

Title (en)

DEVICE AND METHOD FOR OPTICALLY DETECTING AN ELECTRIC CURRENT AND A COMPONENT OF AN ELECTRIC FIELD

Title (de)

VORRICHTUNG UND VERFAHREN ZUR OPTISCHEN ERFASSUNG EINES ELEKTRISCHEN STROMS UND EINER KOMPONENTE EINES ELEKTRISCHEN FIELDS

Title (fr)

DISPOSITIF ET PROCEDE DE MESURE OPTIQUE D'UN COURANT ELECTRIQUE ET D'UNE COMPOSANTE D'UN CHAMP ELECTRIQUE

Publication

**EP 1145019 A2 20011017 (DE)**

Application

**EP 99944241 A 19990701**

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- DE 19832056 A 19980716

Abstract (en)

[origin: WO0004398A2] According to the invention, in an optical series connection consisting of a current-sensitive Faraday element (F) and an element (B1, Bi, Bn) which is sensitive to a component (E1, Ei, En) of an electric field, an emitted light signal (LS) is influenced such that its state of polarization and an optical property different from said state of polarization are modified. From this a first measured quantity (M11, M1i, M1n) is derived for the component (E1, Ei, En) of the electric field and a second measured quantity (M2) is derived for the electric current (I).  
[origin: WO0004398A2] according to the invention, in an optical series connection consisting of a current-sensitive Faraday element (F) and an element (B1, Bi, Bn) which is sensitive to a component (E1, Ei, En) of an electric field, an emitted light signal (LS) is influenced such that its state of polarization and an optical property different from said state of polarization are modified. From this a first measured quantity (M11, M1i, M1n) is derived for the component (E1, Ei, En) of the electric field and a second measured quantity (M2) is derived for the electric current (I).

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