



US 20220361308A1

(19) **United States**(12) **Patent Application Publication**
ABBO et al.(10) **Pub. No.: US 2022/0361308 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **A POWER SUPPLY DEVICE, A POWER
RECEIVING DEVICE AND POWER SUPPLY
AND RECEIPT METHODS**(71) Applicant: **SIGNIFY HOLDING B.V.,
EINDHOVEN (NL)**(72) Inventors: **ANTENEH ALEMU ABBO,
EINDHOVEN (NL); FRITS TOBI DE
JONGH, BEEK EN DONK (NL);
MARCEL BEIJ, SINT OEDENRODE
(NL); JOHANNES PETRUS
WERNARS, MEGEN (NL)**(21) Appl. No.: **17/638,485**(22) PCT Filed: **Aug. 21, 2020**(86) PCT No.: **PCT/EP2020/073536**

§ 371 (c)(1),

(2) Date: **Feb. 25, 2022**(30) **Foreign Application Priority Data**

Sep. 6, 2019 (EP) 19195821.4

Publication Classification(51) **Int. Cl.**
H05B 47/185 (2006.01)(52) **U.S. Cl.**
CPC **H05B 47/185** (2020.01); **H05B 47/18**
(2020.01)(57) **ABSTRACT**

In one aspect, a device is adapted to transmitting power to, or receive power from, a remote device over first and second communication lines (DALI+, DALI-) and to communicate with the remote device over the first and second communication lines. A first driver implements a first communications protocol which comprises coupling the first and second communication lines together to encode a first signal level and isolating the first and second communication lines from each other to encode a second signal level. This may be a DALI protocol. A second driver implements a second communications protocol which comprises modulating the first communication line with a signal having a low modulation depth. The second communications protocol means there is always a voltage difference between the two communication lines to enable continuous power harvesting. A second aspect relates to efficient power transfer by disabling a current limiter function, when possible.

