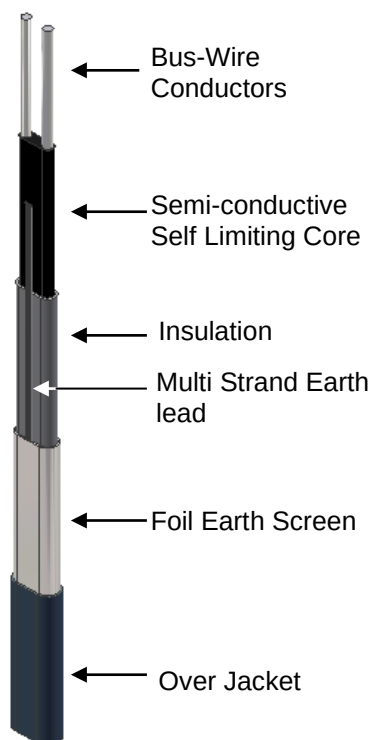




HEATING TAPE TYPE ESRS



ECONOMY SELF REGULATING HEATING TAPE – FOR FROST PROTECTION OF WATER AND LOW TEMPERATURE DOMESTIC AND COMMERCIAL PRODUCT LINES

ESRS is a parallel circuit heating cable with self-limiting characteristics designed for Frost Protection 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.

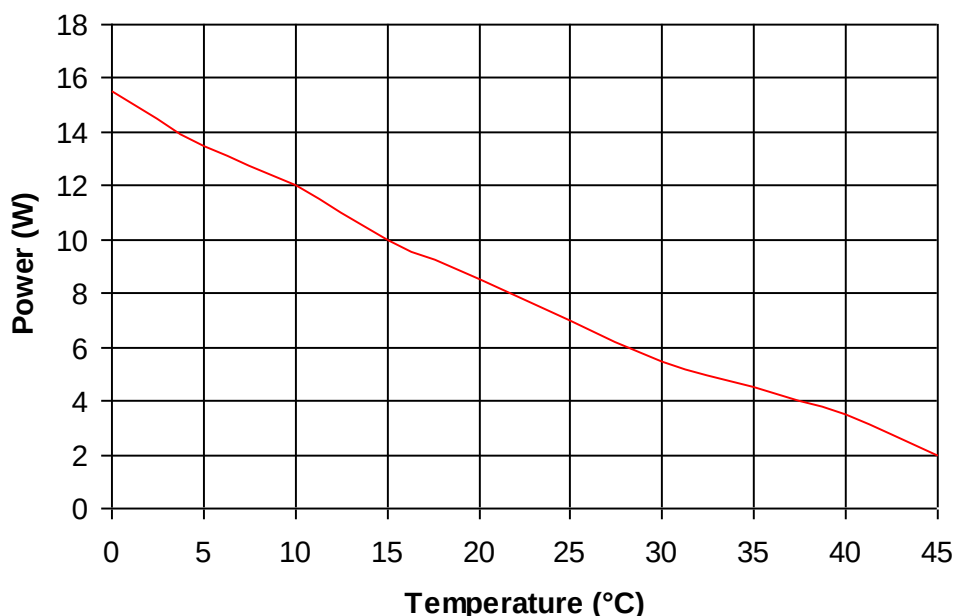
CONSTRUCTION

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.

OUTPUT



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 their own risk.

SPECIFICATION

Conductors	Tinned Copper (7 X 0.32) 0.56mm ² .
Core	Semi-conductive Polymer.
Outer Sheath	Thermo-plastic elastomer
Width	7.3mm.
Thickness	5.1mm
Earth Protection	Foil jacket with multi strand Earth lead
Supply Voltage	230V
Max Exposure Temperature	60°C
Max Length	110m
Min Bend Radius	27mm

Circuit Breaker Sizing (Type C to EN60898)				
Product Type	Start-up Temp (°C)	Max Circuit Length vs. Circuit Breaker Size (m)		
		16A	20A	25A
	-20	84	84	84
ESRSBOJ	0	105	105	105
	10	110	110	110

HEAT LOSSES to BS EN 62395-2

To calculate heat loss per metre of pipe:-

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

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