Title (en)

SYSTEMS AND METHODS FOR INTEGRATING A STEP-DOWN TRANSFORMER INTO AN ELECTRIC VEHICLE CHARGING STATION

Title (de)

SYSTEME UND VERFAHREN ZUR INTEGRATION EINES ABWÄRTSTRANSFORMATORS IN EINE ELEKTROFAHRZEUGLADESTATION

Title (fr)

SYSTÈMES ET PROCÉDÉS D'INTÉGRATION D'UN TRANSFORMATEUR ABAISSEUR DANS UNE BORNE DE CHARGE POUR VÉHICULES ÉLECTRIQUES

Publication

EP 4355609 A1 20240424 (EN)

Application

EP 22741622 A 20220614

Priority

- US 202163210363 P 20210614
- US 202217839238 A 20220613
- US 2022033383 W 20220614

Abstract (en)

[origin: WO2022266064A1] Systems and methods are provided herein for integrating a step-down transformer into an electric vehicle charging station (EVCS). Integrating a step-down transformer into an EVCS optimizes electric vehicle charging and provides for more flexible EVCS placement. For example, the EVCS's power source (e.g., electrical room) can transmit power to the EVCS at a higher voltage (e.g., 480 V) because the power will be stepped down by the EVCS before charging an electric vehicle at a lower voltage (e.g., 240 V). Transmitting power at a higher voltage reduces power loss during transmission so electric vehicles can be charged more efficiently.

IPC 8 full level

B60L 53/14 (2019.01); **B60L 53/30** (2019.01); **B60L 53/31** (2019.01); **B60L 53/63** (2019.01); **B60L 53/65** (2019.01); **B60L 53/67** (2019.01); **B60L 58/12** (2019.01); **H02J 7/00** (2006.01)

CPC (source: EP)

B60L 53/14 (2019.02); **B60L 53/305** (2019.02); **B60L 53/31** (2019.02); **B60L 53/63** (2019.02); **B60L 53/65** (2019.02); **B60L 53/67** (2019.02); **B60L 58/12** (2019.02); B60L 2210/22 (2013.01); B60L 2240/72 (2013.01); B60L 2250/12 (2013.01); B60L 2250/16 (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022266064 A1 20221222; EP 4355609 A1 20240424

DOCDB simple family (application)

US 2022033383 W 20220614; EP 22741622 A 20220614