



TCW Heating Tape

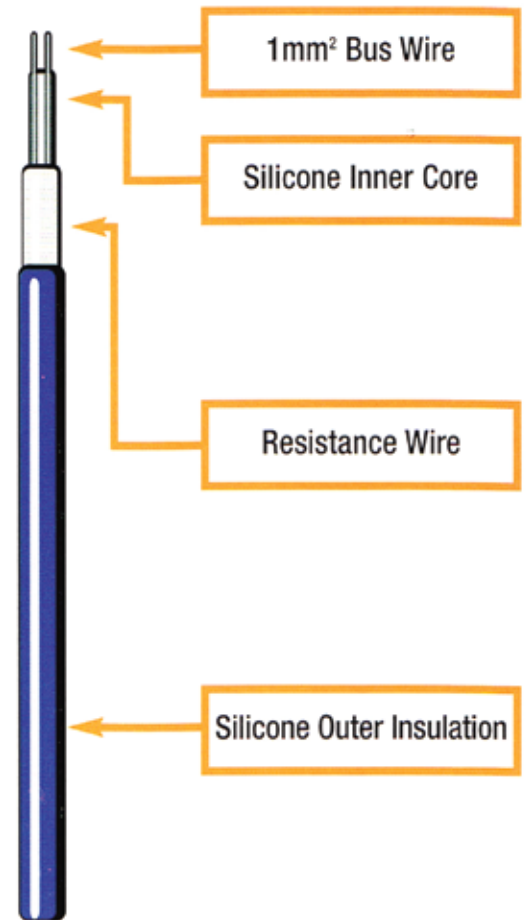
CONSTRUCTION

TCW Heating Tape

'TCW Parallel Circuit Constant Wattage Heating Tape is a high quality Heating Tape'

TCW Heating Tapes are designed for general purpose use not just frost protection, they are ideal for use in refrigeration applications, temperature maintenance of small pipe work or any application where the specifications are suitable.

- Very flexible
- Small in size (easy to fit under insulation)
- Easy to test for ohm's and insulation resistance
- Excellent water and UV resistance
- Lead free solder used in construction
- Translucent core for ease of cutting
- Light weight for ease of handling/carriage
- Excellent temperature withstand range
- Available with Tinned Copper Braid (extra cost)
- Available with additional Silicone over Jacket (extra cost)
- Can be printed with customers name
- Printed with CE mark
- Manufactured in nominal lengths of 500m



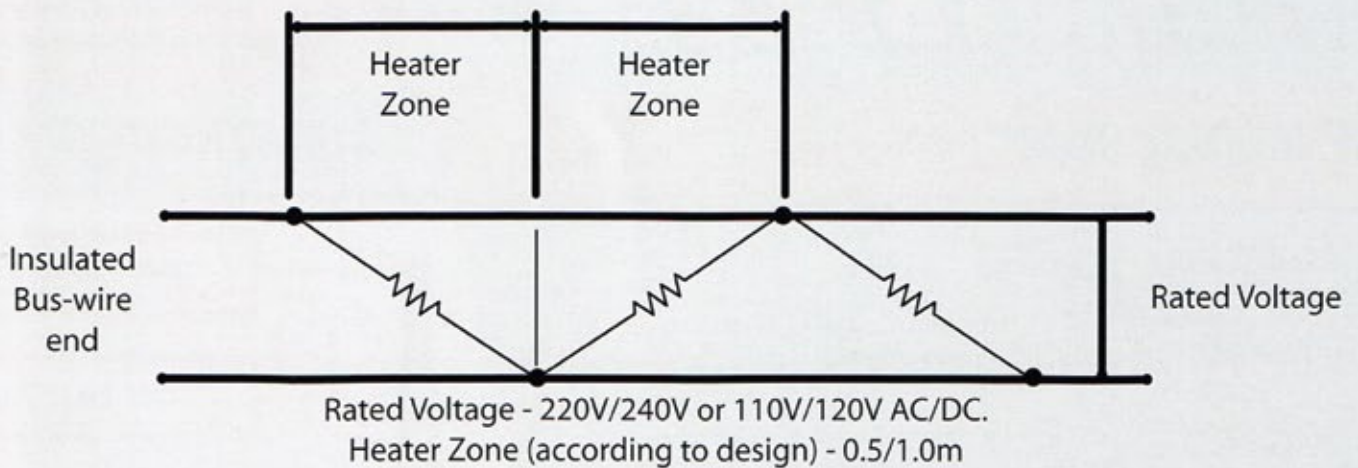
SPECIFICATION

Bus wires	Tinned Copper 1mm ²
Core	Translucent 80 Shore Silicone Rubber
Resistance Element	80/20 Nickel/Chrome
Solder	High Temperature Lead Free
Outer Insulation	Blue 80 Shore Silicone Rubber
Thickness	4mm
Width	7.5mm
Minimum Temperature	- 50°C
Maximum Temperature	+ 225°C
Minimum Bend Radius	6mm
Standard	BS6351 Grade 21

WATTAGE'S AVAILABLE

10W/M 230V	Max Length 145m / Zone Length 1m
15W/M 230V	Max Length 110m / Zone Length 1m
20W/M 230V	Max Length 95mm / Zone Length 1m
30W/M 230V	Max Length 78mm / Zone Length 1m
40W/M 230V	Max Length 65mm / Zone Length 1m
10W/M 110V	Max Length 70mm / Zone Length 1m
20W/M 110V	Max Length 55mm / Zone Length 1m

Please Note: Other voltages and wattages can be manufactured to order



HEAT LOSSES

To calculate heat loss per metre of pipe:-

Heat losses W/m = $\Delta t \times k_e \times \text{Loss Factor}$ where Δt = Pipe temp. – min. 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

Δt °C	30	40	60
k_e	0.034	0.035	0.036

To comply with BS 6351 allowance should be made for supply voltage variation ($\pm 6\%$) and element resistance tolerance ($\pm 10\%$) $\frac{1.1}{(0.94)^2} = 1.25 \times \text{Heat loss}$.

A further design factor of 10% may be added.