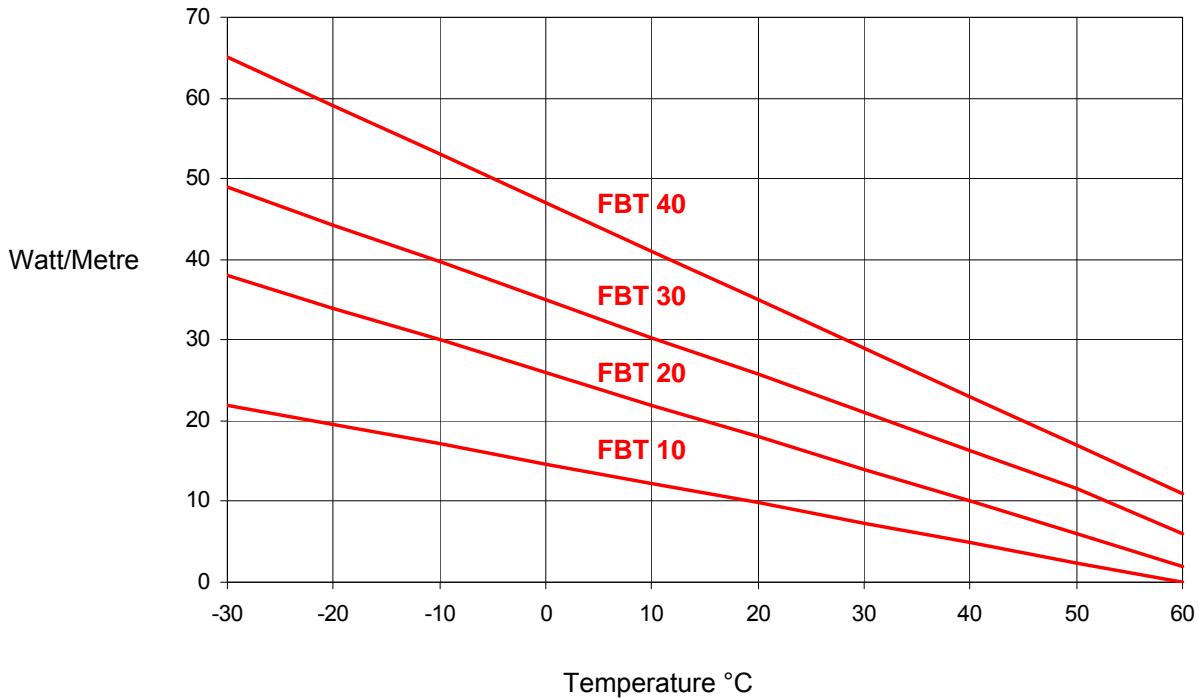
TYPE	VOLTS	WATT/M @ 10°C	MAX CIRCUIT LENGTH (m)	
			16A CB	25A CB
FBT 10	230	10	177	177
FBT 20	230	20	109	129
FBT 30	230	30	83	113
FBT 40	230	40	57	89

## SPECIFICATION

<b>Conductors</b>	Copper stranded flexible 1.23mm <sup>2</sup> .	<b>Thickness</b>	3.2 mm
<b>Core</b>	Semi-conductive Polymer.	<b>Braid</b>	Foil jacket with multi strand Earth lead
<b>Outer Sheath</b>	Polyolefin.	<b>Over sheath</b>	Thermo-plastic elastomer
<b>Width</b>	10.1mm.	<b>Weight</b>	6kg/100m unbraided 7.8kg/100m braided

**Withstand Temp** 80°C Unenergised  
65°C Energised

## OUTPUT



Circuit Breaker type C to EN60898

## HEAT LOSSES

To calculate heat loss per metre of pipe:-

Heat losses W/m =  $\Delta t \times k_e \times \text{Loss Factor}$  where:-

$\Delta t$  = Pipe temp. – Ambient temp.  
 $k_e$  = Thermal conductivity.

Loss Factor  
(From BS 6351)

Pipe NB (mm)	Thermal Insulation Thickness (mm)		
	25	38	50
13	5.16	4.13	3.58
25	6.91	5.36	4.56
38	8.74	6.63	5.54
50	10.28	7.69	6.36
75	13.90	10.15	8.24
100	17.08	12.30	9.88
150	23.82	16.82	13.30

Thermal Conductivity ( $k_e$ ) for Mineral/Glass Fibre

$\Delta t^\circ\text{C}$	30	40	60
$K_e$	0.034	0.035	0.036

To comply with BS 6351 allowance should be taken of maximum heater resistance tolerance ( $\pm 10\%$ ) and voltage variation ( $\pm 6\%$ ) =  $\frac{1.1}{(0.94)^2} = 1.25 \times \text{Heat Loss}$ .

A further design factor of 10% may be added.