

Title (en)  
MEASURING SYSTEM COMPRISING AN INTELLIGENT SENSOR HEAD AND HAVING A REDUCED POWER CONSUMPTION FOR MEDIUM-VOLTAGE OR HIGH-VOLTAGE SYSTEMS OR IN MINING, AND METHOD THEREFOR

Title (de)  
MESSSYSTEM MIT INTELLENTEM SENSORKOPF UND REDUZIERTEM ENERGIEVERBRAUCH FÜR MITTEL- ODER HOCHSPANNUNGSANLAGEN ODER IM BERGBAU UND VERFAHREN HIERZU

Title (fr)  
SYSTEME DE MESURE A TETE DE DETECTION INTELLIGENTE ET A CONSOMMATION D'ENERGIE REDUITE POUR INSTALLATIONS MOYENNE ET HAUTE TENSION OU DANS L'EXPLOITATION DE MINES ET PROCEDE CORRESPONDANT

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Application  
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Abstract (en)  
[origin: WO2004072662A2] The invention relates to a measuring system comprising an intelligent sensor head and having a reduced power consumption for medium-voltage or high-voltage systems or in mining, and to a method therefor. Differently designed measuring systems exist of which most contain a central signal processing unit and a number of electrical measuring components, and in which the measured values furnished by the measuring components are optically transmitted over optical waveguides. The aim of the invention is to provide a measuring system of this type, which has a low power consumption and enables a reliable optical data transmission. To this end, an optical loop is provided between a central measuring unit (MG) and a sensor head (SK). Microprocessors (MP1, MP2), which are situated inside the central measuring unit (MG) and inside the sensor head (SK), carry out transmitting, measuring and monitoring tasks as a distributed controller with bidirectional data communication. A frame synchronization signal serves both for supplying power as well as for deriving a clock signal for block-oriented data transmission. A data communication is carried out for conducting a parameterization and/or programming between the central measuring unit (MG) and the sensor head (SK), and a pre-preprocessing of the measured values is carried out in the sensor head (SK), particularly a measured value correction and/or a range switching and/or a reprogramming of the filtering characteristics and/or an automatic compensation are/is carried out in the sensor head (SK). The invention is used in measuring systems, particularly those having optical signal and power transmission.

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**G01R 15/22** (2013.01 - EP US); **G01R 15/14** (2013.01 - EP US)

Citation (search report)  
See references of WO 2004072662A2

Citation (examination)  
IVAN MARIC: "Automatic Digital Correction of Measurement Data Based on M-Point Autocalibration and Inverse Polynomial Approximation", IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, vol. 35, 1 January 1988 (1988-01-01), pages 317, XP055577844

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