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(71) Applicant: **ROCSYS B.V.** [NL/NL]; Delftweg 65, 2289BA
Rijswijk (NL).

(72) Inventors: **VAN DEURZEN, Kanter**; Rijswijk (NL).
VAN DER WEIJDE, Johannes Oosten; Rijswijk (NL).
BOUMAN, Crijn; Delftweg 65, Rijswijk (NL).

(74) Agent: **IP MAISON**; Sportweg 6, 2751 ER Moerkapelle
(NL).

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(54) Title: SYSTEM AND METHOD FOR SUPPORTING THE AUTONOMOUS CHARGING OF AN ELECTRIC VEHICLE

(57) Abstract: A system for supporting the autonomous connection of an EV charging connector into an EV inlet, the system comprising: - a controllable robot adapted to support the EV charging connector; - an imaging sensor in communication with the robot, the imaging sensor adapted to capture image data within a field of view; and - a controller including a processor and a non-transitory memory storing instructions executed by the processor to configure the controller, the controller configured to: - determining the presence of at least one target component within the field of view, the target component selected from at least one of the EV charging connector and a moveable component of the robot, - when the target component is found to be present, analysing an image received from the image sensor and determining a pose of the target component, utilizing at least the received image and a pose recognition algorithm, and - controlling the robot based on the determined pose.



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