

Title (en)
CEILING-TYPE INDOOR UNIT OF AIR CONDITIONER

Title (de)
DECKENINNENRAUMEINHEIT EINER KLIMAAANLAGE VOM DECKENTYP

Title (fr)
UNITÉ INTÉRIEURE DE PLAFOND POUR CLIMATISEUR

Publication
EP 3680570 A4 20210714 (EN)

Application
EP 18853201 A 20180906

Priority
• KR 20170114121 A 20170906
• KR 20170121408 A 20170920
• KR 2018010447 W 20180906

Abstract (en)
[origin: EP3680571A1] Disclosed is a ceiling type indoor unit of an air conditioner, the ceiling type indoor unit including a case housing installed at the ceiling of a room so as to be suspended therefrom, the case housing having an open lower surface, a front body configured to cover the lower surface of the case housing, the front body having a suction port and a discharge port formed so as to face downwards, a vane module separably coupled to the front body, the vane module being disposed so as to cover the discharge port, and a suction grill separably coupled to the front body, the suction grill being disposed so as to cover the suction port, wherein the vane module includes a first module body disposed at one side of the discharge port, the first module body being located at the lower side of the front body, the first module body being assembled to the front body so as to be separable downwards therefrom, a second module body disposed at the other side of the discharge port, the second module body being located at the lower side of the front body, the second module body being assembled to the front body so as to be separable downwards therefrom, at least one vane having one side and the other side coupled to the first module body and the second module body, respectively, the vane being configured to be rotated relative to the first module body and the second module body, a vane motor installed at at least one of the first module body or the second module body, the vane motor being configured to provide driving force to the vane, a first fastening hole disposed at the first module body, the first fastening hole being disposed so as to face downwards, the first fastening hole being formed through the first module body, a first fastening member fastened to the front body through the first fastening hole, a second fastening hole disposed at the second module body, the second fastening hole being disposed so as to face downwards, the second fastening hole being formed through the second module body, and a second fastening member fastened to the front body through the second fastening hole, and when the first fastening member and the second fastening member are separated from the first fastening hole and the second fastening hole, respectively, the vane module is separated downwards from the front body.

IPC 8 full level
F24F 13/14 (2006.01); **F24F 1/00** (2019.01); **F24F 1/0011** (2019.01); **F24F 1/0014** (2019.01); **F24F 1/0047** (2019.01); **F24F 13/06** (2006.01)

CPC (source: CN EP KR)
F24F 1/0011 (2013.01 - CN EP KR); **F24F 1/0014** (2013.01 - EP); **F24F 1/0047** (2019.02 - CN EP); **F24F 13/14** (2013.01 - EP); **F24F 13/142** (2013.01 - CN); **F24F 13/1426** (2013.01 - CN EP KR); **F24F 13/1486** (2013.01 - EP); **F24F 13/15** (2013.01 - CN); **F24F 1/0047** (2019.02 - KR); **F24F 2013/1433** (2013.01 - CN KR); **F24F 2013/1446** (2013.01 - CN); **F24F 2013/1473** (2013.01 - EP)

Citation (search report)
• [A] KR 20160101848 A 20160826 - SAMSUNG ELECTRONICS CO LTD [KR]
• [A] CN 107062399 A 20170818 - GREE ELECTRIC APPLIANCES INC ZHUHAI
• [A] JP H01217148 A 19890830 - SANYO ELECTRIC CO
• [AD] KR 100679838 B1 20070206 - LG ELECTRONICS INC [KR]
• See also references of WO 2019050309A1

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

DOCDB simple family (publication)
EP 3680571 A1 20200715; **EP 3680571 A4 20210609**; AU 2018327937 A1 20200423; AU 2018327937 B2 20220224;
AU 2018330127 A1 20200423; AU 2018330127 B2 20220310; AU 2018330128 A1 20200423; AU 2018330128 B2 20220609;
AU 2018330129 A1 20200423; AU 2018330129 B2 20211223; AU 2018330131 A1 20200423; AU 2018330131 B2 20220303;
AU 2022202992 A1 20220526; AU 2022202992 B2 20240516; AU 2022202993 A1 20220526; AU 2022202993 B2 20240328;
AU 2022228087 A1 20220929; CN 111295553 A 20200616; CN 111295553 B 20210820; CN 111295554 A 20200616;
CN 111295554 B 20211029; CN 111316045 A 20200619; CN 111316045 B 20210924; CN 111566413 A 20200821; CN 111566413 B 20211228;
CN 112204315 A 20210108; CN 112204315 B 20220517; CN 113739400 A 20211203; CN 113739400 B 20230331; CN 113864870 A 20211231;
CN 113864870 B 20230414; CN 114165912 A 20220311; CN 114165912 B 20230818; CN 114738986 A 20220712; CN 114738986 B 20231017;
EP 3680570 A1 20200715; EP 3680570 A4 20210714; EP 3680572 A1 20200715; EP 3680572 A4 20210728; EP 3680572 B1 20240110;
EP 3680573 A1 20200715; EP 3680573 A4 20210721; EP 3693676 A1 20200812; EP 3693676 A4 20210922; EP 4332446 A2 20240306;
EP 4332446 A3 20240515; ES 2974022 T3 20240625; KR 102078277 B1 20200407; KR 102080512 B1 20200423; KR 102165467 B1 20201014;
KR 102165468 B1 20201014; KR 102201562 B1 20210112; KR 20190027335 A 20190314; KR 20190027336 A 20190314;
KR 20190027338 A 20190314; KR 20190027345 A 20190314; KR 20190027348 A 20190314

DOCDB simple family (application)
EP 18854348 A 20180906; AU 2018327937 A 20180906; AU 2018330127 A 20180906; AU 2018330128 A 20180906;
AU 2018330129 A 20180906; AU 2018330131 A 20180906; AU 2022202992 A 20220504; AU 2022202993 A 20220504;
AU 2022228087 A 20220905; CN 201880071848 A 20180906; CN 201880071874 A 20180906; CN 201880071875 A 20180906;
CN 201880071876 A 20180906; CN 201880071881 A 20180906; CN 202111045041 A 20180906; CN 202111182942 A 20180906;
CN 202111519577 A 20180906; CN 202210475228 A 20180906; EP 18853201 A 20180906; EP 18854263 A 20180906;
EP 18854349 A 20180906; EP 18854669 A 20180906; EP 23216196 A 20180906; ES 18854349 T 20180906; KR 20180106319 A 20180906;
KR 20180106320 A 20180906; KR 20180106394 A 20180906; KR 20180106647 A 20180906; KR 20180106756 A 20180906