

Digital Communications 2

581135 (91023-20)



LabVolt Series

Datasheet

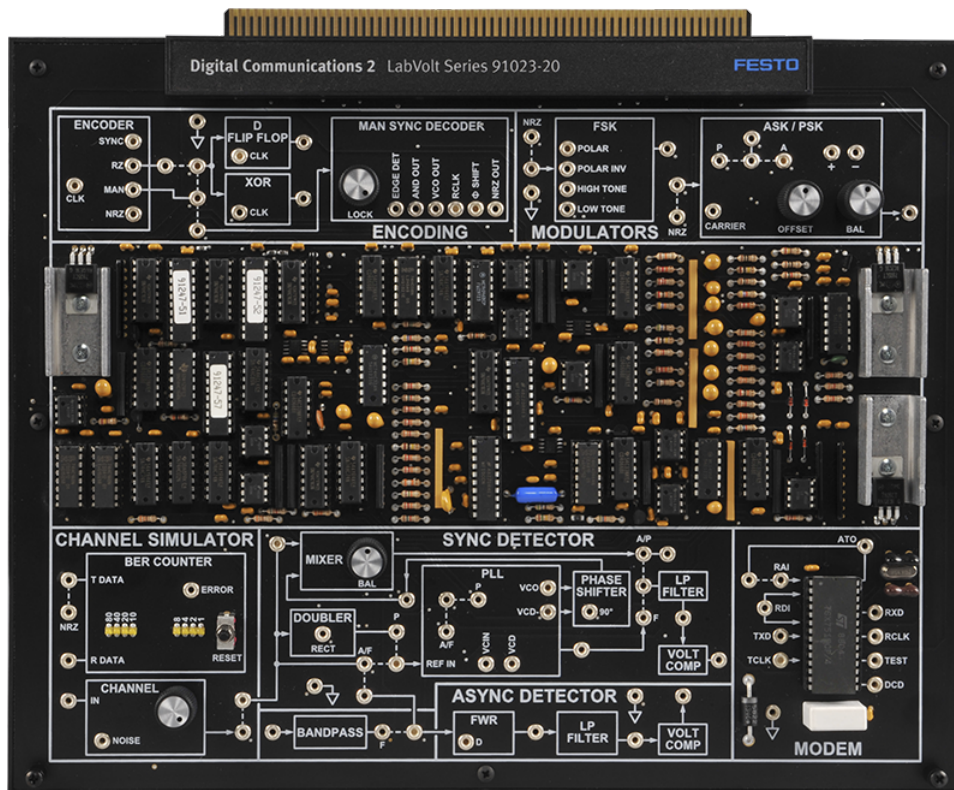


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General Description

The Digital Communications 2 module enables students to configure, operate, and troubleshoot the following circuits:

- NRZ, RZ, and Manchester Encoding and Decoding
- Clock Synchronizer
- Frequency-Shift Keying (FSK) Generation
- FSK Asynchronous and Synchronous Detection
- Phase-Shift Keying (PSK) Generation
- PSK Asynchronous and Synchronous Detection
- Amplitude-Shift Keying (ASK) Generation
- ASK Asynchronous and Synchronous Detection
- Channel Effects
- FSK Modem

The circuits found on this board include:

- Line Encoding
- Modulators
- Channel Simulator
- Sync Detector
- Modem

This board is available in the following language variants:

- English variant: 91023-20
- French variant: 91023-21
- Spanish variant: 91023-22

Topic Coverage

- Circuit Board Familiarization and Introduction to Digital Transmission
- Encoding and Decoding
- FSK Signal Generation, Asynchronous Detection, Synchronous Detection
- PSK Signal Generation and Synchronous Detection
- ASK Signal Generation and Asynchronous Detection
- Effects of Noise on ASK and PSK Signals
- Effects of Noise on Asynchronously and Synchronously Detected FSK Signals
- Operation of an FSK Modem and DPSK Modem
- Troubleshooting Basics and Troubleshooting Digital Communications 2 Circuits

Features & Benefits

- The Channel Simulator circuit block and a bit error rate (BER) counter enable students to evaluate the effects of noise on ASK and PSK modulated carrier signals.
- The Modem circuit block contains an FSK/DPSK modem IC, which students use in a loop-back mode to observe the entire signal path.
- Communication signals are synchronized for easy display.

Optional Manual(s)

Qty	Description	Model number
1	Digital Communications 2 (Student Workbook) _____	580817 (91582-Q0)
1	Digital Communications 2 (Instructor Guide) _____	580819 (91582-R0)

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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