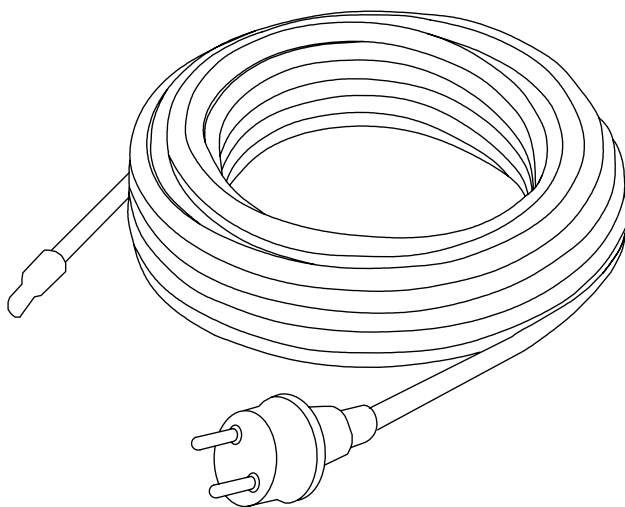


# Warmup<sup>®</sup>

The world's **best-selling** floor heating brand<sup>™</sup>



## Installation Manual

### Frost Protection Cable



TECHNICAL HELPLINE  
0345 345 2288

#### IMPORTANT

Read this manual before attempting to install your heating system. Incorrect installation could damage the heating system and will invalidate your warranty.



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If these instructions are followed, you should have no problems during installation. However, if you require assistance at any point, please call our **Technical Helpline**

**0345 345 2288**

You can also find a copy of this manual, wiring instructions, a list of FAQs and other useful information at our website:

**[www.warmup.co.uk](http://www.warmup.co.uk)**

# Important Installation Points

1. Faulty electrical installation can cause a short circuit or an electric shock. To ensure the best possible protection of people, animals and equipment, a 30 mA RCD **MUST** be fitted. Always Observe the specific regulations for your country.
2. The heating cable may only be connected to a 230VAC supply.
3. The heating cable **MUST** be installed as per installation manual.
4. The heating cable must be connected by a qualified electrician in accordance with the current wiring regulations.
5. Do not shorten or allow the heating element to touch or cross at any point.
6. If the cable is too long due to a project planning mistake, it must not be wound around the tube in narrow swirls as this will cause overheating. (The standard temperature is 65°C).
7. The heating cable must be installed in such a manner that it is not accessible to animals or children.
8. Do not install the Frost Protection cable if the ambient temperature is below -10°C .
9. Do not install the Frost Protection cable on pipes with any other heat source which may cause overheating and damage the cable.
10. Do not use metal ties to secure the cable.
11. The heating cable connection (plug) must not come into contact with water or other liquids.
12. Ensure that the thermistor at the end of the cable does not come under mechanical stress. Neither should the thermistor be bent or squeezed by hand or by any tool.
13. If you discover that the heating cable is damaged, immediately switch off the 230VAC supply and replace the heating cable.
14. Before installing the heating cable, ensure area around the pipe is freely accessible and not obstructed. Always protect the heating element against sharp edges, oil or heat.
15. Ensure that the heating cable is positioned at least 30mm from flammable materials for fire prevention reasons. Never place the heating cable in the vicinity of explosive substances, objects or gases.
16. Do not energise the heating cable while it is coiled up . This may result in damage to the cable due to overheating.

# Safety Guidelines

Incorrect design, handling, installation, could damage the system and may result in inadequate frost protection or electric shock. To minimize these risks and to ensure that the system performs reliably, read and carefully follow the information, warnings, and instructions in this guide.

Ensure that the heaters are connected by a qualified electrician as per the current wiring regulations and are protected by a 30mA RCD at all times.

