

## **Mini-couplers for the interconnection of electrical mains supplied equipment in road vehicles**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50066:2002 sisaldab Euroopa standardi EN 50066:1992 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50066:2002 consists of the English text of the European standard EN 50066:1992.</p> <p>This document is endorsed on 18.12.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies general safety requirements for mini-couplers with a rated current of 16 A and a rated voltage of 250 V a.c. single phase, applied for the interconnection of mains supplied equipment in road vehicles, e.g. to supply electrical heaters, battery chargers and cab heaters.</p>	<p><b>Scope:</b></p> <p>This standard specifies general safety requirements for mini-couplers with a rated current of 16 A and a rated voltage of 250 V a.c. single phase, applied for the interconnection of mains supplied equipment in road vehicles, e.g. to supply electrical heaters, battery chargers and cab heaters.</p>
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ICS 29.120.30

**Võtmesõnad:** buses (vehicles), electrical e, electrical equipment, electrical safety, heaters, heating equipment, insulating resistance, motor vehicles, plug-and-socket connection, safety, safety requirements, specification (approval), specifications, strength of materials

UDC 621.316.541:629.11

Descriptors: Motor vehicles, electric power distribution network, appliance interconnection, electric connectors, mini-couplers, definition, specification, marking, construction, tests, dimension

English version

## **Mini-couplers for the interconnection of electrical mains supplied equipment in road vehicles**

Mini-connecteurs d'interconnexion de l'équipement électrique raccordé au réseau dans les automobiles, autocars, caravanes et véhicules analogues

Steckvorrichtungen für das Verbinden der elektrischen Einrichtungen mit Netzanschluß in Kraftwagen, Omnibussen und dergleichen

This European Standard was approved by CENELEC on 24 March 1992. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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# **CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This standard was prepared by BTTF 52-3, Miniature connecting devices in cars.

The draft standard was submitted to the CENELEC Unique Acceptance Procedure in June 1991 and was ratified by CENELEC as EN 50066 on 24 March 1992.

The following dates are applicable:

- |   |       |            |
|---|-------|------------|
| - latest date of publication of<br>an identical national standard | (dop) | 1993-03-01 |
| - date of withdrawal of<br>conflicting national standards         | (dow) | 1995-03-01 |

For products which have complied with the relevant national standard before 1995-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-03-01.

NOTE: In this document, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

## Mini-couplers for the interconnection of electrical mains supplied equipment in road vehicles

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### Other publications quoted in this standard

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 60309	Plugs, socket-outlets and couplers for industrial purposes (IEC 309, modified)
EN 60529	Classification of degrees of protection provided by enclosures (IEC 529)
HD 21.5 S2	PVC-insulated cables of rated voltages up to and including 450/750 V Part 5: Flexible cables (cords) (IEC 227-5, modified)
HD 22.4 S2	Rubber insulated cables of rated voltages up to and including 450/750 V Part 4: Flexible cables (cords) (IEC 245-4, modified)
HD 214 S2	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions (IEC 112)
HD 444.2.1 S1	Fire hazard testing - Part 2: Test methods, Glow-wire test and guidance (IEC 695-2-1)
HD 495 S1	Spring-operated impact test apparatus and its calibration (IEC 817)
IEC 614-2-2	Specification for conduits for electrical installations Part 2: Particular specifications for rigid plain conduits of insulating materials
IEC 614-2-5	Specification for conduits for electrical installations Part 2: Particular specifications for flexible conduits (under preparation)
IEC 884-1	Plugs and socket-outlets for household and similar purposes
ISO 1101	Standard Technical drawings - Geometrical tolerancing - Tolerancing of form, orientation, location and run-out - Generalities, definitions, symbols, indication on drawings
ISO 1456	Metallic coatings - Electroplated coatings of nickel plus chromium
ISO 1817	Rubber, vulcanized - Determination of the effect of liquids
ISO 2081	Metallic coatings - Electroplated coatings of zinc on iron or steel
ISO 2093	Metallic coatings - Electroplated coatings of tin
ISO 4046	Paper, board, pulp and related terms - Vocabulary

## 1 Scope

This standard specifies general safety requirements for mini-couplers with a rated current of 16 A and a rated voltage of 250 V a.c. single phase, applied for the interconnection of mains supplied equipment in road vehicles, e.g to supply electrical heaters, battery chargers and cab heaters.

This standard may also be used for mini-couplers for other similar applications.

The standard does not apply to devices used in flexible supply cables for the connection of household electrical appliances and the like to their supply.

The introduction of requirements for minicouplers for 440 V three phase is under consideration.

It should be borne in mind that aspects of product liability will have to be considered in conjunction with the use of mini-couplers.

## 2 Definitions

The following definitions apply for the purpose of this European Standard.

### 2.1 mini-coupler

A device for the connection and disconnection of flexible cables in the electrical mains supplied installation in road vehicles. It can consist of the following four parts:

- a **connector**,  
a part of a mini-coupler with contact tubes, which is integral with a flexible conduit and a three core flexible cable.
- an **outlet**,  
a part of a mini-coupler with contact tubes, which is integral with a piece of electrical equipment.
- a **plug**,  
a part of a mini-coupler with contact pins, which is integral with a flexible conduit and a three core flexible cable.
- an **inlet**,  
a part of a mini-coupler with contact pins, which is integral with a piece of electrical equipment.

### 2.2 rated voltage

The voltage value assigned to the mini-coupler by the manufacturer.

### 2.3 rated current

The current value assigned to the mini-coupler by the manufacturer.

### 2.4 clearance

The shortest distance in air between two conductive parts.

For the purpose of determining a clearance to accessible parts, the accessible surface of an insulating enclosure shall be considered conductive as if it were covered by a metal foil wherever it can be touched by hand or the standard test finger according to EN 60529, figure 1.

### 2.5 creepage distance

The shortest distance along the surface of an insulating material between two conductive parts.

For the purpose of determining a creepage distance to accessible parts, the accessible surface of an insulating enclosure shall be considered conductive as if it were covered by a metal foil wherever it can be touched by a hand or the standard test finger according to EN 60529, figure 1.