

Title (en)

TERMINAL UNIT FOR CONDITIONING OF INDOOR AIR

Title (de)

ENDGERÄT ZUR KONDITIONIERUNG VON RAUMLUFT

Title (fr)

UNITÉ DE TERMINAL POUR LE CONDITIONNEMENT D'AIR INTÉRIEUR

Publication

EP 4276376 A1 20231115 (EN)

Application

EP 23171068 A 20230502

Priority

- US 202263340618 P 20220511
- US 202263403855 P 20220905

Abstract (en)

A system and terminal unit are provided for efficiently and effectively conditioning indoor air. Some embodiments address temperature control, humidity control, air quality control, while also introducing conditioned outdoor air. One aspect relates to a terminal unit that monitors and controls sensible and latent cooling rates to simultaneously meet temperature and humidity setpoints for the conditioned space. A sensor suite provides measurements for monitoring cooling rates and a control system controls actuators to meet the sensible and latent cooling requirements. The terminal unit may have a secondary recirculation air intake that bypasses the cooling coil to warm supply air prior to exiting the terminal unit. The terminal unit may be part of an air conditioning system where it is connected to a main branch of a hybrid branch controller which avoids having a home run to the HBC for each terminal unit.

IPC 8 full level

F24F 11/74 (2018.01); **F24F 13/04** (2006.01); **F24F 110/10** (2018.01)

CPC (source: EP)

F24F 11/74 (2017.12); **F24F 13/04** (2013.01); **F24F 2110/10** (2017.12)

Citation (applicant)

- US 11054167 B2 20210706 - FURMAN RICHARD [US], et al
- US 2022154972 A1 20220519 - FURMAN RICHARD C [US], et al

Citation (search report)

- [XAI] US 4210278 A 19800701 - OBLER HENRY D [US]
- [XAI] US 2018266710 A1 20180920 - MEIRAV UDI [US], et al
- [XAI] US 4841733 A 19890627 - DUSSAULT DAVID R [US], et al
- [XAI] KR 20050091197 A 20050915 - KIM IN TAE [KR]
- [A] US 9677777 B2 20170613 - KARAMANOS JOHN CHRIS [US], et al
- [A] US 2020217533 A1 20200709 - MIKULICA MIROSLAV [CZ], et al
- [A] US 2015369503 A1 20151224 - FLAHERTY JAMES [US], et al

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4276376 A1 20231115

DOCDB simple family (application)

EP 23171068 A 20230502