

Title (en)

METHOD AND DEVICE FOR DIAGNOSING ELECTRIC SWITCHES

Title (de)

VERFAHREN UND VORRICHTUNG ZUR DIAGNOSE ELEKTRISCHER WEICHEN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE DIAGNOSTIC D'AIGUILLAGES ÉLECTRIQUES

Publication

**EP 3218727 A1 20170920 (DE)**

Application

**EP 15788408 A 20151102**

Priority

- DE 102014223234 A 20141114
- EP 2015075454 W 20151102

Abstract (en)

[origin: WO2016074971A1] The invention relates to a method for diagnosing switches and to a diagnostic device for switches in tracks of rail-bound traffic routes or other three-phase drives having a cyclic operating pattern. With the aid of at least two multidimensional magnetic field sensors, in each case the current of a suitable phase conductor of the drive is measured. The invention relates to two different measuring methods, which can be implemented by means of the same device. Depending on the type of measurement, in addition, by using one of the two sensors, the current of a further conductor is measured contactlessly at the same time as the phase conductor already mentioned. The measured values from the magnetic field sensors are transmitted via measuring cable or BUS or via radio by means of a suitable interface to a data processing system and are evaluated and stored there. The direction of rotation of the three-phase current applied to the drive is measured by the data-processing system from the time shift of the signals of two phases connected to the drive. During the evaluation, use is made of the fact that the current or power demand of the drive can be determined via the current intensity of any desired phase conductor and can thus be used as a measure of the sluggishness of the points. The condition of the points is determined by the current or power demand values for both directions of rotation of the drive being compared with reference or empirical values which are stored in the data processing system. From this comparison, a maintenance outlay to be expected for the points is determined by the data-processing system.

IPC 8 full level

**G01R 15/20** (2006.01); **B61L 1/20** (2006.01); **G01R 31/327** (2006.01)

CPC (source: EP)

**B61L 1/20** (2013.01); **B61L 5/062** (2013.01); **B61L 5/107** (2013.01); **G01R 15/20** (2013.01); **G01R 15/207** (2013.01); **G01R 31/327** (2013.01)

Citation (search report)

See references of WO 2016074971A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**DE 102014223234 B3 20160317**; EP 3218727 A1 20170920; WO 2016074971 A1 20160519

DOCDB simple family (application)

**DE 102014223234 A 20141114**; EP 15788408 A 20151102; EP 2015075454 W 20151102