nVent

RAYCHEM

QuickNet

GB INSTALLATION MANUAL

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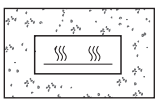
GB

NVENT RAYCHEM QUICKNET

INTRODUCTION

QuickNet is a self-adhesive electrical underfloor heating mat that should be installed and commissioned by a qualified electrician. If QuickNet is purchased and/or installed by an end user, the installation should be approved by an electrician prior to commissioning. The commissioning report shall be filled out completely during the installation and shall be signed by the electrician during the commissioning. All measurements made by the end user during the installation shall be validated by the electrician.

QuickNet is an electrical underfloor heating mat and shall only be installed in that purpose. QuickNet shall always be controlled by a thermostat equipped with a floor sensor. More on the thermostat and floor sensor can be found in the section called “THERMOSTAT”.



QuickNet shall always be fully embedded in at least 5mm of concrete, self-levelling compound, screed, tile adhesive or equivalent material appropriate for underfloor heating. Please read the complete installation instructions carefully. Pay attention to local circumstances, standards and regulations.

SAFETY INSTRUCTIONS

QuickNet may not be cut to length, crossed or installed closer than the spacing of cables pre-installed in the mat. Do not install QuickNet in areas that might be damaged by drilling. Do not install QuickNet in areas that might be covered by fixed furniture where ventilation of the floor is hindered. The presence of the electrical underfloor heating cable shall be made evident by the posting of the installation tag (yellow warning sticker provided with the product) in the fuse box or at the power connection fittings.

Avoid mechanical damage to the heating cable ! In case of damage a repair kit can be used.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

WARRANTY

nVent offers a 12 year Total Care Warranty for QuickNet. Please check the Total Care Warranty Certificate and Registration Form (included in the Commissioning form or downloadable from www.nVent.com/Raychem) for more details. The commissioning form has to be fully filled out during the installation and approved by a qualified electrician. The commissioning form should be kept by the owner of the building in order to comply with electrical regulations and the Total Care Warranty conditions.

In order to ease up the identification of the product, a product identification sticker is included in the box and can be attached to the commissioning form.

THERMOSTAT

As QuickNet is a constant wattage electrical underfloor heating mat, it is mandatory to have it controlled by a thermostat that is regulating the temperature by the use of an external floor temperature senor. Alternatively, QuickNet can be controlled by a nVent RAYCHEM thermostat working in room temperature sensing mode, but with a floor sensor temperature limiter. QuickNet shall be installed in combination with a thermostat that makes the product compliant with the Eco Design directive such as the NRG-DM, Green Leaf, SENZ or SENZ WIFI.

Ecodesign compliant	NRG-DM	GREEN LEAF	SENZ	SENZ WIFI
Week Timer	X	X	X	X
Predictive heating	X		X	X
Open Window		X	X	X
Distance Control				X

It is recommended to install the sensor cable in a conduit (included), so that it is possible to replace a defective sensor easily. The conduit must be sealed properly by means of the cap (included). The sensor itself should be located close to the surface immediately under floor tiles or other floor covering and should be positioned centrally between two heating cables. Strive for a positioning of the floor sensor as close as possible to the top floor surface for best temperature control. When installing two heating mats, the sensor should be positioned between these two mats.

TECHNICAL DATA

	QuickNet-N (90W/m²)	QuickNet-P (160W/m²)
Nominal voltage	AC 230 V	AC 230 V
Power output	up to 90 W/m²	up to 160 W/m²
Circuit breaker	See Fig. E and F	See Fig E and F
Min. bending radius	30 mm	30 mm
Min. cable spacing	90 mm	70 mm
Max. exposure temp.	+90°C	+90°C
Min. installation temp.	+5°C	+5°C
Conductor cross-section of cold lead cable	3 x 1,0 mm²	3 x 1,0 mm²
Length of cold lead cable	2,5 m	5,0 m
Approvals	VDE SEMKO CE	VDE SEMKO CE
Thermostat*	SENZ	SENZ WIFI

* If included in the kit

FLOOR CONSTRUCTION

All material in the floor construction shall be appropriate for underfloor heating. QuickNet can be installed on top of different kind of subfloors:

Subfloor	QuickNet-N	QuickNet-P
Cement screed	✓	✓
Anhydrite screed	✓	✓
Gypsum board	✓	✓
Wooden floor	✓	X
Timber floor	✓	X

Or any type of solid, stable and non combustible material.

