

Title (en)  
AIR CONDITIONER

Title (de)  
KLIMAANLAGE

Title (fr)  
CLIMATISEUR

Publication  
**EP 4107454 A1 20221228 (EN)**

Application  
**EP 21758012 A 20210217**

Priority  
• KR 20200019272 A 20200217  
• KR 2021002003 W 20210217

Abstract (en)  
[origin: US2021254880A1] An air conditioner is provided that may include a defrosting bypass valve disposed at a defrosting bypass pipe having a first end connected to a middle point of the outdoor heat exchanger and a second end connected to an inlet pipe of a compressor, and a processor configured to open and close the defrosting bypass valve according to a temperature of a refrigerant in an outdoor heat exchanger. At a beginning of a defrosting operation, the processor may open the defrosting bypass valve to bypass a portion of the refrigerant in the outdoor heat exchanger to the inlet pipe of the compressor, and if the temperature of the refrigerant in the outdoor heat exchanger exceeds a predetermined temperature, the processor may close the defrosting bypass valve, thereby achieving defrosting performance at an early stage of the defrosting operation.

IPC 8 full level  
**F25B 47/02** (2006.01); **F25B 13/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: CN EP KR US)  
**F24F 1/0003** (2013.01 - EP); **F24F 1/14** (2013.01 - EP); **F24F 1/30** (2013.01 - EP); **F24F 11/84** (2018.01 - EP); **F25B 13/00** (2013.01 - EP KR US); **F25B 41/20** (2021.01 - EP); **F25B 41/42** (2021.01 - US); **F25B 47/022** (2013.01 - CN); **F25B 47/025** (2013.01 - EP KR); **F25B 49/02** (2013.01 - EP KR); **F25D 21/002** (2013.01 - US); **F24F 2140/20** (2018.01 - EP); **F25B 2313/02322** (2013.01 - CN); **F25B 2313/0315** (2013.01 - EP); **F25B 2347/02** (2013.01 - CN); **F25B 2400/0403** (2013.01 - KR); **F25B 2600/2501** (2013.01 - KR); **F25B 2600/2515** (2013.01 - EP)

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)  
**US 2021254880 A1 20210819**; CN 113266965 A 20210817; DE 102021201479 A1 20210819; EP 4107454 A1 20221228; EP 4107454 A4 20240306; JP 2023513827 A 20230403; JP 7460783 B2 20240402; KR 20210104476 A 20210825; WO 2021167337 A1 20210826

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**US 202117177452 A 20210217**; CN 202110190140 A 20210218; DE 102021201479 A 20210217; EP 21758012 A 20210217; JP 2022549301 A 20210217; KR 20200019272 A 20200217; KR 2021002003 W 20210217