# Self-Regulating Heating Cable VTR

VTR is an industrial-grade self-regulating heating cable that can be used for freeze protection of pipelines and vessels and also for snow and ice prevention on roofs and gutters.

The power output adjusts automatically in response to the ambient temperature.

Due to its self-regulating characteristics it will not overheat even when the cable is overlapped. This guarantees maximum safety and reliability. Installation of VTR heating cable is quick and simple and requires no special skills or tools. Thanks to its parallel construction the heating cable can be fitted on site to exact length without any complicated design calculations.

Termination, splicing and power connection components are available in convenient kits.

#### **Features**

- 10, 20, 30 or 40 W/m
- Self-regulating, automatically adjusts power output in response to ambient temperature
- Thermoplastic outer jacket
- Easy to install

- Can be cut to required length on site without any complicated design calculations
- Will not overheat even when overlapped
- UV-resistant
- VDE certified

### **Application Areas**

Freeze protection of pipelines and vessels (non-Ex)  Snow and ice prevention on roof and gutters (non-Ex)



#### Construction

- 1. 1.25 mm<sup>2</sup> nickel-plated copper conductors
- 2. Semi-conductive self-regulating matrix
- 3. Matrix insulation
- 4. Tinned copper braid
- 5. Thermoplastic outer jacket

#### **Technical Data**

| Rated voltage   | 230 VAC              |  |
|---|----------------------|--|
| Maximum continuous operating temperature (trace heater energized)   | +65 °C               |  |
| Maximum continuous exposure temperature (trace heater de-energized) | +85 °C               |  |
| Ambient temperature range   | -60 +55 °C           |  |
| Minimum installation temperature:                                   |                      |  |
| Thermoplastic outer jacket  | -30 °C               |  |
| Minimum bending radius  | 25 mm                |  |
| Maximum braiding resistance   | 10 Ohm/km            |  |
| Conductor cross-section   | 1.25 mm <sup>2</sup> |  |
| Dimension:<br>Thermoplastic elastomer outer jacket,<br>braiding     | 13.20 × 6.10 mm      |  |
| Weight:<br>Thermoplastic elastomer outer jacket,<br>braiding        | 141 kg/km            |  |

## Maximum Heating Circuit Length

For use with type C circuit breakers according to IEC 60898-1:2015

| Туре  | Turn-on<br>temperature, °C | Heating circuit length/m at 230 VAC 16 A |  |
|-------|----------------------------|--|--|
| 10VTR | 10                         | 193                                      |  |
|       | -20                        | 116                                      |  |
| 20VTR | 10                         | 109                                      |  |
|       | -20                        | 56                                       |  |
|       | in gutters                 | 65                                       |  |
| 30VTR | 10                         | 66                                       |  |
|       | -20                        | 42                                       |  |
| 40VTR | 10                         | 53                                       |  |
|       | -20                        | 29                                       |  |
|       |                            |  |  |

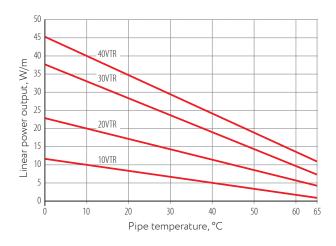
## **Approvals**





### **Power Output Curve**

Nominal power output at rated voltage 230 VAC



### Marking

**Example:** 10VTR-BT 1 2 34

- 1. Linear power output, W/m at +10 °C
- 2. Cable type
- 3. Screen type: B Tinned copper wire braiding
- **4.** Outer jacket material: T Thermoplastic elastomer

### **Types**

| Outer jacket type                                       | Order code | Outer<br>jacket color | Name     | Power<br>output,<br>W/m |
|---|------------|-----------------------|----------|-------------------------|
| Thermoplastic<br>elastomer<br>outer jacket,<br>braiding | 2101002006 | Black                 | 10VTR-BT | 10                      |
|   | 2101002008 |                       | 20VTR-BT | 20                      |
|   | 2101002010 |                       | 30VTR-BT | 30                      |
|   | 2101002011 |                       | 40VTR-BT | 40                      |