# Product Information

## Application

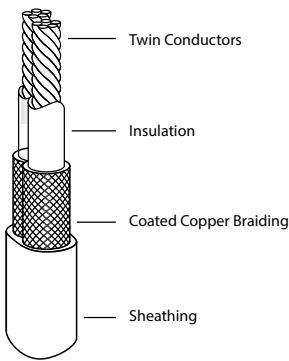
The Frost Protection heating cable is designed for on pipe heating of PVC or metal water pipes.

The thermistor ensures that the supply of electrical energy is reduced to the minimum amount required. For protection against frost ,the thermistor will not switch on the heating cable until the ambient temperature falls below  $< +5^{\circ}\text{C}$ .

A relatively large switching band ensures that entire pipe warms up so that the supply will only be interrupted when the temperature exceeds  $15^{\circ}\text{C}$ . This reduces the amount of switching on and off, allowing the thermistor to operate without any trouble over a long period of time.

## Technical Data

Rated Voltage	230 V AC
Outer Diameter	6.3 x 4.4 mm
Minimum Bending Radius	25mm
Resistance Tolerance	-5% / +10%
Operating Temperature	70°C
Cold Connection Cable	2m with Schuko plug
Min. Installation Temperature	-10°C
Temperature Regulator	<5°C on / + 15°C off
Protection Class	IPX7
Max. Surface output	10 W/m
Inner insulation	Fluoropolymer (FP)
Outer sheath insulation	Polyolefin



## Range Specification

Model	Length (m)	Total Wattage	Total Amperage (A)	Total Resistance ( $\Omega$ )
W10FP20	2	20	0.09	2645.0
W10FP30	3	30	0.13	1763.3
W10FP40	4	40	0.17	1322.5
W10FP50	5	50	0.22	1058.0
W10FP60	6	60	0.26	881.7
W10FP80	8	80	0.35	661.3
W10FP100	10	100	0.43	529.0
W10FP120	12	120	0.52	440.8
W10FP140	14	140	0.61	377.9
W10FP150	15	150	0.65	352.7
W10FP160	16	160	0.70	330.6
W10FP180	18	180	0.78	293.9
W10FP200	20	200	0.87	264.5
W10FP240	24	240	1.04	220.4
W10FP300	30	300	1.30	176.3
W10FP420	42	420	1.83	126.0
W10FP600	60	600	2.61	88.2
W10FP800	80	800	3.48	66.1
W10FP1050	105	1050	4.57	50.4
W10FP1350	135	1350	5.87	39.2

# Installation

## 1. Preparation

Any electrical work, must be carried out by a qualified electrician and the heater must always be protected by a 30mA RCD.

Before fitting the heating cable, make sure that the area around the cable is readily accessible and that there are no sharp edges. If sharp edges exist, use aluminium foil or cement to smoothen these edges, so as to avoid damage to the heating cable.

Prior to installation, turn on the water and ensure there are no leaks in the pipeline joints.

## 2. Installation

Ensure that the heating element is approximately the same length as the pipe.

Plastic pipes must be completely wrapped in Aluminium Adhesive Tape before installation of the frost protection heating cable.

Start by installing the cable at the closest point to the power supply.

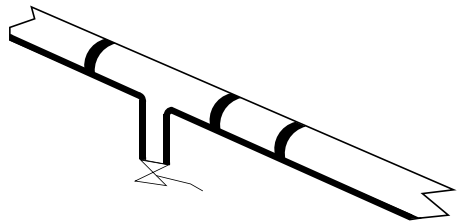
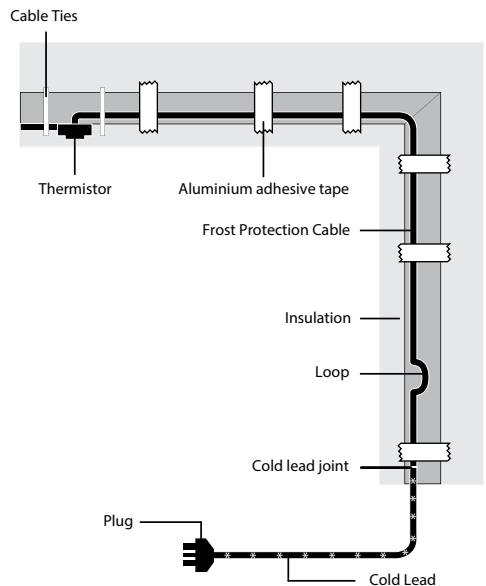
**Note: Ensure the cold lead joint is secured to the pipe.**

The cable must be installed horizontally on the underside of the pipe and secured using Aluminium Adhesive Tape or with plastic cable ties.

