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EU AND ISO - DIRECTIVES AND STANDARDS FOR EV

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Partnership for Promotion and Popularization of Electrical Mobility through Transformation and Modernization of WB HEIs Study Programs/PELMOB

Call: ERASMUS-EDU-2022-CBHE-STRAND-2

Project Number: 101082860

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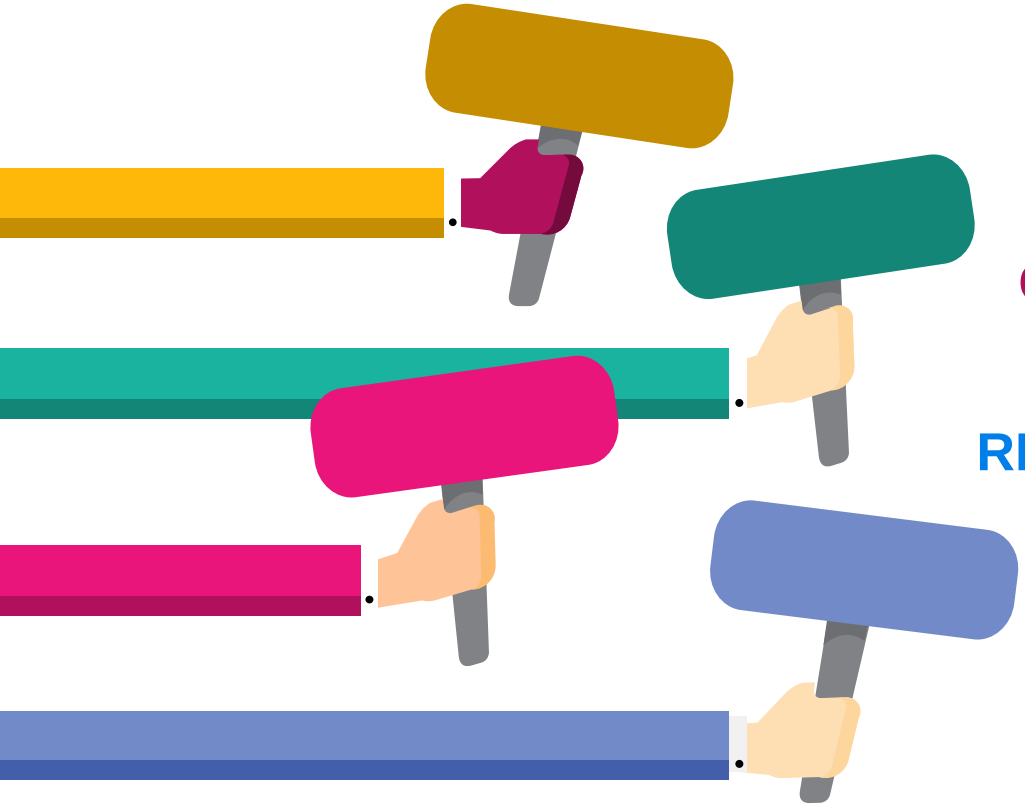

INTRODUCTION

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- DIRECTIVES OF EUROPE UNION
- INTERNATIONAL STANDARDS ISO

CLEAN VEHICLES DIRECTIVE

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- PROMOTES CLEAN MOBILITY SOLUTIONS IN PUBLIC PROCUREMENT TENDERS;
- ENCOURAGES THE PURCHASE OF VEHICLES WITH ZERO HARMFUL GAS EMISSIONS;
- ELECTRICITY, HYDROGEN, BIOFUELS, SYNTHETIC AND PARAFFIN FUELS OR GAS (CNG, LNG, LPG, BIOMETHANE);
- PLUG-IN HYBRID BUSES;
- FROM AUGUST 2, 2021, TO DECEMBER 31, 2025: 45% OF NEW BUSES NEED TO BE "CLEAN"
- FROM JANUARY 1, 2026, TO DECEMBER 31, 2030: 65% OF NEW BUSES NEED TO BE "CLEAN".

RENEWABLE ENERGY DIRECTIVE

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- 32% RENEWABLE ENERGY SOURCES BY 2030;
- EFFICIENT CLIMATE AND ENERGY PLANNING;
- EXPANSION OF RENEWABLE ENERGY SOURCES;
- PROMOTION OF RENEWABLE ENERGY SOURCES;
- MEASURES IN THE HEATING AND TRANSPORT SECTOR.

ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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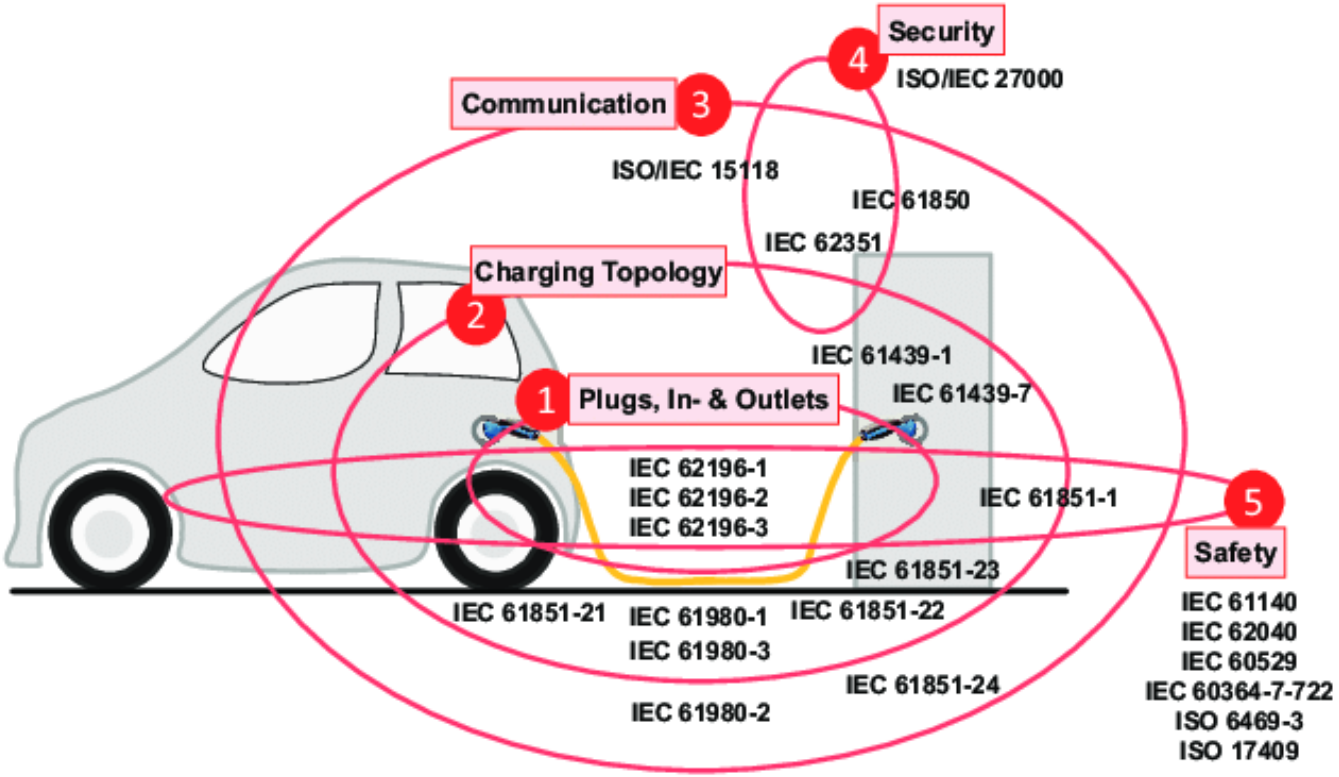
ELECTRIC VEHICLES SAFETY



ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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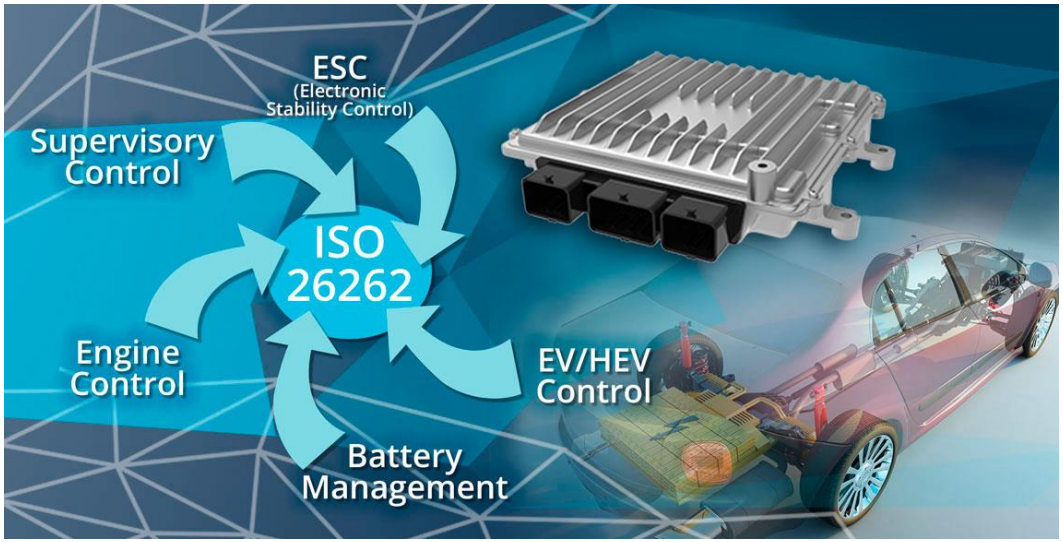
ISO 26262 – ROAD VEHICLES — FUNCTIONAL SAFETY

THIS INTERNATIONAL STANDARD DEFINES REQUIREMENTS AND GUIDELINES FOR FUNCTIONAL SAFETY IN ELECTRICAL AND ELECTRONIC SYSTEMS IN VEHICLES. ITS GOAL IS TO IDENTIFY, ANALYZE AND CONTROL RISKS ASSOCIATED WITH ELECTRICAL SYSTEMS.



ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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ISO 6469 - ELECTRICALLY PROPELLED ROAD VEHICLES

THIS STANDARD SETS REQUIREMENTS FOR THE SAFETY OF ELECTRIC VEHICLES DURING ALL PHASES OF THEIR LIFE CYCLE, INCLUDING PRODUCTION, USE AND RECYCLING.

ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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ISO 21498 - ELECTRICAL TESTS FOR COMPONENTS

THIS STANDARD IS AIMED AT IDENTIFYING POTENTIAL HAZARDS AND ASSESSING RISK IN RELATION TO VEHICLES, INCLUDING ELECTRIC VEHICLES.

ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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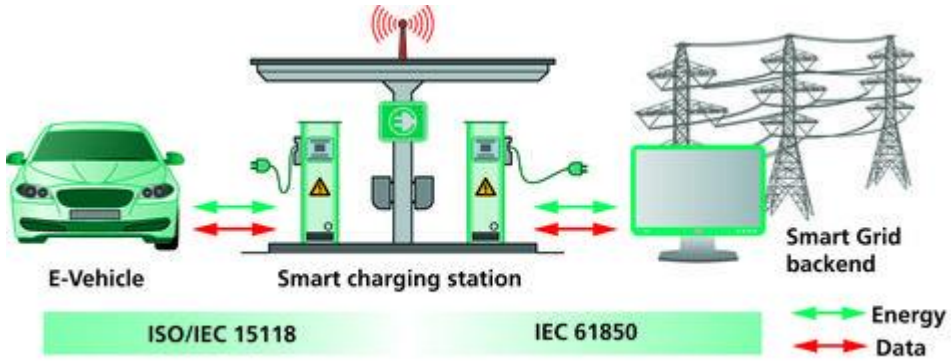
ISO 15118 - COMMUNICATION BETWEEN VEHICLES AND CHARGING INFRASTRUCTURE

THIS STANDARD DEFINES THE COMMUNICATION PROTOCOLS BETWEEN ELECTRIC VEHICLES AND CHARGING INFRASTRUCTURE TO ENSURE SAFE AND EFFICIENT COMMUNICATION.



ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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UN-ECE R100 - STANDARD REGULATION TESTING

THIS SET OF REGULATIONS REGULATES ASPECTS OF ELECTRIC POWER FOR VEHICLES, INCLUDING SAFETY AND PERFORMANCE REQUIREMENTS

ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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IEC 62196 - CHARGING ELECTRIC VEHICLES

THIS STANDARD DEFINES PLUGS, SOCKETS, CONNECTORS AND CABLES FOR CHARGING ELECTRIC VEHICLES. IT RELATES TO THE SAFETY AND PERFORMANCE OF CHARGING SYSTEMS.

	N.America Type1	EU Type2	China	Japan
AC	 SAE J1772 /IEC 62196-2	 IEC 62196-2	 GB/T 20234.2-2011	 IEC 62196-2
DC	 SAE J1772 /IEC 62196-3	 IEC 62196-3	 GB/T 20234.3-2011	 CHAdeMO

ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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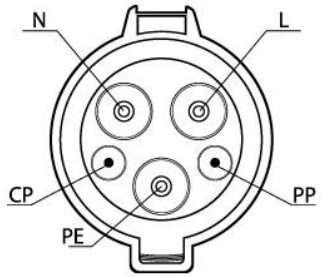
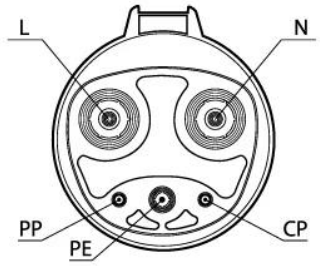
SAE J1772 - ELECTRIC CONNECTOR FOR VEHICLES

THIS STANDARD DEFINES THE CHARACTERISTICS OF ELECTRICAL CONNECTORS AND CHARGING FOR ELECTRIC VEHICLES, INCLUDING SAFETY





ISO STANDARDS FOR ELECTRIC VEHICLES AND SAFETY

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UL 2580 - STANDARD FOR ELECTRIC VEHICLE SAFETY

THIS STANDARD, DEVELOPED BY THE AMERICAN ASSOCIATION FOR LABORATORIES (UL), DEFINES THE SAFETY REQUIREMENTS FOR ELECTRIC VEHICLES, INCLUDING BATTERIES, ELECTRICAL SYSTEMS AND OTHER COMPONENTS.

ADVANCED DRIVER ASSISTANCE SYSTEMS

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THANK YOU FOR ATTENTION