

Electrical heating cable for freeze protection, refrigeration duties or process heating of pipework and vessels.

## MicroTracer

Constant Wattage Heating Cable

- Can be cut-to-length.
- Available for 110-120V AC/DC and 208-277V AC/DC.
- Power outputs up to 50W/m.
- Full range of controls and accessories available.

### DESCRIPTION

Microtracer type **EMTS** is a medium temperature parallel resistance, constant wattage, cut-to-length heating tape that can be used for freeze protection or process heating.

It is particularly suited to refrigeration applications or for small bore instrument lines or process pipework located in non-hazardous areas.

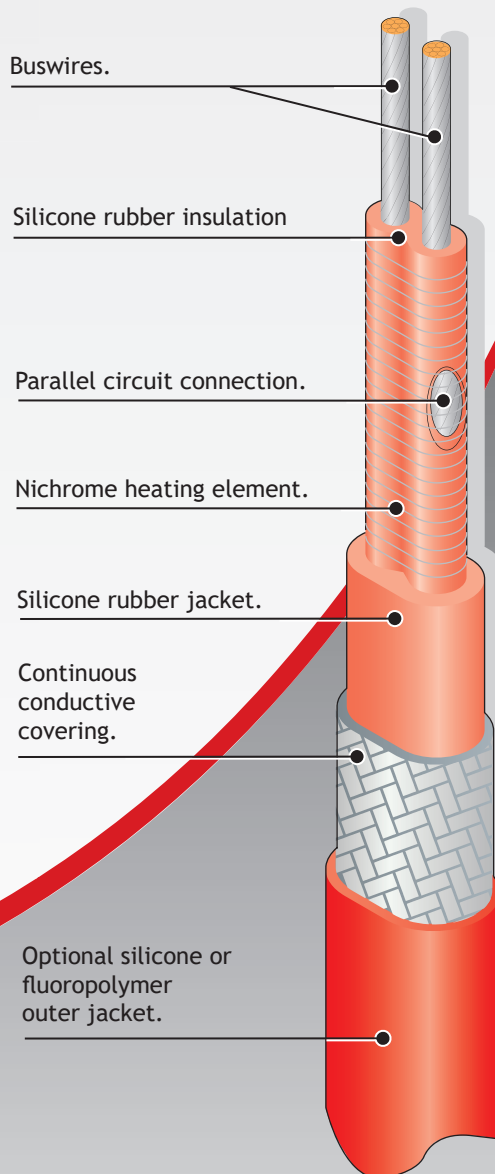
Microtracer type **EMTS** is chosen when short or moderate circuit lengths are required (select Minitracer if longer circuits are required)

The silicone rubber insulation is particularly suited to applications where great flexibility is required.

The installation of **EMTS** heating cable is quick and simple and requires no special skills or tools. Termination and power connection components are all provided in convenient kits.

### OPTIONS

- EMTS..C** Tinned copper braid provides mechanical protection for base heater and may be used when traced equipment does not provide an effective earth path.
- EMTS..CS** Silicone rubber overjacket over tinned copper braid provides additional protection.
- EMTS..CF** Fluoropolymer overjacket over tinned copper braid provides protection where corrosive chemical solutions or vapours may be present.



The Heat Tracing Authority™

## SPECIFICATION

### MAXIMUM TEMPERATURE:

|              |               |
|--------------|---------------|
| Un-energised | 200°C (392°F) |
| Energised    | See table     |

### MINIMUM INSTALLATION

|              |               |
|--------------|---------------|
| TEMPERATURE: | -40°C (-40°F) |
|--------------|---------------|

### POWER SUPPLY:

|                                         |
|-----------------------------------------|
| 208 - 277V AC/DC<br>or 110 - 120V AC/DC |
|-----------------------------------------|

