Application Note

May 2016

ETF-144/99T

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 OJ Microline® products: Touch Clock Thermostats, Wireless Control System, Premium Clock Thermostats, as well as DIN-rail Thermostats.

Type:	ETF-144/99T
Dimensions:	Ø5 x 20 mm, 3 m cable
Sensor Element:	NTC 12 k +25 °C = 12 kΩ Time Constant. (τ): Max 15 sec. (75 °C → 25 °C in air) R_{25} = 12 kΩ ±1 % $B_{25/85}$ = 3,730 k ±1 %
Material:	Cable Jacket: PVC Molding: PVC
Operating Temperature range:	-20/+70 °C
Applications:	Universal sensor

Installation Recommendations

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.
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 from high voltage wires/cables. Place the sensor cable in a separate

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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
OJ Electronics A/S 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 12 kΩ Resistance Table

Temperature (°C)	Resistance (Ω)	Temperature (°C)	Resistance (Ω)
-20	90.1160	24	12.4879
-10	55.0763	25	12.000
0	34.6028	26	11.5334
5	27.6875	27	11.0870
10	22.2844	28	10.6600
11	21.2520	29	10.2512
12	20.4631	30	9.8600
13	19.6155	35	8.1387
14	18.8071	40	6.7472
15	18.0358	45	5.6169
16	17.2998	50	4.6946
17	16.5973	55	3.9386
18	15.9267	60	3.3164
19	15.2863	70	2.3757
20	14.6746		
21	14.0902		
22	13.5318		
23	12.9981		

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