

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
12 May 2022 (12.05.2022)



(10) International Publication Number
WO 2022/099036 A1

(51) International Patent Classification:

H02K 1/16 (2006.01) *H02K 1/26* (2006.01)
H02K 1/17 (2006.01) *H02K 1/27* (2022.01)
H02K 1/22 (2006.01)

(21) International Application Number:

PCT/US2021/058289

(22) International Filing Date:

05 November 2021 (05.11.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

17/090,650 05 November 2020 (05.11.2020) US

(71) Applicant: **IN MOTION US, LLC** [US/US]; 3157 State Street, Blacksburg, Virginia 24060 (US).

(72) Inventors: **BROWN, Gerald W.**; PO Box 2881, Radford, Virginia 24143 (US). **COULSON, David M.**; 623 Seventh Street, Radford, Virginia 24141 (US).

(74) Agent: **WARD, III, Henry B.**; 100 North Tryon Street, Suite 4700, Charlotte, NC 28202 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available):

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,

SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))

(54) Title: GENERATOR FOR DRIVING A PREDEFINED LOAD

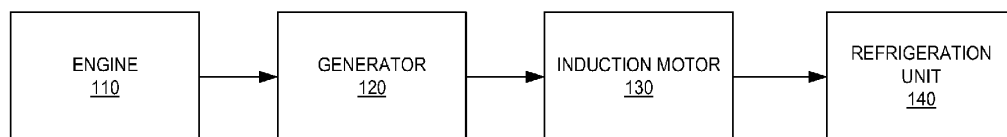


FIG. 1

(57) **Abstract:** Embodiments of the present invention are directed to a generator for connecting to a predefined load, where the generator is designed and constructed to meet one or more requirements of the predefined load. In specific embodiments the one or more requirements include providing a minimum output voltage while starting the predefined load at or above ambient temperature and providing an output voltage that does not exceed an upper voltage limit while being driven at full speed without any load current at or below ambient temperatures, while maintaining high efficiency under a specified full load running condition and keeping the overall cost and size of the generator low.



WO 2022/099036 A1