Amphenol®

Application Note

IAN-130





ER Series SAE J1772

BACKGROUND

Electric vehicle (EV) chargers using the SAE J1772 connector are crucial for transferring electrical energy from the grid to the vehicle's battery, primarily used in Level 1 and Level 2 charging. This standardized connector ensures compatibility and safety across various EV models and charging stations. As EV adoption grows, the SAE J1772 connector remains a key component in supporting reliable and efficient charging solutions for sustainable transportation.

PROBLEM

As electrical requirements for charging continue to evolve, there is a growing need for reliable solutions that support higher power levels, which current standard charging guns cannot adequately provide. In order to meet the needs for lower temperature rise, lower operational force, and higher mating cycles in the field, advanced designs are essential. With the global push towards electrification, there is an increasing demand for higher performance and uniquely compact designs capable of withstanding harsh environments.

AIO SOLUTION

Introducing the ER series SAE J1772 charging gun and inlet, which not only meets but exceeds the requirements for an integrated design within the EV charging market. This mating interface, based on SAE J1772 standards, accommodates wider tolerances to absorb various manufacturer variations and features a secondary locking mechanism to prevent unintentional or intentional interruptions before charging is complete. Additionally, the unique plating and contact design ensure compliance with SAE J1772 requirements, while the receptacle terminals offer an easy installation solution.