

Title (en)
WIRELESSLY RECHARGEABLE ENERGY STORE

Title (de)
DRAHTLOS WIEDERAUFLADBARER ENERGIESPEICHER

Title (fr)
ACCUMULATEUR D'ÉNERGIE RECHARGEABLE SANS FIL

Publication
EP 3440758 A1 20190213 (DE)

Application
EP 17711680 A 20170322

Priority
• CH 4352016 A 20160404
• CH 14462016 A 20161028
• EP 2017056812 W 20170322

Abstract (en)
[origin: WO2017174359A1] A wirelessly rechargeable energy store (1) is desired, comprising a housing (10), having a casing wall (100), in which a converter (12), a storage core (11), charging electronics (13) and an antenna structure are arranged along a longitudinal axis (L), which energy store, independently of the relative alignment of antenna structures used with respect to the acting field direction, achieves an increased recharging efficiency and nevertheless, by virtue of its housing configuration, is diversely usable as a replacement for batteries and battery packs in small electrical devices. This is achieved by virtue of the fact that the antenna structure comprises at least two induction loops (14, 14') – shaped from an electrically conductive wire – formed as flat coils (14, 14'), which are arranged in a partly overlapping manner on a flexible printed circuit board, wherein the printed circuit board together with the at least two induction loops (14, 14') at least partly encloses the storage core (11) in such a way that loop longitudinal extents (S) run at least approximately parallel to the longitudinal axis (L) and loop transverse extents (Q) run at least approximately perpendicularly to the longitudinal axis (L) and a first pole of the induction loops (14, 14') is connected to a first pole of the converter (12) and a second pole of the induction loops (14, 14') is connected to a second pole of the converter (12).

IPC 8 full level
H02J 5/00 (2016.01); **H01M 10/42** (2006.01); **H01M 10/46** (2006.01); **H02J 7/02** (2016.01); **H02J 50/10** (2016.01)

CPC (source: EP US)
H01M 10/4257 (2013.01 - US); **H01M 10/44** (2013.01 - US); **H01M 10/46** (2013.01 - US); **H02J 7/0042** (2013.01 - US); **H02J 50/005** (2020.01 - US); **H02J 50/10** (2016.02 - EP US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)
See references of WO 2017174359A1

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)
WO 2017174359 A1 20171012; CN 109155526 A 20190104; CN 109155526 B 20230721; EP 3440758 A1 20190213; JP 2019514324 A 20190530; US 11031815 B2 20210608; US 2020328613 A1 20201015

DOCDB simple family (application)
EP 2017056812 W 20170322; CN 201780022371 A 20170322; EP 17711680 A 20170322; JP 2018553126 A 20170322; US 201716090964 A 20170322