

Joint Media Factsheet

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Singapore Elevates National Standard for Electric Vehicle (EV) Charging Systems to Support Safer and More Reliable Charging Infrastructure

To support the continued expansion of Singapore's electric vehicle (EV) charging network and the adoption of emerging charging technologies, the national EV charging standard, Technical Reference 25 (TR25:2022) will be elevated to a Singapore Standard, SS 722 with effect from 1 April 2026. The standard will also be expanded to include updated specifications and guidelines for the design, installation, maintenance and operation of EV charging systems in Singapore to enhance their safety and reliability. This elevation also supports the continued expansion of Singapore's charging network through standardised technical practices that ensure consistent quality across charging stations island-wide.

2 The upgrade to SS 722 follows a review undertaken by a public-private Working Group¹ appointed by the Singapore Standards Council, overseen by Enterprise Singapore, and supported by the Land Transport Authority. The Institution of Engineers, Singapore – Standards Development Organisation managed the development of this standard. The review examined the need for emerging charging solutions within the evolving EV landscape and specific infrastructure requirements to ensure the safe installation, maintenance and operation of charging stations.

3 The key changes and expanded scope introduced in SS 722 are summarised below.

a. Part 1 – Electrical Safety and General Requirements

- This covers the general requirements for EV charging systems and has been updated to cater for new types of EV charging systems such as wireless charging stations, mobile charging systems, and battery charge and swap stations for four-wheeled vehicles.

b. Part 2 – Low-Powered Charging and Wireless Power Transfer (WPT) Systems

- Under the new standard, vehicles fitted with a dedicated wireless power receiver can be charged simply by parking over a charging pad, without needing to plug into a charging station. The standard includes safety requirements to ensure that wireless EV charging stations operate safely and do not pose any safety hazards to drivers or the public.

¹ The Working Group comprised representatives from across the EV ecosystem (see Annex A for the full members list), including EV and charging equipment manufacturers, testing and certification bodies, academia, trade associations, and professional engineers. The Working Group last conducted a review from September 2020 to January 2022.

- It includes cybersecurity requirements for Charging Station Management Systems and electric vehicle charging equipment communications to protect charging infrastructure.
- It also provides guidance on smart grid integration and supports smart charging capabilities for more efficient energy management.

c. Part 3 – Direct Current (DC) EV Charging System

- Part 3 focuses on DC charging stations and has been updated to align with the latest International Electrotechnical Commission (IEC) standard. The updated requirements call for stricter temperature controls, enhanced integrity checks on cable insulation, and more precise power output. Together, these improvements create a safer and more reliable charging experience for EV users.

d. Part 4 – Battery Swapping and Mobile Charging System

- On top of existing specifications for electric motorcycles, the new standard will cover battery charge and swap stations for four-wheelers, such as electric heavy goods vehicles (eHGV).
- It will also introduce requirements for mobile EV charging systems – DC EV chargers connected to a battery system and mounted on a vehicle such as a van or truck – that can provide on-demand charging at any location.
- Battery testing requirements are included to ensure the safety and reliability of the battery systems.

4 Chargers that have already been type-approved under the EV Charging Act based on the earlier TR 25 standards do not need to be re-certified to the new SS standard. There will be a transition period of two and a half years before compliance with SS 722 becomes mandatory for new chargers.

5 SS 722 can be purchased from the Singapore Standards eShop at www.singaporestandardseshop.sg.

About Technical Reference 25

The Technical Reference 25 (TR 25) was introduced in 2010 to set technical safety requirements for EV charging in Singapore and has been progressively updated as EV technologies evolved. Notably, its scope was expanded in the 2022 revision to cover higher powered charging, battery swapping for electric motorcycles, and periodic inspections by equipment specialists. The most recent amendment in 2025 aligned AC charging requirements with updated international IEC electromagnetic compatibility standards and revised the definition of restricted access locations to include townhouses.

About the Land Transport Authority, Singapore

The Land Transport Authority (LTA) is responsible for planning, designing, building and maintaining a land transport infrastructure and system that is reliable, connected, sustainable, safe and meets diverse transport needs.

A good land transport system is the lifeline of the metropolis and critical enabler of the economy. Imagine a future where getting to your next destination is easy and seamless, with options that connect you to the places and people you love. Whether it's by rail, road, buses, taxis, private hire cars, or through active mobility, LTA is working towards a future with greener and more sustainable transport to transform how we live, work, study and play. We also promote a safe, gracious and inclusive transport system for a pleasant journey for all.

About Enterprise Singapore

Enterprise Singapore is the government agency championing enterprise development.

We partner committed companies to build capabilities, innovate and go global. We drive growth – empowering local businesses and shaping industries, anchoring Singapore as a trade and startup hub, and establishing trust in our products through quality and standards.

We're here, for wherever you're growing.

Visit www.enterprisesg.gov.sg for more information.

About Singapore Standards Council

The Singapore Standards Council (SSC) facilitates the development, promotion and review of Standards and Technical References in Singapore. This work is done through partnerships with the industry, academia and government organisations, under the national standardisation programme overseen by Enterprise Singapore.

Visit www.enterprisesg.gov.sg/standards for more information.

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- BYD Singapore
- Defence Science and Technology Agency
- Energy Market Authority
- Kempower
- Land Transport Authority
- Nanyang Technological University, Singapore
- National University of Singapore
- NIO Inc
- Optimulate Pte Ltd
- PSA International Pte Ltd
- Power-Up Tech Pte Ltd
- Red Dot Mobility Pte Ltd
- Schneider Electric Singapore Pte Ltd
- Singapore Electrical Contractors and Licensed Electrical Workers Association
- Singapore Electrical Trades Association
- Singapore Institute of Technology
- Singapore Motor Cycle Trade Association
- Singapore Technologies Engineering Ltd
- SGS Testing & Control Services Singapore Pte Ltd
- SP Mobility Pte Ltd
- Strides Frontiers Pte Ltd
- Tesla Motors Singapore Pte Ltd
- TÜV SÜD Asia Pacific Pte Ltd
- vFlowTech Pte Ltd
- Xnergy Autonomous Power Technologies Pte Ltd

² The experts participated in their own capacity, and do not represent their organisation.