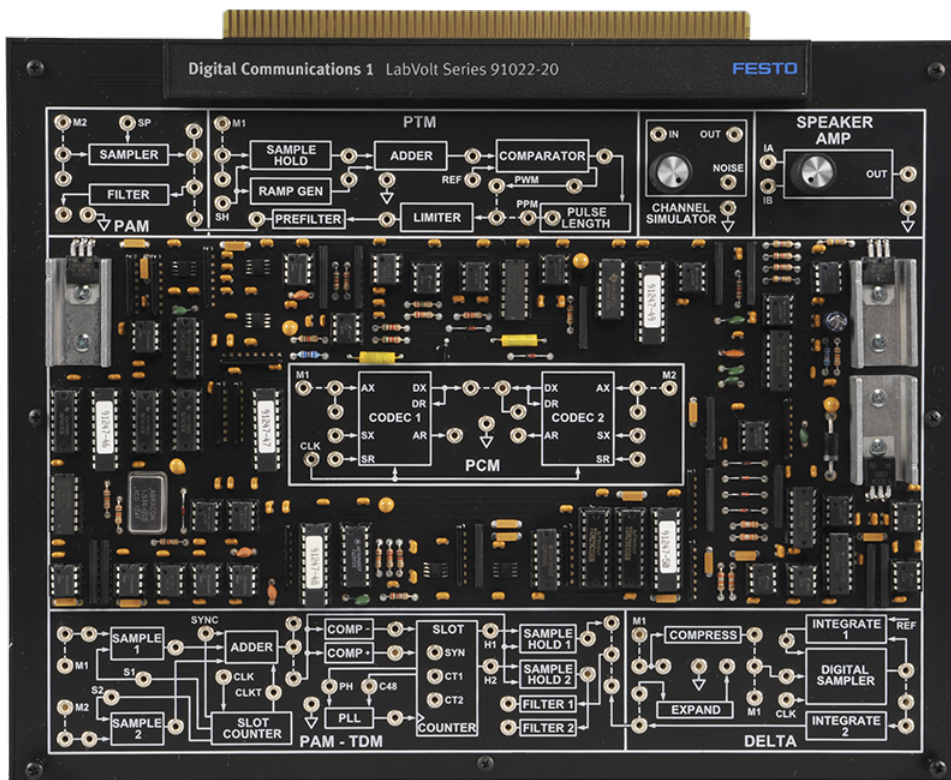


Digital Communications 1 FACET Board 581123 (91022-20)

FESTO

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	3
Topic Coverage	3
Features & Benefits	4

General Description

The Digital Communications 1 module enables students to configure, operate, and troubleshoot the following circuits:

- Pulse-Amplitude Modulation
- PAM Time-Domain Multiplexing
- Pulse-Time Modulation (PWM and PPM)
- Pulse-Code Modulation and Time-Division Multiplexing of PCM Signals
- Delta Modulation
- Channel Effects

Each circuit block contains a modulator for transmission and a demodulator for reception.

Students learn the operation and function of the following:

- Sampler
- Sample/Hold
- Adder
- Ramp Generator
- Comparator
- Limiter
- Filter
- CODEC
- PLL
- Compressor
- Expander
- Integrator
- Differentiator
- Latched Compare
- Speaker Amplifier
- Channel Simulator

Topic Coverage

- Concepts of Digital Communications, Circuit Board Familiarization
- PAM Signal Generation, Demodulation, PAM TDM Transmission and Reception
- PTM Signal Demodulation and Generation
- PCM Signal Generation and Demodulation, Signal Time-Division Multiplexing
- DM Transmitter, Receiver and Noise
- Channel Bandwidth and Noise
- Troubleshooting Basics and Troubleshooting Digital Communications 2 Circuits

Features & Benefits

- Each circuit block contains a modulator for transmission and a demodulator for reception.
- Built-in channel simulator and speaker amp circuitry
- The channel simulator circuit block enables students to investigate the effects of noise and channel bandwidth on pulse and digital modulation signals
- The speaker amp circuit block permits students to connect a speaker and listen to the signals.
- Communication signals are synchronized for easy display

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 reserves the right to make product improvements at any time and without notice and is not responsible for typographical errors. Festo Didactic recognizes all product names used herein as trademarks or registered trademarks of their respective holders. © Festo Didactic Inc. 2024. All rights reserved.

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