US 20220352748A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2022/0352748 A1

CARNEMARK et al. (43) Pub. Date: Nov. 3, 2022

(54) SYSTEMS AND METHODS FOR SUPPLYING UNINTERRUPTIBLE POWER

(71) Applicant: **Inertech IP LLC**, Plano, TX (US)

(72) Inventors: **Jakob CARNEMARK**, Fairfield, CT (US); **Robert S. STONE**, Youngsville, NC (US)

(21) Appl. No.: **17/697,905**

(22) Filed: **Mar. 17, 2022**

Related U.S. Application Data

(63) Continuation of application No. 16/653,988, filed on Oct. 15, 2019, now Pat. No. 11,296,546.

(60) Provisional application No. 62/745,465, filed on Oct. 15, 2018.

Publication Classification

(51) **Int. Cl.**

H02J 9/08 (2006.01)

H02J 9/06 (2006.01)

(52) **U.S. Cl.**

CPC ***H02J 9/08*** (2013.01); ***H02J 9/062*** (2013.01)

(57) **ABSTRACT**

Electrical systems for providing uninterruptible power to a critical load. One electrical system includes a ring bus, multiple power blocks including one or more generators electrically coupled to the ring bus, and uninterruptible power supplies (UPSs) electrically coupled to the ring bus. In some aspects, the electrical system includes a UPS switchgear electrically coupled between the ring bus and the UPSs. In other aspects, the UPSs are electrically coupled together in parallel. Another electrical system includes a utility switchgear, UPS blocks electrically coupled together in parallel and electrically coupled to the utility switchgear via transformers, low voltage (LV) power blocks electrically coupled to the UPS blocks, and medium voltage (MV) switchgear electrically coupled to the UPS blocks via transformers. Each of the LV power blocks include one or more generators.