



TECHNICAL SPECIFICATION

**Intelligent Transport Systems (ITS);
Infrastructure to Vehicle Communications;
Part 3: Communications system for the planning and
reservation of EV energy supply using wireless networks**

Reference

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Intelligent Transport Systems (ITS).

The present document is part 3 of a multi-part deliverable covering the infrastructure to Vehicle Communication as identified below:

- Part 1: "Electric Vehicle Charging Spot Notification Specification";
- Part 2: "Communication system specification to support application requirements for Tyre Pressure Monitoring System (TPMS)";
- Part 3: "Communications system for the planning and reservation of EV energy supply using wireless networks".**

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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1 Scope

The present document specifies wireless application protocols and messages supporting the discovery of offered services (completing related discovery protocols), charging spot reservation (and possible renegotiation), pre-payment of the service reservation in the vehicle (involving pre-payment support or contract validation), and application-level logical pairing of the Electric Vehicle to a selected charging spot. Requirements regarding the underlying transport and network layer services are also defined.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] ISO/IEC 15118-2: "Road vehicles - Vehicle-to-Grid Communication Interface - Part 2: Network and application protocol requirements".
- [2] DIN SPEC 91286:2011: "Electric mobility - Schemes of identifiers for E-Roaming - ContractID and Electric Vehicle Supply Equipment ID".
- [3] IETF RFC 5246: "The Transport Layer Security (TLS) Protocol Version 1.2".
- [4] IETF RFC 6347: "Datagram Transport Layer Security Version 1.2".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI TS 101 556-1: "Intelligent Transport Systems (ITS); Infrastructure to Vehicle Communication; Electric Vehicle Charging Spot Notification Specification".
- [i.2] IEC 61851-3: "Electric vehicle conductive charging system - Part 3: Communication protocol between electric vehicle charging station and electric vehicle".
- [i.3] ISO/IEC 15118-7: "Road vehicles - Vehicle-to-Grid Communication Interface - Part 7: Network and application protocol requirements for wireless communication".
- [i.4] ISO/IEC 15118-3: " Road vehicles -- Vehicle to grid communication interface -- Part 3: Physical and data link layer requirements".
- [i.5] ISO/IEC 15118-8: " Road vehicles -- Vehicle to grid communication interface -- Part 8: Physical layer and data link layer requirements for wireless communication".