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**Information systems—Equipment—  
Fibre Distributed Data Interface  
(FDDI)**

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

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[ISO/IEC Title: Information Processing Systems—Fibre Distributed  
Data Interface (FDDI)  
Part 3: Physical layer Medium Dependent (PMD)]

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## PREFACE

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9314-1	Part 1: Token Ring Physical Layer Protocol (PHY)	3734.1	Part 1: Token ring PHYSical layer protocol (PHY)
9314-2	Token Ring Media Access Control (MAC)	3734.2	Part 2: Token ring Media Access Control (MAC)

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# Information systems—Equipment—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 µm fibre optic cables and optical bypass switches.
- The MIC receptacle mechanical mating requirements including the keying features.
- The 62,5/125 µm 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