

New Products

Over 150 kW Class CHAdeMO Liquid-Cooled Charging Cable and Connector

We have developed a liquid-cooled charging cable and connector (with a rated charging current of 400 A) for over 150 kW class DC high-power EV chargers conforming to the CHAdeMO specification ver.2.0. Recently, the battery capacity of EVs is on the increase, and there is a strong demand for shortening battery charging time. Consequently, there is a growing need to introduce DC high-power EV chargers to the market.

We have been selling non-forced cooled charging cables and connectors conforming to the CHAdeMO specification ver.1.1 (with a rated charging current of 125 A) for 50 kW class DC high-power chargers. This time, we have also developed and released a liquid-cooled charging cable and connector with a rated charging current of higher than three times that of the conventional non-forced cooled models by applying liquid cooling technology. The new charging cable and connector are designed to be cooled by forcing the heat generated due to higher charging currents to dissipate through the circulation of an electrically insulating liquid coolant. The coolant flows in the cooling tubes integrated into the charging cable and connector.

The liquid cooling technology described above has made it possible to suppress the increase in size of the cable conductors and connector terminals. As a result, we have realized a charging cable and connector with a weight and size that does not affect the charging operation.

We will continue to provide our innovative and user-friendly liquid cooled charging cables and connectors to further shorten battery charging time and improve charging operation. Through such efforts, we will contribute to the spread of EVs and the realization of a decarbonized society.

Table 1. Product specifications.

Compliant standard		CHAdeMO ver.2.0
Rated output		DC 500 V / 400 A
Charging connector	Approximate weight	1.3 kg
	Approximate size	192 mm × 286 mm × 79 mm
Charging cable	Approximate weight	1.9 kg/m
	Approximate diameter	39 mm



(a) Charging connector.



(b) Charging cable and connector.

Fig. 1. Overview of over 150 kW class CHAdeMO liquid-cooled charging cable and connector.

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