

Title (en)
COMPRESSOR CONTROL SYSTEM FOR A PORTABLE VENTILATOR

Title (de)
KOMPRESSOR-KONTROLLSYSTEM FÜR EINEN TRAGBAREN VENTILATOR

Title (fr)
SYSTEME DE COMMANDE DE COMPRESSEUR POUR UN VENTILATEUR PORTABLE

Publication
EP 1653904 A2 20060510 (EN)

Application
EP 04780095 A 20040803

Priority
• US 2004025197 W 20040803
• US 49242103 P 20030804

Abstract (en)
[origin: WO2005016217A2] A method and apparatus for controlling a brushless DC (BLDC) motor over a wide range of angular speeds is presented. Analog magnetic sensors provide continuous signal measurements related to the rotor angular position at a sample rate independent of rotor angular speed. In one embodiment, analog signal measurements are subsequently processed using an arctangent function to obtain the rotor angular position. The arctangent may be computed using arithmetic computation, a small angle approximation, a polynomial evaluation approach, a table lookup approach, or a combination of various methods. In one embodiment, the BLDC rotor is used to drive a Roots blower used as a compressor in a portable mechanical ventilator system.

IPC 1-7
A61H 1/00

IPC 8 full level
A47C 3/025 (2006.01); **A61M 16/00** (2006.01); **A62B 7/00** (2006.01); **F01C 1/18** (2006.01); **H02K 29/08** (2006.01); **H02P 6/06** (2006.01); **H02P 6/16** (2006.01); **A61M 11/00** (2006.01); **A61M 16/10** (2006.01); **A61M 16/12** (2006.01); **A61M 16/20** (2006.01)

IPC 8 main group level
A61H (2006.01)

CPC (source: EP)
A61M 16/0057 (2013.01); **A61M 16/0063** (2014.02); **A61M 16/0069** (2014.02); **A61M 16/026** (2017.07); **A61M 16/205** (2014.02); **A61M 16/206** (2014.02); **H02P 6/17** (2016.02); **A61M 11/00** (2013.01); **A61M 16/0066** (2013.01); **A61M 16/12** (2013.01); **A61M 2016/0021** (2013.01); **A61M 2016/0036** (2013.01); **A61M 2016/1025** (2013.01); **A61M 2202/0208** (2013.01); **A61M 2205/16** (2013.01); **A61M 2205/3317** (2013.01); **A61M 2205/3365** (2013.01); **A61M 2205/3368** (2013.01); **A61M 2205/3553** (2013.01); **A61M 2205/3569** (2013.01); **A61M 2205/3584** (2013.01); **A61M 2205/42** (2013.01); **A61M 2205/505** (2013.01); **A61M 2205/52** (2013.01); **A61M 2205/581** (2013.01); **A61M 2205/583** (2013.01); **A61M 2205/70** (2013.01); **A61M 2205/8206** (2013.01); **A61M 2205/8237** (2013.01); **A61M 2205/8262** (2013.01); **A61M 2209/086** (2013.01); **A61M 2230/205** (2013.01); **A61M 2230/432** (2013.01); **A61M 2230/435** (2013.01)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2005016217 A2 20050224; **WO 2005016217 A3 20060706**; AU 2004264324 A1 20050224; AU 2004264324 B2 20110303; BR PI0413261 A 20061010; CA 2531889 A1 20050224; CA 2531889 C 20160802; CA 2861511 A1 20050224; EP 1653904 A2 20060510; EP 1653904 A4 20070404; JP 2007501072 A 20070125; JP 2011152445 A 20110811

DOCDB simple family (application)
US 2004025197 W 20040803; AU 2004264324 A 20040803; BR PI0413261 A 20040803; CA 2531889 A 20040803; CA 2861511 A 20040803; EP 04780095 A 20040803; JP 2006522701 A 20040803; JP 2011099329 A 20110427