Optical Module v4

Overview

PROFIBUS OLM/G11 V4.0 06/2025, Operating Instructions, C79000-G8976-C749-02 Summary: This document contains information Siemens OLM P11 V4.0, OLM P12 V4.0.

Key Takeaways

Optical Module V4 refers to the fourth generation of optical modules, typically indicating an updated electrical interface standard, higher data rates, and improved performance in fiber-optic communication systems.Overview of Optical Modules

An optical module is a hot-pluggable transceiver used in fiber-optic communication to convert electrical signals into optical signals and vice versa, operating at the physical layer of the OSI model . It usually consists of:

• TOSA (Transmitter Optical Sub-Assembly): Converts electrical signals into optical signals using a laser diode or LED .

• ROSA (Receiver Optical Sub-Assembly): Converts incoming optical signals back into electrical signals using a photodetector .

• Functional circuits and driver chips: Process signals for transmission and reception .

• Optical and electrical interfaces: Connect the module to the fiber network and the host system . Optical modules are essential for high-bandwidth data communications and are widely used in networking equipment such as switches, routers, and servers. What "V4" Means

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The "V4" designation generally refers to the fourth version or generation of the module's electrical interface standard. Over time, optical modules have evolved from analog NRZ interfaces to retimed digital interfaces, with each version improving:

• Data rates: Supporting higher bit rates for faster transmission.

• Signal integrity: Reducing jitter and improving error performance.

• Compatibility: Aligning with multi-source agreements (MSAs) and industry standards like the Common Electrical Interface (CEI) defined by the Optical Internetworking Forum (OIF), .

• Power efficiency and thermal performance: Optimizing energy consumption and heat dissipation. For example, earlier versions (V1–V3) might support lower speeds or simpler electrical signaling, while V4 modules are designed for modern high-speed networks, often supporting 25G, 50G, or 100G Ethernet links.
Practical Implications

Using a V4 optical module ensures:

• Compatibility with the latest high-speed network equipment.

• Improved reliability and signal quality over longer distances.

• Support for advanced features like forward error correction (FEC) and enhanced monitoring. In summary, V4 indicates a modern, high-performance generation of optical modules, reflecting improvements in electrical interface standards, data throughput, and overall efficiency in fiber-optic communication systems .

Article Content

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Siemens OLM P11 V4.0, OLM P12 V4.0, OLM G11 V4.0, OLM G12 V4

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Siemens OLM/G12-1300 V4.0 Operating Instructions

Outlines the standards and approvals the OLM V4.0 devices meet. Provides an overview of the

PROFIBUS OLM/G12-1300 V4.0

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PROFIBUS OLM/G12-1300 V4.0 optical link module with 1 RS 485 and 2 glass fiber optic cable interfaces (4 BFOC sockets), 1300

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To set up an active PROFIBUS star coupler, modules with one or two optical channels can be used. To connect a DTE or an RS-485

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Optical link module (standard version)

Optical channels of the OLM / P V2 connected to optical channels of an OLM / P V4.1 must be operated with a higher transmit

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LIDAR-Lite v4 LED is a small optical ranging sensor that incorporates ANT profile wireless networking technology.

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Optical modules are essential components in modern communication networks, enabling

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PROFIBUS OLM/G12 V4.0 Optical Link Module 1 RS 485 interface 2 glass FOC interfaces (4 BFOC sockets) Suitable for standard

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical

SIMATIC NET PROFIBUS Optical Link Module OLM Operation Manual

Preface 1 Introduction 2 Network Topologies 3 Product Characteristics 4 SIMATIC NET PROFIBUS Optical Link Module Installation

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Optical link module version 4.0 1 RS 485 interface 1 glass fiber optic cable interface with 2 BFOC sockets Signaling contact included

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What Is an Optical Module and Its FAQs (V200) Describes what an optical module is and FAQs, including the fundamentals,

Siemens SIMATIC 6GK15032CB00 PROFIBUS Optical

SIMATIC NET, PB OLM/G11 V4.0 OPTICAL LINK MODULE W. 1 RS485 AND 1 GLASS-FOC

PROFIBUS OLM/G11 V4.0

PROFIBUS OLM/G11 V4.0 optical link module with 1 RS 485 and 1 glass fiber optic cable interface (2 BFOC sockets), with signaling

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