

Title (en)
Multi-type air conditioner and control method therefor

Title (de)
Multityp-Klimaanlage und Regelverfahren dafür

Title (fr)
Climatiseur multitype et son procédé de commande

Publication
EP 2532992 A1 20121212 (EN)

Application
EP 12170925 A 20120606

Priority
JP 2011128876 A 20110609

Abstract (en)
Provided are a multi-type air conditioner and a control method therefor, in which it is possible to swiftly reach an ideal zone-control region at a switchover from open-loop control to zone control and to the multi-type air conditioner with high COP while ensuring stable operation of a compressor. In a multi-type air conditioner (1) that includes a first electronic expansion valve (8) and a plurality of second electronic expansion valves (10A to 10F) corresponding to respective rooms, the first electronic expansion valve (8) is open-loop controlled for a predetermined period of time at a degree of opening calculated based on particular parameters, at a starting time of a heating operation and at a time of a change in the number of operated indoor units; is switched to zone control in which a discharge degree of superheat is controlled so as to fall within a target zone; and is provided with an expansion-valve control section (24) that corrects, when a temperature deviation of the discharge degree of superheat with respect to the target zone and a time variation of the discharge degree of superheat are large at the switchover to zone control, a degree of opening of the first electronic expansion valve for the next open-loop control in response thereto.

IPC 8 full level
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CPC (source: EP)
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Citation (applicant)
• JP 2005291553 A 20051020 - MITSUBISHI HEAVY IND LTD
• JP 3546544 B2 20040728
• JP 3495486 B2 20040209

Citation (search report)
• [XYI] EP 2261580 A1 20101215 - DAIKIN IND LTD [JP]
• [Y] US 2002129612 A1 20020919 - SAIKUSA TETSUJI [JP], et al
• [A] EP 2270405 A1 20110105 - DAIKIN IND LTD [JP]

Cited by
CN106482425A; CN114396715A; CN112762579A; CN106679214A; CN111520869A; EP3199889A1; CN103776131A; CN103884140A; CN105987551A; EP3062046A1; CN106482426A; CN106979641A; CN107655166A; CN114234353A; US10704814B2; US11137157B2; WO2020224037A1

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