

Title (en)

ELECTRICAL DEVICE, IN PARTICULAR MICROBATTERY, AND METHOD FOR THE PRODUCTION

Title (de)

ELEKTRISCHE EINRICHTUNG, INSBESONDERE MIKROBATTERIE, SOWIE VERFAHREN ZUR HERSTELLUNG

Title (fr)

DISPOSITIF ÉLECTRIQUE, EN PARTICULIER MICRO-BATTERIE, ET SON PROCÉDÉ DE PRODUCTION

Publication

EP 4121994 A1 20230125 (DE)

Application

EP 21712068 A 20210310

Priority

- DE 102020107224 A 20200317
- DE 202020106518 U 20201113
- EP 2021056011 W 20210310

Abstract (en)

[origin: WO2021185648A1] The invention relates to an electrical device, in particular an electrical storage device or sensor housing, preferably a battery, in particular a microbattery or capacitor, having a feedthrough, in particular through a housing part of a housing of the device made of a metal, in particular iron, iron alloys, iron-nickel alloys, iron-nickel-cobalt alloys, KOVAR, steel, stainless steel, stainless steel, aluminium, an aluminium alloy, AlSiC, magnesium, a magnesium alloy or titanium or a titanium alloy, wherein the housing part has at least one opening as part of the feedthrough, wherein the opening extends about an axis and a first region of the housing part comprises the opening and a second region of the housing part is adjacent to the opening and the opening receives a conductive material in particular a conductor in a glass or glass ceramic material. The invention is characterised in that the first region of the housing part has a width W that is essentially perpendicular to the axis of the opening and the width W of the first region is always greater than the thickness D, D of the second region and the conductive material has a first expansion coefficient α_1 , and the glass or glass-ceramic material has a second expansion coefficient α_2 and the housing part has a third expansion coefficient α_3 , the third expansion coefficient α_3 always being greater than the second coefficient of expansion α_2 .

IPC 8 full level

H01G 11/80 (2013.01); **H01G 11/14** (2013.01); **H01G 11/74** (2013.01); **H01G 11/78** (2013.01); **H01M 50/14** (2021.01); **H01M 50/147** (2021.01)

CPC (source: EP KR US)

C03C 10/0054 (2013.01 - US); **H01G 11/74** (2013.01 - EP KR); **H01G 11/78** (2013.01 - KR US); **H01G 11/80** (2013.01 - EP US); **H01M 10/058** (2013.01 - KR); **H01M 50/14** (2021.01 - EP); **H01M 50/148** (2021.01 - EP); **H01M 50/154** (2021.01 - EP KR US); **H01M 50/159** (2021.01 - EP KR US); **H01M 50/169** (2021.01 - EP KR US); **H01M 50/172** (2021.01 - EP US); **H01M 50/182** (2021.01 - EP KR); **H01M 50/184** (2021.01 - EP KR US); **H01M 50/188** (2021.01 - EP KR US); **H01M 50/191** (2021.01 - EP KR US); **H01M 50/198** (2021.01 - EP KR US); **H01M 50/3425** (2021.01 - EP KR US); **H01M 50/552** (2021.01 - US); **H01M 50/562** (2021.01 - US); **H01M 50/564** (2021.01 - US); **C03C 2204/00** (2013.01 - US); **H01G 11/78** (2013.01 - EP); **H01M 2200/20** (2013.01 - US); **Y02E 60/10** (2013.01 - EP KR); **Y02E 60/13** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (search report)

See references of WO 2021185648A1

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

DE 202020106518 U1 20210622; CN 115298782 A 20221104; CN 115315767 A 20221108; DE 102020107224 A1 20210923; EP 4121993 A1 20230125; EP 4121994 A1 20230125; JP 2023520175 A 20230516; JP 2023520176 A 20230516; KR 20220152235 A 20221115; KR 20220154593 A 20221122; US 2023014877 A1 20230119; US 2023021960 A1 20230126; WO 2021185648 A1 20210923; WO 2021185649 A1 20210923

DOCDB simple family (application)

DE 202020106518 U 20201113; CN 202180022413 A 20210310; CN 202180022927 A 20210310; DE 102020107224 A 20200317; EP 2021056011 W 20210310; EP 2021056018 W 20210310; EP 21712068 A 20210310; EP 21712069 A 20210310; JP 2022556141 A 20210310; JP 2022556143 A 20210310; KR 20217009865 A 20210310; KR 20227032248 A 20210310; US 202217946494 A 20220916; US 202217946712 A 20220916