



Undertile Heating Cable Instructions

Testing

You must not apply power to the heating cable to test it, but should use appropriate test equipment to check that live to earth and neutral to earth show infinity. These tests should be carried out prior, during and after installation of the cables. Live to neutral should show the Ohms value listed below. If the test results are not as expected you should contact RS Components.

Product Code	Unit Power	Cable Length	Coverage at 150W/sqm	Coverage at 200W/sqm	Ohms Value +/- 10%
9138808	200W	11.8	1.3	1.0	270 Ω
9138817	300W	17.6	2.0	1.5	190 Ω
9138810	400W	23.5	2.7	2.0	140 Ω
9138814	600W	35.3	4.0	3.0	95 Ω
9138823	800W	47.1	5.3	4.0	72 Ω
9138826	1200W	72.0	8.0	6.0	48 Ω
Product code	Description	Power		Warranty	
9098289	Programmable thermostat	16A, 3600W		3 years	

Technical/construction data

Voltage:	240Vac-50Hz	Wire thickness:	3mm
Maximum load:	17 W/m	Power Range:	200W to 1200W
Wire type:	Dual conductor/single coldtail	IP Rating:	IPX7 as required by the 17th Edition
Maximum Cable Temperature:	90°C	Approved to:	EN 60335-1:1998, EN60335-2-17:1999, IEC 60730
Approvals:	CE Marked, Independently Approved, 17th Edition		
Compliant:	Low EMC, Manufactured in Western Europe		

Basic wiring information

- A qualified electrician should confirm the electrical requirements of the project.
- RCD protection must always be included in the circuit supplying power to the heating cable.
- The connection between the heating cable and the supply lead, as well as the end return of the heating cable, must never be bent and must always be fully encased within flexible tile adhesive or levelling compound.

Do's

- All heating cables must be connected in parallel not in series.
- Make sure you never cut, shorten, lengthen, strain or cross heating cables.
- You must always ensure the floor sensor is not fitted near another heat source such as a radiator pipe or where rugs, mats or furniture are expected to be placed on top of the floor.
- You should make sure the systems output is between 130W/sqm and 220W/sqm.
- To provide equal heat over the floor the cables must be spaced evenly.
- Consider using thermal insulation beneath your heating system if the floor base is poorly insulated.

Cable Spacing

If your room is a high heat loss/poorly insulated area such as a conservatory we recommend installing the cable at 200W/sqm. If your room meets current building regulations 150W/sqm should provide full room heating. To comply with the latest regulations the thermal resistance between the heating system and the room must not have an insulation value higher than 0.125m²K/W.

Some typical insulation values for floor coverings are listed below:

- Tile, stone and thin vinyl floors are usually up to 0.035 m²K/W.
- Carpets with a hessian backing and low Tog rated underlay are usually up to 0.125 m²K/W
- Parquet and laminate floors up to 18mm thick are normally no more than 0.125 m²K/W.
- Wood fibre and cork floors and rubber backed carpets or rubber based underlays are not suitable for use with underfloor heating as their insulation value is usually above 0.175 m²K/W.
- Any material used to cover the heating system should have a density of at least 1,500kg/m³ to ensure good heat transfer of at least 1W/m K. All normal tile adhesives, levelling compounds and screeds conform to this standard.