

## **SAE International Publishes Updated Standard for On-Route Mechanized Conductive EV Charging Systems for Buses**

*SAE J3105 Standard Promotes the Safe Testing and Performance of Mechanized Conductive Power Transfer Systems.*

WARRENDALE, Pa. ([PRWEB](#)) January 23, 2020 -- SAE International, announced today it has published its latest standard, [SAE J3105®: Electric Vehicle Power Transfer System Using Conductive Automated Connection Devices](#), along with three new tributary documents. The standard covers the general physical, electrical, functional, testing, and performance requirements for a mechanized (hands-free) conductive power transfer system primarily for transit buses using an overhead coupler capable of, but not limited to, transferring direct current (DC) power.

According to a [report published in 2019 by P&S Intelligence](#), the U.S. electric bus market size is projected to reach \$1,948.5 million by 2024. The market growth is primarily driven by several federal, regional, and state grants and incentive programs. In addition, low cost of ownership, coupled with low maintenance cost of electric buses, specially battery electric buses (BEB) is expected to benefit the market during the forecast period.

As the market expands, the need for the continued standardization of DC power distribution remains, and SAE J3105 addresses the many interfaces required to ensure power delivery is consistent. SAE J3105 defines a conductive power transfer method, including the curbside electrical contact interface, the vehicle connection interface, the electrical characteristics of the DC supply and the communication system. It also covers the functional and dimensional requirements for the vehicle connection interface and supply equipment interface.

“SAE International remains focused on advancing mobility solutions for the benefits of humanity, so as the electric bus market expands in the United States, it is imperative that we modify our standards and approach to ensure safe and reliable usage,” said Jack Pokrzywa, Director of Global Ground Vehicle Standards, SAE International. “SAE J3105 will guide this burgeoning industry to safe and efficient charging solutions that minimize downtime and promote long-term performance for heavy duty applications.”

The publication of the SAE J3105 Standard was published by SAE International’s Hybrid EV group and is accompanied by three supporting documents that detail the connections in J3105:

- SAE J3105/1™: Infrastructure-Mounted Cross Rail Connection covers the connection interface relevant requirements for an electric vehicle power transfer system using a conductive automated connection device based on a cross-rail design.
- SAE J3105/2™: Vehicle-Mounted Pantograph Connection covers the connection interface relevant requirements for an electric vehicle power transfer system using a conductive automated charging device based on a conventional rail vehicle pantograph design.
- SAE J3105/3™: Enclosed Pin and Socket Connection covers the main safety and interoperability relevant requirements for an electric vehicle power transfer system using a conductive automated charging device based on an enclosed pin and socket design.

More information on SAE J3105 is available at [www.sae.org/standards/content/j3105\\_202001/](http://www.sae.org/standards/content/j3105_202001/).

### About SAE International

SAE International is a global association committed to advancing mobility knowledge and solutions for the



benefit of humanity. By engaging nearly 200,000 engineers, technical experts and volunteers, we connect and educate mobility professionals to enable safe, clean, and accessible mobility solutions. We act on two priorities: encouraging a lifetime of learning for mobility engineering professionals and setting the standards for industry engineering. We strive for a better world through the work of our philanthropic SAE Foundation, including programs award-winning programs like A World in Motion® and the Collegiate Design Series™. More at [www.sae.org](http://www.sae.org).



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