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## Analysis of Exposure of People to Magnetic Flux Density in the Apartment Due to the Influence of Low Voltage Cable Terminal Boxes

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Category of article: Professional paper

### Highlights

- Cable terminal boxes can be a significant magnetic field source when located in close proximity to areas of increased sensitivity
- It is necessary to carry out the first non-ionizing radiation testing in the areas of increased sensitivity with cable terminal boxes on their walls
- Cable terminal boxes can be the non-ionizing radiation source of special interest

### Abstract

*The paper analyzes the levels of magnetic flux density in the apartment that occur due to the influence of cable terminal boxes. The analysis is based on the results of magnetic flux density measurements in the apartment. In the considered example, the cable terminal boxes are located on the outer wall of the apartment, which leads to increased levels of magnetic flux density in the room located on the other side of the wall. It has been shown that the values of magnetic flux density in the apartment can exceed the value of 4  $\mu$ T, which is a criterion for the source to be categorized as a source of special interest, in accordance with the provisions of the current national legislation in the field of non-ionizing radiation. The aim of the paper is to show that in the aforementioned configuration the values of magnetic flux density in the apartment can be significant, in order to avoid such technical solutions in the future during the design and construction of new facilities which represent areas of increased sensitivity. The significance of performing testing in apartments and other areas of increased sensitivity with cable terminal boxes in their proximity is also emphasized.*

### Keywords

**Area of increased sensitivity, cable terminal box, magnetic field, magnetic flux density, non-ionizing radiation, reference level**

#### Notes:

**The full text of this article is available only in the Serbian language. In the English version, only its Abstract (given above) is available.**

The article (in Serbian) represents an expanded, improved and additionally peer-reviewed version of the paper "Analysis of Magnetic Flux Density Levels in the Apartment due to the Influence of Low Voltage Cable Terminal Boxes", awarded by Expert Committee EC-1 Network Components at the 13<sup>th</sup> CIRED Serbia Conference, Kopaonik, September 12-16, 2022

Received: April 7<sup>th</sup>, 2023

Reviewed: May 26<sup>th</sup>, 2023

Modified: June 7<sup>th</sup>, 2023

Accepted: July 3<sup>rd</sup>, 2023

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