Fig A:	1	Floor covering (can be tile or natural stone)
	2	Tile glue
	3	(Waterproofing layer – optional for shower areas)
	4	(Filler material – Optional)*
	5	QuickNet + Floor sensor inserted in sensor tube
	6	Primer (optional)
	7	Sub floor
	8	Insulation
	9	Bearing construction

Fig B:	1	Floor covering (can be tile or natural stone)
	2	Tile glue
	3	(Waterproofing layer – optional for shower areas)
	4	(Filler material – Optional)*
	5	QuickNet + Floor sensor inserted in sensor tube
	6	Primer (optional)
	7	Gypsum plasterboard ≥13mm
	8	Wooden plate
	9	Joist and insulation layer between the joists

Fig C:	1	Floor covering (Parquet floor)
	2	Glue
	3	(plywood – Optional)
	4	Filler material (between 15 and 30mm of filler material)
	5	QuickNet + Floor sensor inserted in sensor tube
	6	Primer (optional)
	7	Sub floor
	8	Insulation
	9	Bearing construction

Fig D:	1	Floor covering (Engineered wood installed floating)
	2	Foam underlayement
	3	Filler material (between 15 and 30mm of filler material)
	4	QuickNet + Floor sensor inserted in sensor tube
	5	Primer (optional)
	6	Sub floor
	7	Insulation
	8	Bearing construction

* If QuickNet is embedded directly into tile glue, it should be embedded in a minimum of 5mm of glue.

QuickNet can be installed under tile and natural stone.
QuickNet-N (90W/m²) can also be installed under engineered wood and under parquet floors under certain conditions (see wooden top floors for more details)

The maximum allowed thickness of the floor covering is 30mm. The thermal resistance of the floor construction above QuickNet should be as low as possible (Max. 0,15 m² K/W). Avoid damaging QuickNet during the installation. Avoid sharp objects and incautious pouring of concrete/filler. No airgaps are allowed in the concrete/filler.

QuickNet mat should not be laid across expansion joints.

The connection between the heating cable and the cold lead must be located in the filler (grout) and must not be pulled up into the conduit. Do not bend or pull the connection between the heating cable and the cold lead. Make sure the entire connection is embedded in the floor and not inserted in the wall together with the cold lead.

Always pay attention to instructions for the floor covering adhesive. QuickNet shall be installed in minimum of 5 mm of concrete, filler or tile adhesive. Caution: Do not lay heating cable in areas that might be damaged by drilling or might be covered by fixed furniture. Do not lay QuickNet in areas subject to high mechanical loads or impact. It is not allowed to place QuickNet under a heat source.

The subfloor should be clean, plain, stable and rigid, without cracks, sharp objects or adhesion-reducing substances. Cracks are to be filled out on beforehand with a casting resin. Big roughness is to be levelled out. The concrete subfloor must be completely dry before installing the floor heating system. With quickly solidifying plaster, one should follow

the supplier's instructions. QuickNet can be fixed, if required, to the subfloor by means of glue or staples. Fixing with staples is only allowed in the net, and never over the heating cable. Any metal shield, braid, screen or equivalent electrically conductive covering of the QuickNet shall be connected to an earthing terminal.

WOODEN TOP FLOORS

QuickNet-N (90W/m²) can be installed under engineered wooden floors (laminate) and parquet floors under certain conditions.

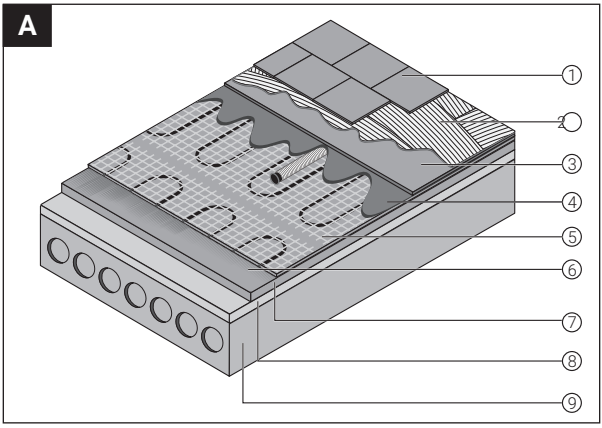
For wooden floors QuickNet-N should be embedded in a layer of concrete of 15-30mm. The thermostat that controls the QuickNet should be regulated by a floor sensor (or by room sensor with floor limiter). The floor sensor limit should be set to 27°C as maximum temperature. The type of wood should be compatible with underfloor heating.

