

# SLOVENSKI STANDARD

## SIST EN ISO/IEC 9314-3:1997

01-december-1997

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### Information processing systems - Fibre distributed Data Interface (FDDI) - Part 3: Physical Layer Medium Dependent (PMD) (ISO/IEC 9314-3:1990)

Information processing systems - Fibre distributed Data Interface (FDDI) - Part 3:  
Physical Layer Medium Dependent (PMD) (ISO/IEC 9314-3:1990)

Informationsverarbeitungssysteme - Verteilte Datenschnittstelle mit Lichtwellenleitern  
(FDDI) - Teil 3: Mediumspezifische Festlegungen für die Bitübertragungsschicht (PMD)  
(ISO/IEC 9314-3:1990)

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Systemes de traitement de l'information - Interface de données distribuées sur fibre -  
Partie 3: Spécification pour la couche physique déterminée par le milieu (ISO/IEC 9314-  
3:1990)

**Ta slovenski standard je istoveten z: EN ISO/IEC 9314-3:1995**

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35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

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Data Interface (FDDI) - Part 3: Physical Layer  
Medium Dependent (PMD) (ISO/IEC 9314-3:1990)**

Systèmes de traitement de l'information -  
Interface de données distribuées sur fibre -  
Partie 3: Spécification pour la couche physique  
déterminée par le milieu (ISO/IEC 9314-3:1990)

Informationsverarbeitungssysteme - Verteilte  
Datenschnittstelle mit Lichtwellenleitern  
(FDDI) - Teil 3: Mediumspezifische Festlegungen  
für die Bitübertragungsschicht (PMD) (ISO/IEC  
9314-3:1990)

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SIST..... EN ISO/IEC 9314-3

PREVZET PO METODI RAZGLASITVE

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EN ISO/IEC 9314-3:1995

## Foreword

The text of the International Standard from the work of ISO/IEC/JTC 1 "Information technology" of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) has been taken as a European Standard by the CEN Technical Board.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 1996, and conflicting national standards shall be withdrawn at the latest by January 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

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The text of the International Standard ISO/IEC 9314-3:1990 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in annex ZA (normative).

**Annex ZA (normative)****Normative references to international publications  
with their relevant European publications**

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 9314-1	1989	Information processing systems - Fibre Distributed Data Interface (FDDI) - Part 1: Token Ring Physical Layer Protocol (PHY)	EN 29314-1	1993
ISO 9314-2	1989	Information processing systems - Fibre Distributed Data Interface (FDDI) - Part 2: Token Ring Media Access Control (MAC)	EN 29314-2	1993

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INTERNATIONAL  
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**ISO/IEC**  
**9314-3**

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**Information processing systems — Fibre  
distributed Data Interface (FDDI) —**

**Part 3:**  
**Physical Layer Medium Dependent (PMD)**

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## ISO/IEC 9314-3 : 1990 (E)

**Foreword**

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) together form a system for worldwide standardization as a whole. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for approval before their acceptance as International Standards. They are approved in accordance with procedures requiring at least 75 % approval by the national bodies voting.

International Standard ISO/IEC 9314-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

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ISO/IEC 9314-3 consists of the following parts, under the general title *Information processing systems — Fibre distributed Data Interface (FDDI)*

- *Part 1: Token Ring Physical Layer Protocol (PHY)*
- *Part 2: Token Ring Media Access Control MAC*
- *Part 3: Token Ring Physical Layer Medium Dependent (PMD)*

Annexes A to G are for information only.

## Introduction

This part of ISO/IEC 9314 on the FDDI token ring physical layer, medium dependent is intended for use in a high-performance multistation network. This protocol is designed to be effective at 100 Mbit/s using a token ring architecture and fibre optics as the transmission medium over distances of several kilometres in extent.

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# Information processing systems — Fibre distributed Data Interface (FDDI) —

## Part 3: Physical Layer Medium Dependent (PMD)

### 1 Scope

This part of ISO/IEC 9314 specifies Physical Layer, Medium Dependent (PMD) requirements for the Fibre Distributed Data Interface (FDDI).

The FDDI provides a high-bandwidth (100 Mbit/s) general-purpose interconnection among computers and peripheral equipment using fibre optics as the transmission medium. The FDDI may be configured to support a sustained transfer rate of approximately 80 Mbit/s (10 Mbyte/s). It may not meet the response time requirements of all unbuffered high-speed devices. The FDDI establishes the connection among many FDDI nodes (stations) distributed over distances of several kilometres in extent. Default values for FDDI were calculated on the basis of 1 000 physical connections and a total fibre path length of 200 km.

The FDDI consists of

(a) A Physical Layer (PL) which is divided into two sublayers:

(1) A Physical Layer, Medium Dependent (PMD), which provides the digital baseband point-to-point communication between nodes in the FDDI network. PMD shall provide all services necessary to transport a suitably coded digital bit stream from node to node. PMD specifies the point of interconnection requirements for conforming FDDI stations and cable plants at both sides of the Media Interface Connector (MIC). PMD includes the following:

- The optical power budgets for cable plants using 62,5/125  $\mu\text{m}$  fibre optic cables and optical bypass switches.
- The MIC receptacle mechanical mating requirements including the keying features.
- The 62,5/125  $\mu\text{m}$  fibre optic cable requirements.
- The services provided by PMD to PHY and SMT.

(2) A Physical Layer Protocol (PHY), which provides connection between PMD and the Data Link Layer (DLL). PHY establishes clock synchronization with the upstream code-bit data stream and decodes this incoming code-bit stream into an equivalent symbol stream for use by the higher layers. PHY provides encoding and decoding between data and control indicator symbols and code bits, medium conditioning and initializing, the synchronization of incoming and outgoing code-bit clocks, and the delineation of octet boundaries as required for the transmission of information to or