

Title (en)  
Over current protection device

Title (de)  
Überstromschutzvorrichtung

Title (fr)  
Dispositif de protection contre la surintensité

Publication  
**EP 2159812 A1 20100303 (EN)**

Application  
**EP 09010821 A 20090824**

Priority  
• JP 2008215528 A 20080825  
• JP 2008215530 A 20080825

Abstract (en)  
An over current protection device that surely prevents a burnout by opening a power supply circuit to an electric compressor upon an over current, includes a heater which generates heat by a current flowing through the electric compressor, a first over current relay unit which is serially connected to the heater, is thermoelectrically coupled thereto, and includes a first bimetal contact piece which opens a first contact at a temperature equal to or more than a first temperature, and recovers the first contact at a temperature lower than the first temperature and higher than 0°C, and a second over current relay unit which is serially connected to the heater, is thermoelectrically coupled thereto, and includes a second bimetal contact piece which opens a second contact at a temperature equal to or higher than a second temperature higher than the first temperature, and recovers the second contact only at a temperature lower than 0°C, where both the first over current relay unit and the second over current relay unit open the power supply circuit to the electric compressor.

IPC 8 full level  
**H01H 37/00** (2006.01); **H01H 37/54** (2006.01)

CPC (source: EP)  
**F25B 49/005** (2013.01); **H01H 37/006** (2013.01); **H01H 37/5427** (2013.01); **F25B 2500/06** (2013.01); **F25B 2700/151** (2013.01)

Citation (applicant)  
• JP H07201262 A 19950804 - SANYO ELECTRIC CO  
• JP H09180612 A 19970711 - YAMADA ELECTRIC MFG  
• JP H09180612 A 19970711 - YAMADA ELECTRIC MFG  
• EP 0858091 A2 19980812 - THERMIK GERAETEBAU GMBH [DE]

Citation (search report)  
• [XY] EP 0858091 A2 19980812 - THERMIK GERAETEBAU GMBH [DE]  
• [Y] FR 2698963 A1 19940610 - JAEGER [FR]  
• [A] US 6252492 B1 20010626 - FRANK JAMES P [US], et al  
• [DA] JP H07201262 A 19950804 - SANYO ELECTRIC CO

Cited by  
CN103681108A; EP2776767A4; CN102157301A; WO2013070090A1

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

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**EP 2159812 A1 20100303**

DOCDB simple family (application)  
**EP 09010821 A 20090824**