

Title (en)
OUTDOOR UNIT AND REFRIGERATION CYCLE DEVICE

Title (de)
AUSSENEINHEIT UND KÜHLZYKLUSVORRICHTUNG

Title (fr)
UNITÉ EXTÉRIEURE ET DISPOSITIF À CYCLE FRIGORIFIQUE

Publication
EP 4030122 A4 20220921 (EN)

Application
EP 19944933 A 20190909

Priority
JP 2019035407 W 20190909

Abstract (en)
[origin: EP4030122A1] An outdoor unit (2) includes a first flow path (F1), a second flow path (F2), and a controller (100). A compressor (10) and a condenser (20) are disposed on the first flow path (F1) in order from a refrigerant inlet port (PI2) toward a refrigerant outlet port (PO2). The second flow path (F2) is configured to branch from a portion of the first flow path (F1) between the condenser (20) and the refrigerant outlet port (PO2), and to return, to the compressor (10), the refrigerant that has passed through the condenser (20). A first expansion valve (71), a receiver (73), and a second expansion valve (72) are disposed on the second flow path (F2) in order from a branch point where the second flow path (F2) is branched from the first flow path (F1). The controller (100) is configured to control the compressor (10) and the first and second expansion valves (71, 72). The controller (100) is configured to notify that the refrigerant is insufficient when a time period for which a degree of opening of the second expansion valve (72) is at an upper limit exceeds a determination time period.

IPC 8 full level
F25B 49/02 (2006.01); **F25B 1/00** (2006.01); **F25B 1/10** (2006.01); **F25B 41/30** (2021.01); **F25B 49/00** (2006.01)

CPC (source: EP)
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Citation (search report)

- [AD] WO 2017199391 A1 20171123 - MITSUBISHI ELECTRIC CORP [JP]
- [A] EP 3348939 A1 20180718 - HITACHI JOHNSON CONTROLS AIR CONDITIONING INC [JP]
- [A] WO 2018185841 A1 20181011 - MITSUBISHI ELECTRIC CORP [JP]
- See references of WO 2021048905A1

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)
EP 4030122 A1 20220720; EP 4030122 A4 20220921; EP 4030122 B1 20230621; CN 114364934 A 20220415; CN 114364934 B 20230321; DK 4030122 T3 20230724; ES 2950759 T3 20231013; FI 4030122 T3 20230728; JP 7199554 B2 20230105; JP WO2021048905 A1 20210318; WO 2021048905 A1 20210318

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