Fiber Optic Communications FACET Board
581159 (91025-20)

LabVolt Series

Datasheet

* The product images shown in this document are for illustration purposes; actual products may vary. Please refer to the Specifications section of each product/item for all details. Festo Didactic reserves the right to change product images and specifications at any time without notice.

Festo Didactic
en
11/2024

Table of Contents

General Description

The Fiber Optic Communications circuit board provides the student with a solid foundation in the theory and practice of fiber optics and communication techniques. The eleven circuit blocks provide hands-on experimentation with several varieties of fiber optic transmission and reception.

Through the interactive LMS format, the student learns the principles of both analog and digital transmission and reception using fiber optic data links. The circuit board may be used in the FACET base unit or as a stand-alone trainer.

- When used in the FACET base unit, the course can be performed through the interactive Learning Management System (LMS) format.

- When used as a stand-alone trainer, the course is performed in a conventional way by using the optional Student and Instructor Guides. An external power source is required if the circuit board is used without a base unit.

Topic Coverage

- Circuit Board Familiarization and Introduction to Fiber Optic Communications
- Scattering and Absorption Losses
- Connectors and Polishing
- Numerical Aperture and Core Area
- Bending Loss and Modal Dispersion
- Light Source
- Driver Circuit
- Source-to-Fiber Connection
- Light Detector
- Output Circuit
- Fiber Optic Test Equipment
- Optical Power Budgets
- Analog Communications
- Digital Communications (Requires the Optional 32-Bit Microprocessor Module (91017), plus these accessories: 9 V Power Supply (91730) and Adapter (31216).)
- Troubleshooting

Features & Benefits

- FACET base unit or stand-alone operation
- Interface with the 32-Bit Microprocessor module
- ST connections
- Multimode 62.5/125 cm cable
- High-speed 820 nm transmitter
- Integrated PIN photodiode and trans-impedance receiver
- Digital and analog communications channels
- Full handshake RS232 interface using time-division multiplexing (TDM) and Manchester coding
- On-board microphone and speaker
- Built-in microphone amplifier, power supply, audioamplifier and photo transmitter
- LED block

Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

Festo Didactic SE

Rechbergstrasse 3
73770 Denkendorf
Germany

P. +49(0)711/3467-0
F. +49(0)711/347-54-88500

Festo Didactic Inc.

607 Industrial Way West
Eatontown, NJ 07724
United States

P. +1-732-938-2000
F. +1-732-774-8573

Festo Didactic Ltée/Ltd

675 rue du Carbone
Québec QC G2N 2K7
Canada

P. +1-418-849-1000
F. +1-418-849-1666

www.labvolt.com

www.festo-didactic.com