There shall be no thermal barrier on top of the floor (like carpet or furniture).

QuickNet-P (160W/m²) shall in no case be installed under wooden floors.

END OF LIFE DISPOSAL

The thermostat must be disposed of as Waste Electrical and Electronic Equipment (WEEE directive) according to local regulations. The rest of the heating cable system must be disposed of as construction waste.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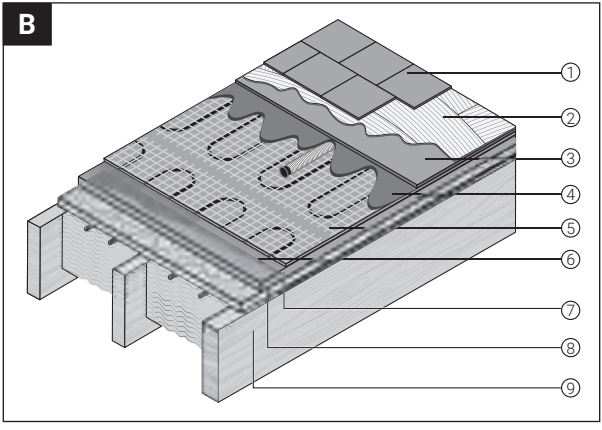
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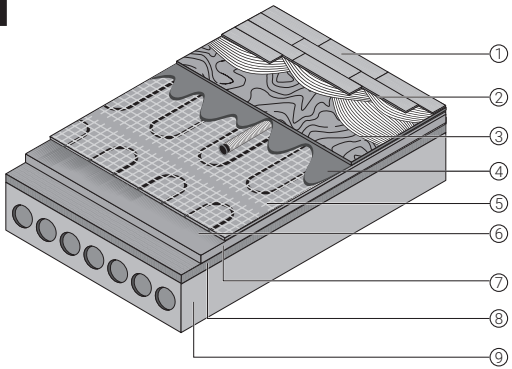

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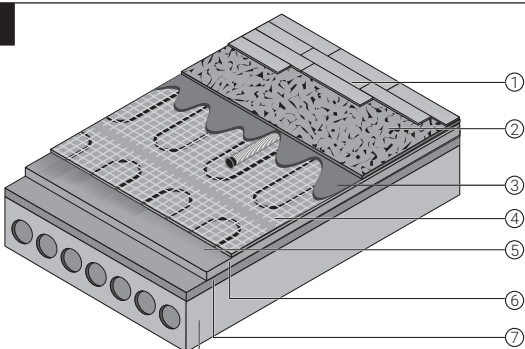
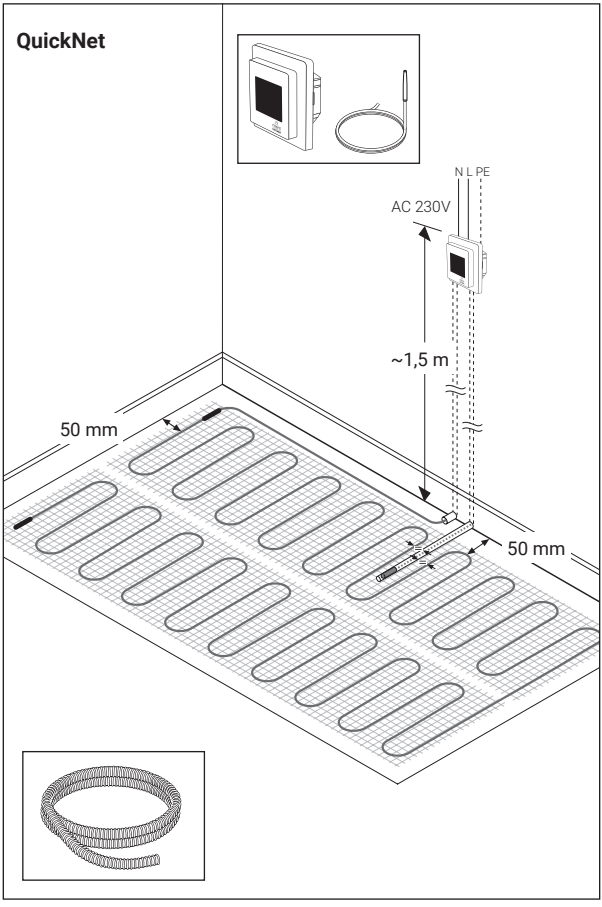
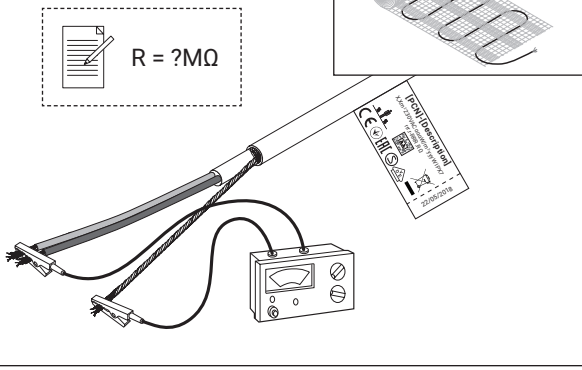