In cases where the main pipeline branches onto a short length of pipe running in a different direction, run the cable down the pipe and return it back to the main pipe. If the branched pipe is of longer length use a separate Frost Protection Cable, and install as on the main pipeline.

Any remaining length of the heating cable can be used up by laying it along the length of the pipe in large loops.

Do not allow any of the cable to cross or touch.



Temperature Monitoring

The thermistor is located at the end of the heating cable and should measure and regulate the temperature at the position of the tube where the temperature is lowest.

**Note: The fixings must not exert any pressure on the thermistor.**

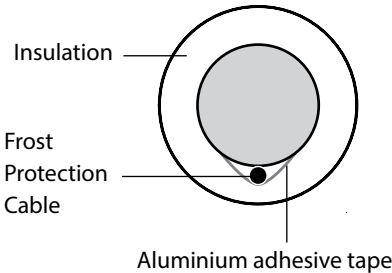
The thermistor should be carefully fitted with the flat side sitting directly on the left or right side of the pipe and secured using either adhesive tape or plastic cable ties.

3. Insulation

Operating safely in frost conditions down to -20°C can only be guaranteed by using an insulation material. Aluminium Adhesive Tape wound around the heating cable eases installation and distributes warmth evenly.

An insulation layer with a minimum thickness of 20 mm reduces the heating energy requirements.

The thermistor must not be covered by insulation, so that it can monitor the ambient temperature properly at all times.



Insulation of Heated Pipes					
Pipe Size (inch)	½	¾	1	1 ¼	1 ½
Pipe Size (mm)	15	20	25	32	40
Insulation (mm)	20	20	30	30	40

# Warranty



Warmup® Frost Protection Cable is guaranteed for a period of 10 years by WARMUP PLC ("Warmup") to be free from defects in materials and workmanship under normal use and maintenance, and is guaranteed to remain so subject to the limitations and conditions described below:

## **The 10 year Guarantee applies:**

1. Only if the unit is registered with Warmup® within 30 days after purchase. Registration can be completed online at [www.warmup.co.uk](http://www.warmup.co.uk). In the event of a claim, proof of purchase is required, so keep your invoice or receipt – such invoice should state the exact model that has been purchased.
2. Only if the heater has been earthed and protected by a 30mA Residual Current Device (RCD) at all times.
3. Only if the heaters have been tested and electrical work and connections have been undertaken by a qualified electrician in accordance with IEE regulations and in accordance with these installation instructions.

During the period of guarantee, the manufacturer will arrange for the heater to be repaired or (at its discretion) have parts replaced.

If the heater fails due to damage caused during installation, this guarantee does not apply.

THE MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO EXTRA UTILITY EXPENSES OR DAMAGES TO PROPERTY.

## **WARMUP® PLC is not responsible for:**

1. Damage or repairs required as a consequence of faulty installation or application.
2. Damage as a result of floods, fires, winds, lightning, accidents, corrosive atmosphere or other conditions beyond the control of the manufacturer.
3. Use of components or accessories not compatible with the units.
4. Normal maintenance as described in the installation and operating manual.
5. Parts not supplied or designed by the manufacturer.
6. Damage or repairs required as a result of any improper use, maintenance, operation or servicing.
7. Failure to start due to interruption and/or inadequate electrical service.
8. Any damage caused by frozen or broken water pipes in the event of equipment failure.
9. Changes in the appearance of the product that does not affect its performance.

# Warmup®

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