

Title (en)
Electric heating and control thereof

Title (de)
Elektrische Heizung und Steuerung

Title (fr)
Chauffage électrique et sa commande

Publication
EP 0840534 A1 19980506 (DE)

Application
EP 97118676 A 19971028

Priority
DE 19645095 A 19961101

Abstract (en)
The heating unit (5) comprises at least one carrier (3) as well as a heating member (9) releasing heat across the carrier, such as a layered resistance. The control unit(6) comprises at least one carrier (4) as well as electrical guide and control members, like at least one part of an electronic circuit (10). Preferably at least two carriers form a self-supporting unit, which can be inherently rigid. At least two carriers are joined by a firm connection which is designed to be a one-piece member with at least one carrier. Preferably two carriers form a one-piece item.

Abstract (de)
Ein Heiz-Modul (2) enthält außer dem unmittelbar den Träger (3, 4) beheizenden Schicht-Heizwiderständen (9) zu deren Steuerung bzw. Regelung eine elektronische Schaltung (10) einer Steuereinheit (6) sowie Mittel zur Abführung der Heizwärme von den Heizbereichen so, daß die elektronische Schaltung (10) nicht über etwa 125°C erwärmt wird. Dadurch läßt sich das Modul sehr einfach herstellen und montieren. <IMAGE>

IPC 1-7
H05B 1/02; **H05B 3/26**; **H05B 3/06**; **A47J 27/21**

IPC 8 full level
H05B 1/02 (2006.01); **H05B 3/00** (2006.01); **H05B 3/06** (2006.01); **H05B 3/26** (2006.01)

CPC (source: EP)
H05B 1/02 (2013.01); **H05B 1/0208** (2013.01); **H05B 3/00** (2013.01); **H05B 3/06** (2013.01); **H05B 3/26** (2013.01); **H05B 2203/011** (2013.01); **H05B 2203/017** (2013.01); **H05B 2203/021** (2013.01)

Citation (search report)

- [XY] US 4841170 A 19890620 - ECCLESTON LARRY E [US]
- [X] GB 2283156 A 19950426 - OTTER CONTROLS LTD [GB]
- [X] US 4374316 A 19830215 - INAMORI KAZUO [JP], et al
- [X] GB 1187595 A 19700408 - TELEFUNKEN PATENT [DE]
- [X] DE 2354719 A1 19750515 - LICENTIA GMBH
- [Y] GB 2228634 A 19900829 - OTTER CONTROLS LTD [GB]
- [A] US 5437002 A 19950725 - BENNETT STEVEN B [US]

Cited by
EP0967836A1; EP1157867A1; EP0901311A3; EP1492384A3; EP1530405A3; DE19738318C5; EP1530405A2; US6392207B2; EP1510381B2

Designated contracting state (EPC)
AT CH DE ES FR GB IT LI SE

DOCDB simple family (publication)
EP 0840534 A1 19980506; DE 19645095 A1 19980507

DOCDB simple family (application)
EP 97118676 A 19971028; DE 19645095 A 19961101