

Title (en)  
DIAGNOSIS OF A DRIVE SYSTEM, AND DRIVE SYSTEM

Title (de)  
DIAGNOSE EINES ANTRIEBSSYSTEMS SOWIE ANTRIEBSSYSTEM

Title (fr)  
DIAGNOSTIC D'UN SYSTÈME D'ENTRAÎNEMENT ET SYSTÈME D'ENTRAÎNEMENT

Publication  
**EP 3129793 A1 20170215 (DE)**

Application  
**EP 15733398 A 20150624**

Priority  
• DE 102014212554 A 20140630  
• EP 2015064263 W 20150624

Abstract (en)  
[origin: WO2016001037A1] The invention relates to a diagnosis of a drive system (1), in particular a door drive system, which has an electric motor (2), preferably a synchronous motor, with a stator (3) with phase windings (4, 5, 6) and with a rotor (7) excited by a permanent magnet. The drive system also has a sensor (9) for determining a position of the rotor (7). The diagnosis is carried out according to the invention in a simple manner with little complexity by means of the following steps: a) rotating the rotor (7) without supplying the phase windings (4, 5, 6) with current, preferably manually rotating the rotor (7) or rotating the rotor (7) by allowing the rotor to coast to a stop after a previous acceleration, b) measuring voltages induced in the phase windings (4, 5, 6) by the rotation and signals generated by the sensor (9) at the same time as the rotation is being carried out, c) ascertaining a spatial indicator angle (yab) of the voltages induced during the rotation and ascertaining a rotor position angle (yel) from the signals generated by the sensor (9) during the rotation, and d) comparing the spatial indicator angle (yab) ascertained during the rotation with the rotor position angle (yel) ascertained during the rotation and ascertaining a difference in a value, a direction, and/or a rotational speed of the two angles in order to diagnose the drive system (1).

IPC 8 full level  
**G01P 21/02** (2006.01); **G01D 5/244** (2006.01); **G01D 18/00** (2006.01); **G01P 3/00** (2006.01); **G01P 3/487** (2006.01); **G01P 3/488** (2006.01); **H02P 6/16** (2016.01); **H02P 6/18** (2016.01)

CPC (source: CN EP)  
**E05F 15/40** (2015.01 - CN EP); **G01D 5/145** (2013.01 - CN EP); **G01D 5/24461** (2013.01 - CN EP); **G01P 3/487** (2013.01 - CN EP); **G01P 3/488** (2013.01 - CN EP); **G01P 21/02** (2013.01 - CN EP); **H02P 6/16** (2013.01 - CN EP); **H02P 6/182** (2013.01 - CN EP); **H02P 29/0241** (2016.02 - CN EP); **E05Y 2201/434** (2013.01 - CN EP); **E05Y 2400/458** (2013.01 - CN EP); **E05Y 2400/50** (2013.01 - CN EP); **E05Y 2800/404** (2013.01 - CN EP); **G01D 2218/10** (2021.05 - EP)

Citation (search report)  
See references of WO 2016001037A1

Citation (examination)  
US 2012280641 A1 20121108 - LEJEUNE GUILHEM [FR], et al

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 102014212554 A1 20151231**; CN 106471729 A 20170301; EP 3129793 A1 20170215; WO 2016001037 A1 20160107

DOCDB simple family (application)  
**DE 102014212554 A 20140630**; CN 201580035748 A 20150624; EP 15733398 A 20150624; EP 2015064263 W 20150624