

Title (en)

MEASURING DEVICE FOR DETERMINING A DIELECTRIC VALUE

Title (de)

MESSGERÄT ZUR BESTIMMUNG EINES DIELEKTRIZITÄTSWERTES

Title (fr)

DISPOSITIF DE MESURE PERMETTANT LA DÉTERMINATION D'UNE VALEUR DIÉLECTRIQUE

Publication

EP 4073496 A1 20221019 (DE)

Application

EP 20811990 A 20201120

Priority

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Abstract (en)

[origin: WO2021115763A1] The invention relates to a robust measuring device (1) for determining the dielectric value of a medium (2) in a phase-based manner, which measuring device comprises at least the following components: a measurement section (11) which can be brought into contact with the medium (2), a signal generation unit (12) for injecting a high-frequency signal (sHF) at a defined frequency (fHF) into the measurement section (11), and an evaluation unit (13) which is designed to receive a corresponding reception signal (rHF) after said high-frequency signal passes through the measurement section (11), to determine a phase shift (φ) between the high-frequency signal (sHF) and the reception signal (rHF) and to determine the dielectric value of the medium (2) on the basis of the determined phase shift (φ). According to the invention, the measuring device (1) also comprises at least one filter (14, 14') which transmits the frequency (fHF) of the high-frequency signal (sHF) and is arranged in such a manner that the received reception signal (rHF) and/or the generated high-frequency signal (sHF) is/are filtered. This ensures that the determined dielectric value is not distorted by noise caused by components or the environment.

IPC 8 full level

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CPC (source: EP US)

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