

Title (en)

Heating device, in particular for a motor vehicle air conditioning device

Title (de)

Heizeinrichtung insbesondere für eine Kraftfahrzeugklimaanlage

Title (fr)

Dispositif de chauffage notamment pour une climatisation de véhicule automobile

Publication

EP 2315493 B1 20170510 (DE)

Application

EP 09290807 A 20091021

Priority

EP 09290807 A 20091021

Abstract (en)

[origin: EP2315493A1] The heaters i.e. positive temperature coefficient heaters (1, 2), have a device supplying electric current to one of the electric resistance heaters with a time delay relative to the other electric resistance heater, where the device comprises two delay circuits (3). One of the delay circuits comprises exclusively electric and/or electronic components such as capacitor and/or resistor. Each delay circuit is connected in series to a parallel connected in parallel to the electric resistance heaters. An independent claim is also included for a method for operating a heater.

IPC 8 full level

H05B 1/02 (2006.01)

CPC (source: EP US)

H05B 1/0236 (2013.01 - EP US); **H05B 2203/02** (2013.01 - EP US)

Citation (examination)

EP 1681755 A2 20060719 - BERU AG [DE]

Citation (opposition)

Opponent : Webasto SE

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CN105828461A; DE102011057105A1; FR3008844A1; DE102011057105B4; WO2015010842A1; DE102018133529A1; WO2020127892A1; EP2315493B1

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

EP 2315493 A1 20110427; EP 2315493 B1 20170510; CN 102118892 A 20110706; US 2011091190 A1 20110421

DOCDB simple family (application)

EP 09290807 A 20091021; CN 201010512062 A 20101019; US 90849010 A 20101020