



TSR/MD Self-Regulating Heating Tape

Electrical heating tape for frost protection or temperature maintenance of instrument lines and pipework in safe or hazardous locations.

- Automatically adjusts heat output in response to increasing or decreasing pipe temperature
- Can be cut to length with no wastage
- Will not overheat or burnout, even when overlapped
- Approved for use in non-hazardous, hazardous and corrosive environments
- Full range of controls and accessories
- Available for 110-120VAC and 220-277 VAC

Features

TSR/MD is a light industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework and vessels in the construction and refrigeration industries

It can be cut-to-length at site and exact piping lengths can be matched without any complicated design considerations

TSR/MD is approved for use in non-hazardous, hazardous and corrosive environments to world wide standards

Its self-regulating characteristics improve safety and reliability

TSR/MD will not overheat or burnout, even when overlapped upon itself. Its power output is self-regulated in response to the pipe temperature

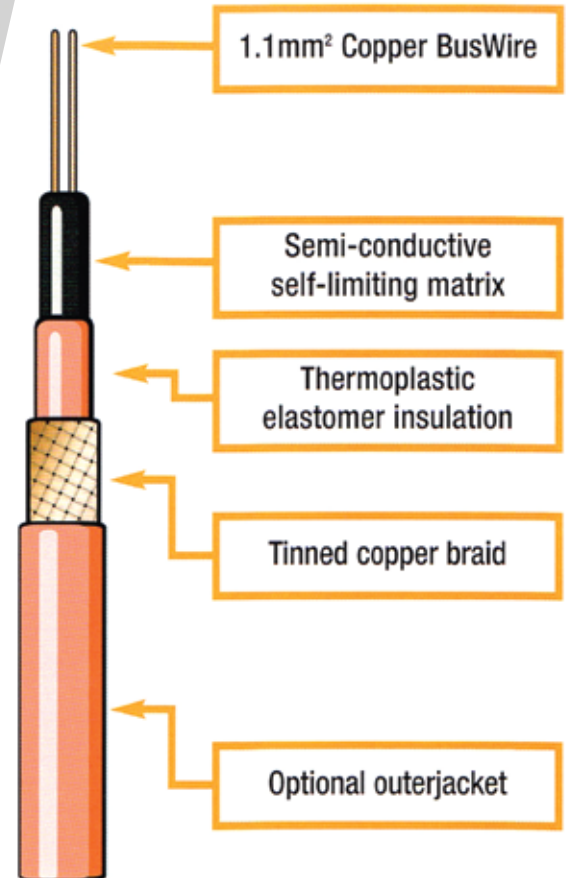
The installation is quick and simple and requires no special skills or tools. Termination, splicing and power connection components are all provided in convenient kits.

Options

TSR/MD..C Tinned copper braid providing mechanical protection or where traced equipment does not provide an effective earth path, e.g. plastic pipework

TSR/MD..CT Thermoplastic overjacket over tinned copper braid provides additional protection







TSR/MD..CF Fluoropolymer overjacket over tinned copper braid provides protection where corrosive chemical solutions or vapours may be present



SPECIFICATION

Maximum Temperature	65°C (149°F)			
Max. Permissible Temperature	85° C (185°F) de-energised (1000 hrs cumulative)			
Maximum Installation	-40°C (-40°F) Thickness 4mm			
Temperature (CENELEC)	-20°C, -4°F			
Power Supply	110 – 120VAC, 220 – 277VAC			
Temperature up to	23W/m T6 (85°C)			
Classification	31W/m and/or 277V T4 (135°)			
Maximum Resistance of Protective Braiding	18.2 Ohm/km			
Weights and Dimensions				
Type	Nominal	Weight	Min.	Gland
Ref	Dimensions (mm)	kg/100m	Bending radius	Size
TSR/MD	8.5 x 3.9	4.625	25mm	M20
TSR/MD..C	9.3 x 4.7	9.230	35mm	M20
TSR/MD..CT	10.5 x 5.9	9.9	35mm	M20
TSR/MD..CF	10.5 x 5.9	9.9	35mm	M20

Approval Details

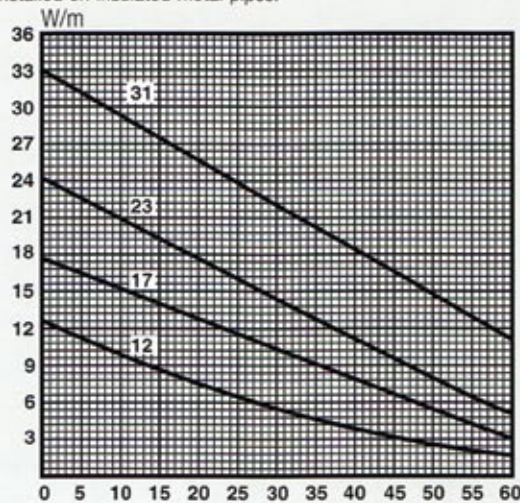
Testing Authority	Certificate	No. Standard
CENELEC 	SCS Ex 99E3146	EN50014 & EN50019
ATEX 	Sira 02ATEX3074	EN50014, EN50019 & IEC62086
IEC 	Sira 02Y3064CEI	IEC62086 & IEC60079-7
FM 	3009080	ANSI/IEEE Std 515
VDE 	114665	DIN VDE 0254
CSA 	214197 – 1295278	C22.2 No. 130.1 C22.2 No. 130.2 C22.2 No. 138
Lloyds Register	2/00062	EN50014, EN50019, BS6351, IEEE Std 515

Maximum Length (m) vs Circuit Breaker Size

Cat Ref	Start-up Temperature	230V 6A	10A	16A	20A
TSR/MD/12	5°C	78	132	180	-
	0°C	74	124	180	-
	-20°C	56	94	150	180
	-40°C	46	76	124	154
TSR/MD/17	5°C	62	104	146	-
	0°C	60	100	146	-
	-20°C	48	82	130	146
	-40°C	42	70	112	138
TSR/MD/23	5°C	46	76	124	-
	0°C	42	70	114	124
	-20°C	34	56	88	110
	-40°C	28	46	72	90
TSR/MD/31	5°C	34	58	92	102
	0°C	32	52	84	102
	-20°C	24	40	56	66
	-40°C	20	34	54	66

For use with Type C circuit breakers to BS EN60898

Thermal Ratings Nominal Output at 115V or 230V when TSR is installed on insulated metal pipes.



Pipe temperature (°C)