

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0230722 A1 **CONWAY**

Jul. 20, 2023 (43) **Pub. Date:**

(54) POWER CABLE WHICH REDUCES SKIN EFFECT AND PROXIMITY EFFECT

(71) Applicant: TE Connectivity Solutions GmbH, Schaffhausen (CH)

(72) Inventor: Bruce Raymond CONWAY, Freemont, CA (US)

Assignee: TE Connectivity Solutions GmbH, Schaffhausen (CH)

(21) Appl. No.: 18/190,162

(22) Filed: Mar. 27, 2023

Related U.S. Application Data

(62) Division of application No. 17/315,816, filed on May 10, 2021, now Pat. No. 11,640,861.

Publication Classification

(51) Int. Cl. H01B 7/30 (2006.01)H01B 9/00 (2006.01)

U.S. Cl. CPC H01B 7/303 (2013.01); H01B 9/006 (2013.01)

ABSTRACT

A power cable having a central ground conductor. Phase interweave power conductors are positioned about the central ground conductor. Individual phase interweave power conductors have the same diameter. The individual phase interweave power conductors have a cross sectional area which is optimized. Each of the individual phase interweave power conductors is configured to support 100% cross sectional usage to maximize power carrying capability. The power cable reduces the skin effect of the power cable and the proximity effect of the power cable.

