

Title (en)

CONTROL DEVICE AND METHOD FOR OPERATING A REFRIGERANT COMPRESSOR

Title (de)

STEUERUNGSEINRICHTUNG UND VERFAHREN ZUM BETREIBEN EINES KÄLTEMITTELKOMPRESSORS

Title (fr)

DISPOSITIF DE COMMANDE ET PROCÉDÉ POUR FAIRE FONCTIONNER UN COMPRESSEUR DE FLUIDE FRIGORIGÈNE

Publication

EP 3555474 B1 20210630 (DE)

Application

EP 17821607 A 20171219

Priority

- AT 502662016 U 20161219
- EP 2017083591 W 20171219

Abstract (en)

[origin: US2020088188A1] Electronic control device for a refrigerant compressor, comprising at least one drive unit and a compression mechanism which is in operative connection with the drive unit and has at least one piston which, in an operating state of the refrigerant compressor, moves back and forth in a cylinder of a cylinder block of the refrigerant compressor for the operational compression of refrigerant and is driven by a crankshaft of the drive unit, wherein the electronic control device of the refrigerant compressor is at least designed to detect at least one physical process parameter, preferably the rotational speed (n) of the crankshaft or the power consumption of the refrigerant compressor, and to detect a switch-off signal directed at the refrigerant compressor, said switch-off signal terminating a refrigerant compressor operating phase in which the refrigerant compressor is operated as intended with a positive operating torque; and is also designed to regulate a torque applied by the drive unit to the crankshaft so as to adjust the rotational speed (n) of the crankshaft, wherein the electronic control device is further designed to apply a braking torque to the crankshaft immediately after detecting the switch-off signal, wherein the braking torque is applied in the opposite direction to the positive torque acting during the operating phase and the value of this braking torque is a function of the detected physical process parameter, preferably the rotational speed (n) of the crankshaft or the power consumption of the refrigerant compressor.

IPC 8 full level

F04B 39/00 (2006.01); **F04B 49/02** (2006.01); **F04B 49/06** (2006.01)

CPC (source: AT EP US)

A63B 55/40 (2015.10 - EP); **A63B 55/60** (2015.10 - EP); **F04B 39/0027** (2013.01 - EP); **F04B 39/0094** (2013.01 - US); **F04B 49/02** (2013.01 - EP US); **F04B 49/065** (2013.01 - EP US); **A63B 55/40** (2015.10 - AT); **A63B 2210/50** (2013.01 - EP); **F04B 2201/1201** (2013.01 - EP); **F04B 2201/1203** (2013.01 - EP); **F04B 2201/127** (2013.01 - EP US); **F04B 2203/0208** (2013.01 - EP); **F04B 2203/0209** (2013.01 - EP)

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

DOCDB simple family (publication)

US 2020088188 A1 20200319; CN 110300850 A 20191001; CN 110300850 B 20210615; EP 3555474 A1 20191023; EP 3555474 B1 20210630

DOCDB simple family (application)

US 201716470779 A 20171219; CN 201780084761 A 20171219; EP 17821607 A 20171219