

Working principle of 5g base station electromagnetic waves





Overview

Why is a 5G network a challenge?

5G networks deployment poses new challenges when evaluating human exposure to electromagnetic fields. Fast variation of the user load and beamforming techniques may cause large fluctuations of 5G base stations field level. They may be underestimated, resulting in compliance of base stations not fitting the requirements.

How will 5G base stations and devices work?

To address the demands of increased performance, 5G base stations and devices will use many antennas. Arrays of up to hundreds of small antennas at the base station will make it possible to focus the transmission of radio waves to maximize the signals that the connected devices receive. This is called beamforming or massive MIMO.

How will 5G work?

The power levels of the radio signals transmitted by 5G radio equipment will be of similar or lower magnitude as those used in previous networks. 5G devices will be designed and tested to comply with established radio wave exposure limits. 5G base stations will be positioned so that the exposure in homes and public areas is well below the limits.

Does 5G signal exposure affect base station compliance?

This agrees with measurements done in other countries whose authors conclude that the exposure to 5G signals is limited , , , but this does not assure the base station compliance as full load situation should be considered for such assessment. It also shows that the increase in the EMF field is due to the induced data traffic.



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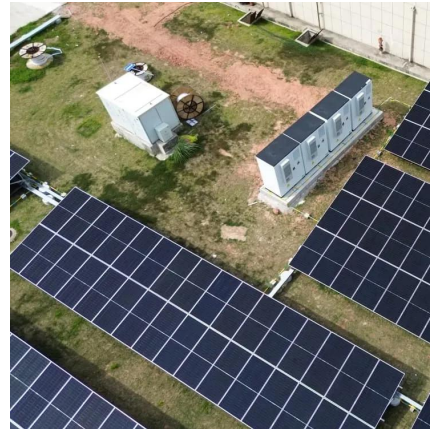


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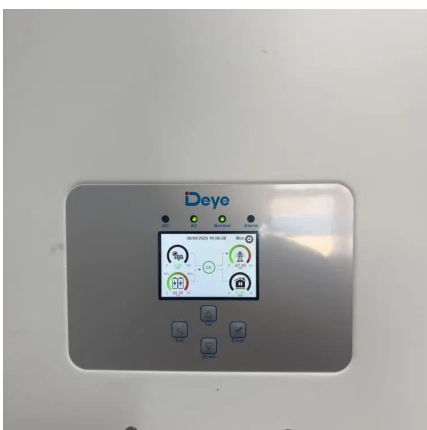
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