

Title (en)
ELECTRICAL MACHINE

Title (de)
ELEKTRISCHE MASCHINE

Title (fr)
MACHINE ÉLECTRIQUE

Publication
EP 3596811 A1 20200122 (DE)

Application
EP 18711516 A 20180312

Priority
• DE 102017204072 A 20170313
• EP 2018056092 W 20180312

Abstract (en)
[origin: WO2018166977A1] The present invention relates to an electrical machine comprising at least one disc-shaped stator (1) with at least one winding (7) of electrically conductive wire, and at least one rotor (2) that is rotatable relative to the stator (1) and that has a first permanent magnet (31) and at least one second permanent magnet (32), the magnets being arranged such that a north pole (N) of the first permanent magnet (31) and a south pole (S) of the second permanent magnet (32) point towards the stator (1). The winding (7) is arranged on the disc-shaped stator (1) radially around the circumference in a serpentine configuration having alternating radially arranged portions (8) and tangentially arranged portions (9), such that loops (10) of the winding (7) arranged on two opposing surfaces of the disc-shaped stator (1) only partly overlap one another in their radially arranged portions (8), or only partly overlap one another in their tangentially arranged portions (9), and the winding (7) is arranged alternately on one of the two surfaces (33,34) of the disc-shaped stator (1), or one winding (7) of the wire is arranged on each of the surfaces (33,34) of the disc-shaped stator (1).

IPC 8 full level
H02K 21/24 (2006.01); **H02K 3/28** (2006.01)

CPC (source: EP KR US)
H02K 1/2793 (2013.01 - KR); **H02K 3/14** (2013.01 - KR); **H02K 3/28** (2013.01 - EP KR US); **H02K 3/47** (2013.01 - KR);
H02K 7/003 (2013.01 - KR); **H02K 16/00** (2013.01 - KR); **H02K 21/24** (2013.01 - EP KR US); **H02K 2213/03** (2013.01 - KR)

Citation (search report)
See references of WO 2018166977A1

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 102017204072 A1 20180913; CN 110915112 A 20200324; EP 3596811 A1 20200122; JP 2020510400 A 20200402;
KR 20200011410 A 20200203; US 2020227991 A1 20200716; WO 2018166977 A1 20180920

DOCDB simple family (application)
DE 102017204072 A 20170313; CN 201880031801 A 20180312; EP 18711516 A 20180312; EP 2018056092 W 20180312;
JP 2019571772 A 20180312; KR 20197029874 A 20180312; US 201816493918 A 20180312