QuickNet
N L PE
AC 230V
~1,5 m
50 mm
50 mm

1 **QuickNet**



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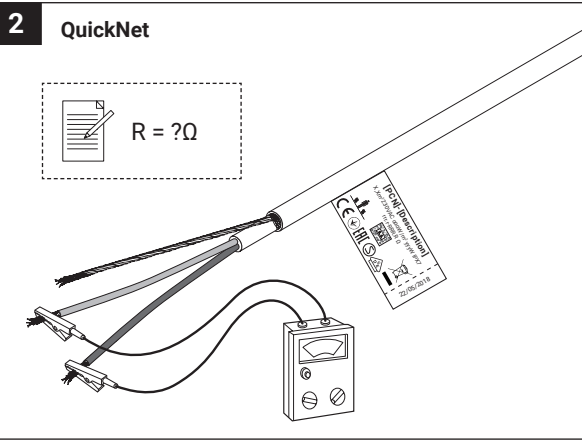

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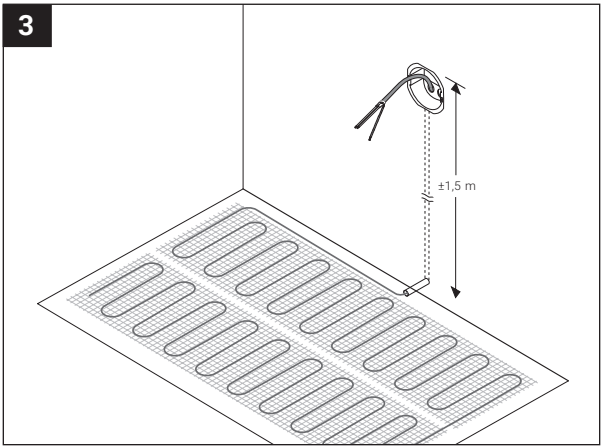

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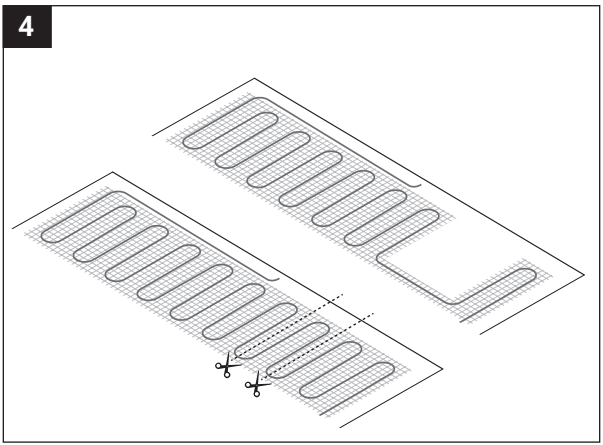

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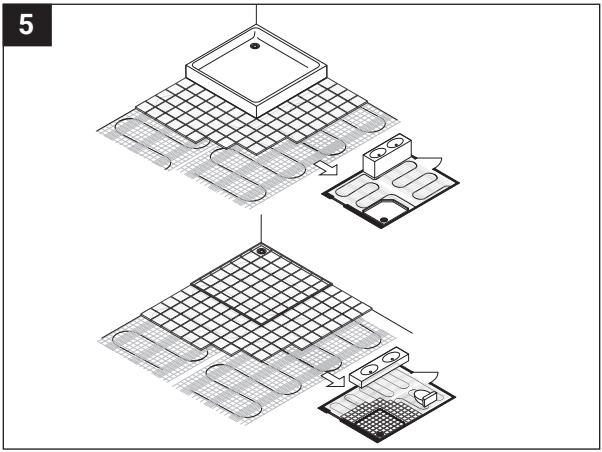