### WEIGHTS & DIMENSIONS:

| Type Ref | Dimensions (mm)+/-0.5 | Weight kg/100m | Min Bending radius | Gland Size |
|----------|-----------------------|----------------|--------------------|------------|
| EMTS..C  | 9.4 x 6.2             | 11.7           | 12mm               | M16        |
| EMTS..CS | 11.4 x 8.2            | 14.3           | 15mm               | M20        |
| EMTS..CF | 10.2 x 7.0            | 14.3           | 25mm               | M20        |

### CONSTRUCTION:

|                        |                                      |
|------------------------|--------------------------------------|
| Grade:                 | 2.2 to BS6351: Part 1                |
| Heating Element:       | Nickel Chromium                      |
| Power Conductors:      | Tin Plated Copper 1.5mm <sup>2</sup> |
| Conductor Insulation:  | Silicone Rubber                      |
| Jacket:                | Silicone Rubber                      |
| Braid:                 | Tinned Copper                        |
| Overjacket (Optional): | Silicone Rubber or Fluoropolymer     |

### ORDERING INFORMATION:

|                                 |                |
|---------------------------------|----------------|
| Example;                        | 23 EMTS 2 - CS |
| Output 23W/m                    | _____          |
| Microtracer type EMTS           | _____          |
| Supply Voltage 220 - 240V AC/DC | _____          |
| Tinned copper braid             | _____          |
| Silicone rubber overjacket      | _____          |

### ACCESSORIES:

Heat Trace supply a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. These items are recommended for the correct operation of EMTS products.

### FURTHER INFORMATION:

Please consult the appropriate termination instructions and the Heat Trace Installation, Maintenance and Testing Manual (HTDIMM 010) for further details.

### MAXIMUM PIPE / WORKPIECE TEMPERATURES:

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials. This is ensured by limiting the pipe or workpiece temperatures to a safe level either by design calculation (a stabilised design) or by means of temperature controls.

For worst case conditions, the temperature of steel pipes should be limited to the following levels:-

| HEATER NOMINAL OUTPUT (W/m) | MAXIMUM PERMISSIBLE PIPE TEMP (°C) |         |         |
|-----------------------------|------------------------------------|---------|---------|
|                             | EMTS-C                             | EMTS-CS | EMTS-CF |
| 6.5                         | 190                                | 190     | 190     |
| 13                          | 180                                | 185     | 185     |
| 23                          | 150                                | 160     | 160     |
| 33                          | 110                                | 115     | 115     |
| 50                          | 75                                 | 80      | 75      |

For conditions other than worst case, or pipes of other materials (eg. Plastic, Stainless Steel, etc.) consult Heat Trace.

Pipe temperatures higher than those given above may be accommodated by using Heat Trace Ltd voltage compensating devices e.g. POWERMATCH™ Call for further details.

### MAXIMUM CIRCUIT LENGTH:

| OUTPUT (W/m) | MAX.CIRCUIT LENGTH* |      | ZONE LENGTH (NOM) |        |
|--------------|---------------------|------|-------------------|--------|
|              | 115V                | 230V | 115V              | 230V   |
| 6.5          | 82m                 | 164m | 1000mm            | 1500mm |
| 13           | 58m                 | 116m | 800mm             | 1100mm |
| 23           | 44m                 | 87m  | 900mm             | 1000mm |
| 33           | 36m                 | 73m  | 750mm             | 1000mm |
| 50           | 30m                 | 59m  | 1000mm            | 1000mm |

### POWER CONVERSION FACTORS:

| 115V HEATING CABLE           | 230 HEATING CABLE            |
|------------------------------|------------------------------|
| 277V Multiply output by 5.80 | 277V Multiply output by 1.45 |
| 230V Multiply output by 4.00 | 240V Multiply output by 1.09 |
| 208V Multiply output by 3.27 | 220V Multiply output by 0.91 |
| 120V Multiply output by 1.09 | 208V Multiply output by 0.82 |
| 110V Multiply output by 0.91 | 115V Multiply output by 0.25 |



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