

English version

**Conductive charging for electric vehicles -
Part 2: Communication protocol between off-board charger
and electric vehicle**

Charge conductive
pour véhicules électriques -
Partie 2: Protocole de transmission
entre le chargeur extérieur
et le véhicule électrique

Konduktive Ladung
von Elektrofahrzeugen -
Teil 2: Kommunikationsprotokoll zwischen
externem Ladegerät und Elektrofahrzeug

This Technical Specification was approved by CENELEC on 2007-03-01.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This Technical Specification was prepared by the CENELEC Reporting Secretariat 69, Electric road vehicles and electric industrial trucks.

The text of the draft was submitted to vote in accordance with the Internal Regulations, Part 2, Subclause 11.3.3.3 and was approved by CENELEC as CLC/TS 50457-2 on 2007-03-01.

This Technical Specification is to be used in conjunction with EN 61851-1.

This Technical Specification supersedes ENV 50275-2-4:1998.

In the framework of the conversion of ENV 50275-2-4, Clause 2 has been updated.

The following date was fixed:

- latest date by which the existence of the CLC/TS
has to be announced at national level (doa) 2008-07-01

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Introduction

This Technical Specification "Conductive charging for electric vehicles" is published in separate parts according to the following structure:

This Technical Specification covers the physical, electrical and performance requirements concerning devices for the charging system, when they are not already standardized.

Part 1: D.C. charging station.

Part 2: Communication protocol between off-board charger and electric vehicle.

1 Scope

This Technical Specification applies to the communication data link between external charger and electric road vehicle for the charging procedure, using the most common communication link.

This Part 2 applies to communication data link between the off-board charging system with direct current and electric road vehicles.

The aspects covered are the physical layer, the data link layer and the communication applicative layer.

This Technical Specification does not cover communication between dedicated off-board charger and their electric vehicle.

Annex A gives an example of normal operation.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14229	Road vehicles - Diagnostic systems - Diagnostic services specifications
ISO 14230-1	Keyword Protocol 2000 – Part 1: Physical layer
ISO 14230-2	Keyword Protocol 2000 – Part 2: Data link layer
ISO 14230-3	Keyword Protocol 2000 – Part 3: Application layer

3 Definitions

For the purposes of this document, the following terms and definitions apply.

3.1

vehicle charging control unit (VCCU)

system embedded in the electric vehicle able to command and control the charging parameters of the off-board charger

3.2

charging parameters

parameters including set points needed by the off-board charger to generate a current adapted to the vehicle battery

3.3

charging values

values measured during charging process