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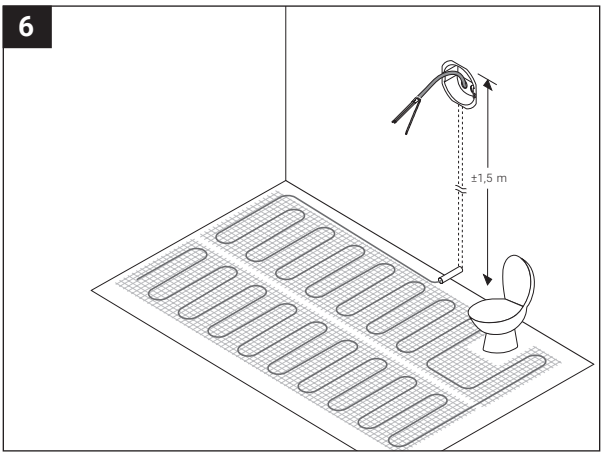

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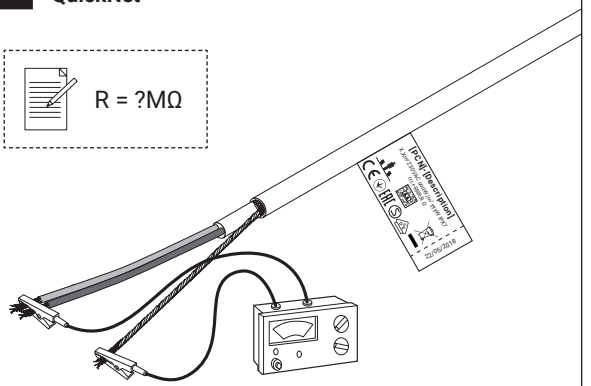

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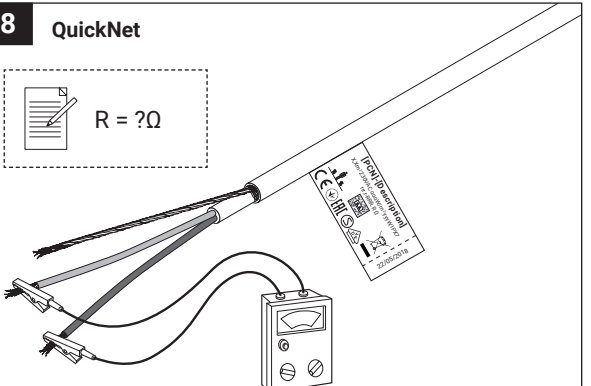

