

Selected Fenix products were tested by the Electrotechnical Testing Institute in Prague-Trója. The aim was to measure the electromagnetic fields of the products according to the valid technical standards. The results show that all of the measured values are well below acceptable limits.

PROTOKOL O ZKOUŠCE

Výrobek: Infračervený topný panel
Typ: ECOSUN 700 U
Jmenovité hodnoty: 230V AC, 50Hz, 700W
Výrobní číslo: _____
Výrobce: FENIX Trading, s.r.o.
Slezská 535/2, 790 01 Jeseník
Česká republika
Výrobní místo: Viz výrobce
Objednavatel: FENIX Trading, s.r.o.
Slezská 535/2, 790 01 Jeseník
Česká republika

Počet zkoušených vzorků: 1
Vzorky předloženy dne: 10.11.2017
Místo provedení zkoušek: EZÚ
Zkoušky prováděny v době od 14.11.2017 do 28.11.2017
Jiné údaje: _____
Zkušební předpis: ČSN EN 62233:08
ČSN EN 55014-1ed.4:17
EN 62233:2008
EN 55014-1:2017

Zpracoval: Pavel Zabloudek
Schválil: Miroslav Vondra
Technický vedoucí zkušební laboratoře

Výsledky zkoušek uvedeny v protokolu a zprávkách a slouží jako základ pro vydávání certifikátů. Zprávkou není v protokolu a zprávkou uvedená prák. listy

Interest in electric heating systems is increasing constantly, particularly in connection with those that utilize large surface areas (floor and ceiling heating systems). The growing demand is also accompanied by an increasing amount of questions from customers regarding the potential health risks connected with long-term exposure to what is known as electromagnetic smog.

In response to these queries, Fenix asked for a test to be carried out focused on determining the exact electromagnetic field emission values of items in our product range. The measurements were carried out by the Electrotechnical Testing Institute, s.p. in Prague-Trója. The tested products were a single-core heating cable with protective braiding (PSV 10W/m), a two-core heating cable with protective braiding assembled into a mat (LDTs 160/1), an ECOFILM F 1008 heating foil, and the radiant panels ECOSUN 600U (the heating element is a foil) and 700U (the heating element is a resistance wire cable).

The electromagnetic compatibility of each of the products was tested, their disturbance voltages and disturbance powers were measured with regard to the power grid frequency, and primarily the intensity of the electromagnetic field was measured with respect to human exposure. The measurements were carried out in accordance with European technical standards EN 62233 and EN 55014-1, which are the only valid EU regulations defining the exact methods and measuring devices to be used in testing, as well as the permitted limits.

The obtained results show that all of the determined values lie well below the limits set by the valid standards (see the enclosed protocols). It is interesting, for example, that the results for the single-core and two-core heating cables are almost identical; there is a deep-rooted belief that single-core cables are many times worse than two-core cables with regard to so-called electromagnetic smog.

The highest electromagnetic field values were measured for the ECOSUN 600 U radiant panel, but even in this case they only amounted to 2.2% of the permitted limit. It is thus clear from the

measurement results that individuals who install electric heating systems in living areas are in no way exposing themselves to an intensive electromagnetic field that could give rise to health risks.

| | heating cable PSV | heating mat LDTS | heating foil ECOFILM F | radiant panel ECOSUN 600U | radiant panel ECOSUN 700U |
|-----------------------------------------------------------------------------------|--------------------------|-------------------------|-------------------------------|----------------------------------|----------------------------------|
| Electromagnetic compatibility – Emissions (acc. to EN 55014-1) | Satisfactory | Satisfactory | Satisfactory | Satisfactory | Satisfactory |
| Disturbance voltage introduced to the network (acc. to EN 55014-1) | Satisfactory | Satisfactory | Satisfactory | Satisfactory | Satisfactory |
| Measurement of disturbance voltage in the 30MHz-300MHz range (acc. to EN 55014-1) | Satisfactory | Satisfactory | Satisfactory | Satisfactory | Satisfactory |
| The EMG field of the appliance with regard to human exposure (acc. to EN 62233:8) | 0,42% of the limit | 0,41% of the limit | 1% of the limit | 2,3% of the limit | 1,6% of the limit |