Title (en)
FIBER-OPTIC CURRENT SENSOR

Title (de)
FASEROPTISCHER STROMSENSOR

Title (fr)
CAPTEUR DE COURANT A FIBRE OPTIQUE

Publication
EP 1299736 A1 20030409 (DE)

Application
EP 01942947 A 20010704

Priority
- EP 01942947 A 20010704
- CH 0100415 W 20010704
- EP 00810605 A 20000710

Abstract (en)
[origin: EP1174719A1] The invention relates to a fiber-optic current sensor that is provided with a reflection interferometer (1, 10). In its fiber-optic feed line (2), said fiber-optic current sensor comprises a polarization-maintaining first fiber branch (20) for two forward propagating orthogonally polarized waves and a polarization-maintaining second fiber branch (20') for two backward propagating orthogonally polarized waves. Said fiber branches (20, 20') are interlinked via a coupler (8) provided in the sensor. The first fiber branch (20) is linked with a light source (4) and the second fiber branch (20') is linked with the detector (5). A phase-shift device (7) is functionally linked with at least one of the fiber branches (20, 20'), thereby allowing a quasi-static control of the phase shift of the waves. As a result, the phase-shift device does not have to meet such strict requirements as the phase modulators and signal processors that are generally used in conventional current sensors.

IPC 1-7
G01R 15/24

IPC 8 full level
G01R 15/24 (2006.01); **G01R 19/00** (2006.01); **G02B 27/28** (2006.01)

CPC (source: EP US)
G01R 15/247 (2013.01 - EP US)

Citation (search report)
See references of WO 0204963A1

Designated contracting state (EPC)
CH DE FR GB IT LI

DOCDB simple family (publication)
EP 1174719 A1 20020123; AU 6573801 A 20020121; CN 1213305 C 20050803; CN 1441907 A 20030910; EP 1299736 A1 20030409; JP 2004503751 A 20040205; US 2004101228 A1 20040527; US 7075286 B2 20060711; WO 0204963 A1 20020117

DOCDB simple family (application)
EP 00810605 A 20000710; AU 6573801 A 20010704; CH 0100415 W 20010704; CN 01812641 A 20010704; EP 01942947 A 20010704; JP 2002509782 A 20010704; US 33250403 A 20030110