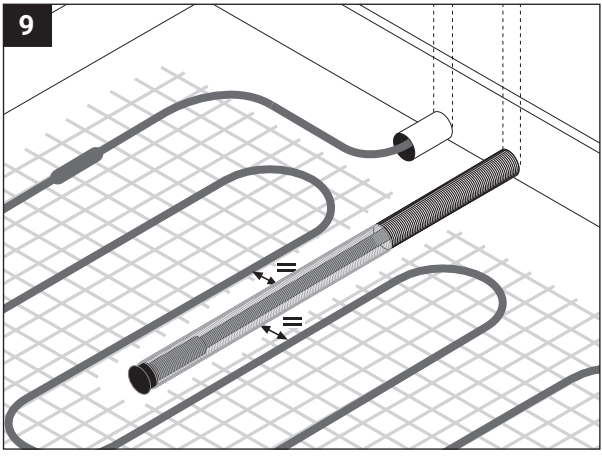
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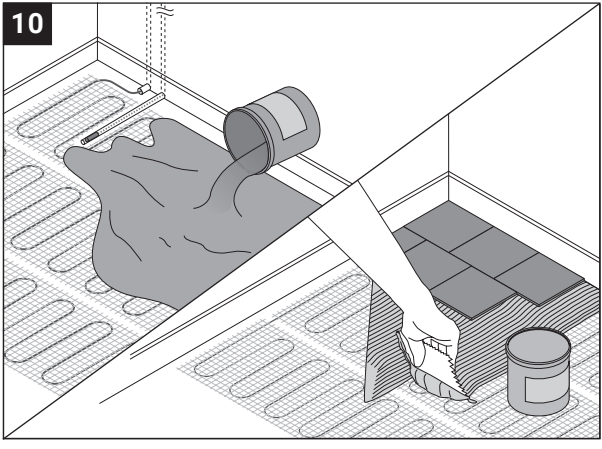
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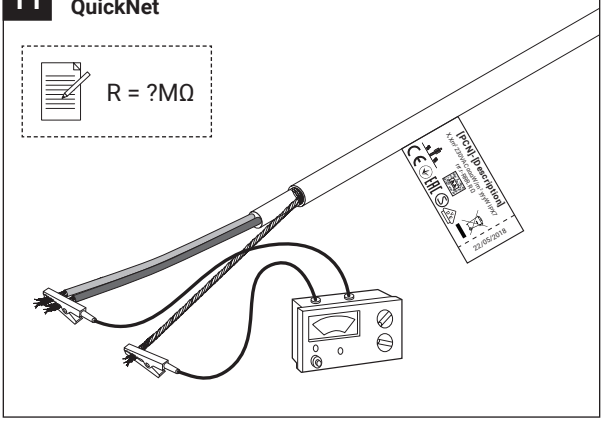
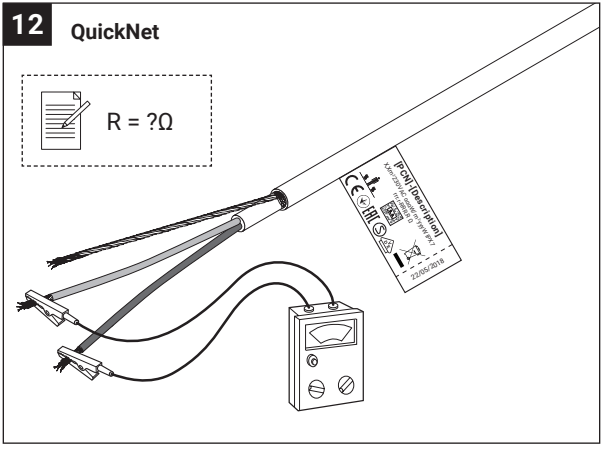
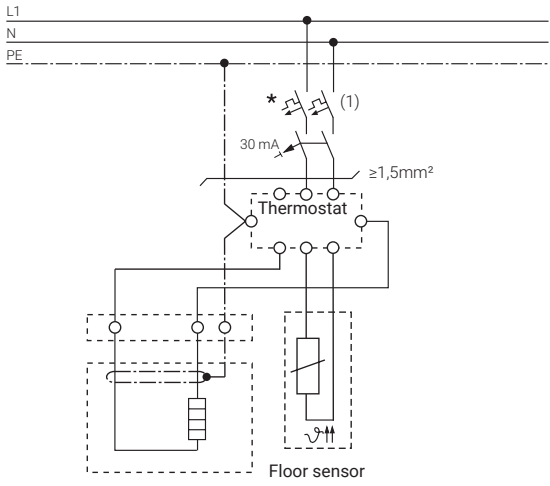


12 **QuickNet**

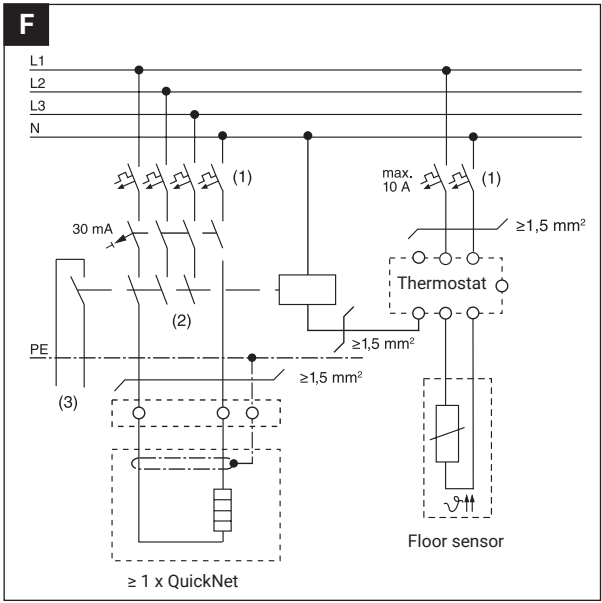


QuickNet m² max.	(*)	Thermostat
33 m² QuickNet-N (90W/m²) 18 m² QuickNet-P (160W/m²)	13A max.	NRG-DM, Green Leaf, SENZ and SENZ WIFI

E



GB (1) Two- or four-pole electrical protection by circuit-breaker may be needed for local circumstances, standards and regulations



GB (1) Two- or four-pole electrical protection by circuit-breaker may be needed for local circumstances, standards and regulations
(2) Depending on the application, one- or three-pole circuit-breakers or contactors may be used
(3) Optional: Potential-free contact for connection to the BMS

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