



**SLOVENSKI STANDARD**  
**SIST-TP CLC/TR 61491:2011**  
**01-januar-2011**

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**Električna oprema industrijskih strojev - Serijska podatkovna povezava za komunikacijo v realnem času med krmilniki in pogoni (IEC/TR 61491:2010)**

Electrical equipment of industrial machines - Serial data link for real-time communication between controls and drives (IEC/TR 61491:2010)

Elektrische Ausrüstung von Industriemaschinen - Serielle Datenverbindung für Echtzeit-Kommunikation zwischen Steuerungen und Antrieben (IEC/TR 61491:2010)

Équipement électrique des machines industrielles - Liaison des données sérielles pour communications en temps réel entre unités de commande et dispositifs d'entraînement (CEI/TR 61491:2010)

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**Ta slovenski standard je istoveten z: CLC/TR 61491:2010**

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**ICS:**

33.200	Daljinsko krmiljenje, daljinske meritve (telemetrija)	Telecontrol. Telemetry
35.240.50	Uporabniške rešitve IT v industriji	IT applications in industry

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TECHNICAL REPORT  
RAPPORT TECHNIQUE  
TECHNISCHER BERICHT

**CLC/TR 61491**

October 2010

ICS 33.200; 35.240.50

English version

**Electrical equipment of industrial machines -  
Serial data link for real-time communication between controls and drives  
(IEC/TR 61491:2010)**

Équipement électrique des machines  
industrielles -  
Liaison des données sérielles pour  
communications en temps réel entre  
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Elektrische Ausrüstung  
von Industriemaschinen -  
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This Technical Report was approved by CENELEC on 2010-09-17.  
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CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

This Technical Report consists of the text of the International Technical Report IEC/TR 61491:2010 prepared by SC 22G, Adjustable speed electric drive systems incorporating semiconductor power converters, of IEC TC 22, Power electronic systems and equipment.

It was circulated for voting in accordance with the Internal Regulations, Part 2, Subclause 11.4.3.3 (simple majority) and was accepted by CENELEC as CLC/TR 61491 on 2010-09-17.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the Technical Report IEC/TR 61491:2010 was approved by CENELEC as a Technical Report without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

ISO/IEC 7498-1

NOTE Harmonized as EN/ISO/IEC 7498-1.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61158	series	Industrial communication networks - Fieldbus specifications	EN 61158	series
IEC/TR 61158-1	-	Industrial communication networks - Fieldbus specifications - Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series	CLC/TR 61158-1	-
IEC 61158-2	-	Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition	EN 61158-2	-
IEC 61158-3-16	-	Industrial communication networks - Fieldbus specifications - Part 3-16: Data-link layer service definition - Type 16 elements	EN 61158-3-16	-
IEC 61158-3-19	-	Industrial communication networks - Fieldbus specifications - Part 3-19: Data-link layer service definition - Type 19 elements	EN 61158-3-19	-
IEC 61158-4-16	-	Industrial communication networks - Fieldbus specifications - Part 4-16: Data-link layer protocol specification - Type 16 elements	EN 61158-4-16	-
IEC 61158-4-19	-	Industrial communication networks - Fieldbus specifications - Part 4-19: Data-link layer protocol specification - Type 19 elements	EN 61158-4-19	-
IEC 61158-5-16	-	Industrial communication networks - Fieldbus specifications - Part 5-16: Application layer service definition - Type 16 elements	EN 61158-5-16	-
IEC 61158-5-19	-	Industrial communication networks - Fieldbus specifications - Part 5-19: Application layer service definition - Type 19 elements	EN 61158-5-19	-
IEC 61158-6-16	-	Industrial communication networks - Fieldbus specifications - Part 6-16: Application layer protocol specification - Type 16 elements	EN 61158-6-16	-

IEC 61158-6-19	-	Industrial communication networks - Fieldbus specifications - Part 6-19: Application layer protocol specification - Type 19 elements	EN 61158-6-19	-
IEC 61784-1	-	Industrial communication networks - Profiles - Part 1: Fieldbus profiles	EN 61784-1	-
IEC 61784-2	-	Industrial communication networks - Profiles - Part 2: Additional fieldbus profiles for real-time networks based on ISO/IEC 8802-3	EN 61784-2	-
IEC 61800-7	series	Adjustable speed electrical power drive systems - Part 7-xxx: Generic interface and use of profiles for power drive systems	EN 61800-7	series
IEC 61800-7-1	-	Adjustable speed electrical power drive systems - Part 7-1: Generic interface and use of profiles for power drive systems - Interface definition	EN 61800-7-1	-
IEC 61800-7-204	-	Adjustable speed electrical power drive systems - Part 7-204: Generic interface and use of profiles for power drive systems - Profile type 4 specification	EN 61800-7-204	-
IEC 61800-7-304	-	Adjustable speed electrical power drive systems - Part 7-304: Generic interface and use of profiles for power drive systems - Mapping of profile type 4 to network technologies	EN 61800-7-304	-
ISO/IEC 8802-3	-	Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications		-

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# TECHNICAL REPORT

# RAPPORT TECHNIQUE

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**Electrical equipment of industrial machines – Serial data link for real-time communication between controls and drives**

**Équipement électrique des machines industrielles – Liaison des données sérielles pour communications en temps réel entre unités de commande et dispositifs d'entraînement**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
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INTERNATIONALE

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**ELECTRICAL EQUIPMENT OF INDUSTRIAL MACHINES –  
SERIAL DATA LINK FOR REAL-TIME COMMUNICATION  
BETWEEN CONTROLS AND DRIVES**

## FOREWORD

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IEC 61491, which is a technical report, has been prepared by subcommittee 22G: Adjustable speed electric drive systems incorporating semiconductor power converters, of IEC technical committee 22: Power electronic systems and equipment.

This first edition of the technical report cancels and replaces the second edition of IEC 61491, published in 2002. The changes are primarily to make reference to material that was moved to IEC 61158, IEC 61784 and IEC 61800-7 series of standards.