

Title (en)

METHOD AND DEVICE FOR MEASURING A MAGNETIC FIELD WITH THE AID OF THE FARADAY EFFECT

Title (de)

VERFAHREN UND EINRICHTUNG ZUM MESSEN EINES MAGNETFELDES MIT HILFE DES FARADAY-EFFEKTES

Title (fr)

PROCEDE ET DISPOSITIF POUR MESURER UN CHAMP MAGNETIQUE PAR EFFET FARADAY

Publication

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Application

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Abstract (en)

[origin: US6495999B1] A magnetic field is measured with the aid of the Faraday effect. Light is coupled into a Faraday element subjected to the magnetic field, the light having a linearly polarized first component at a first wavelength and an unpolarized second component at a second wavelength different from the first. A light signal is coupled out of the Faraday element and is split optically into a first light signal component with the first wavelength and a second light signal component with the second wavelength. A first measurement signal is derived from the first light signal component and a second measurement signal is derived from the second light signal component and these are used to form a corrected measurement signal S. In this way, attenuation influences in the transmission paths can be largely compensated for, even when measuring a magnetic field which is constant over time or a magnetic field with a component which is constant over time.

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