TRM Heating Cables

ETF-110/99C

Thin Floor Sensor with Stiff Wire

Data Sheet

Thin Floor Sensor

The thin floor sensor with stiff wire is suitable for floor heating thermostats, and fits the following TRM Heating Cable products: GFCI Thermostats for USA & Canada incl. EGFPD.

Type:	ETF-110/99C The sensor is not double insulated.
Dimensions:	Ø5 x 20 mm, 4.5 m cable
Sensor Element:	NTC 10 k +25 °C = 10 kΩ Time Constant. (τ): Max 15 sec. (75 °C → 25 °C in air) R_{25} = 10 kΩ ±1 % $B_{25/85}$ = 3,997 k ±1 %
Material:	Cable Jacket: PVC Molding: PVC
Operating Temperature range:	-20/+70 °C
Applications:	Universal sensor

Installation Recommendations

It is strongly recommended to insert the cable and sensor into a non-conductive conduit embedded in the floor.
The end of the conduit must be sealed and the conduit placed as high as possible in the concrete layer.
Alternatively, the sensor can be embedded directly in the floor.
The floor sensor must be centered between loops of heating cable.

The sensor cable may be extended with additional two-core cable. Max sensor extension, 30 m.
The two wires from the sensor to the thermostat must be kept separate

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from high voltage wires/cables. Place the sensor cable in a separate conduit or segregate it from power cables in some other way. Never use two vacant wires in a multi-core cable.
Shielded cable does not connect the shield to earth (PE).

Installation must comply with national and/or local electrical codes.

Regulations
TRM Heating Cables hereby declares that the product is in conformity with the following directives of the European Parliament:
EMC – Electromagnetic Compatibility
RoHS – Restriction of the use of certain Hazardous Substances
WEEE – Waste Electrical and Electronic Equipment Directive

Applies standards
EN 60730-2-9

NTC 10 kΩ Resistance Table

Temperature (°C)	Resistance (Ω)	Temperature (°C)	Resistance (Ω)
-20	97.083	24	10.448
-10	55.329	25	10.000
0	32.650	26	9.574
5	25.391	27	9.165
10	19.902	28	8.779
11	18.970	29	8.406
12	18.091	30	8.055
13	17.256	35	6.532
14	16.461	40	5.324
15	15.710	45	4.368
16	15.000	50	3.602
17	14.325	55	2.986
18	13.681	60	2.488
19	13.073	70	1.752
20	12.491		
21	11.940		
22	11.421		
23	10.924		