MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ABB

FENA-01 68469422

DRIVE ETHERNET ADAPTER MODULE

Used with the applicable FENA-01 Ethernet Adapter configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: ABB FENA-01/-11/-21 user manual 3AUA0000093568, exact FENA-01 single-port execution and technical data pp.415 to 416

FENA-01/-11/-21 Ethernet adapter module

The FENA-01/-11/-21 Ethernet adapter module is an optional device for ABB drives which enables the connection of the drive to an Ethernet network.

Through the adapter module you can:

- give control commands to the drive (for example, Start, Stop, Run enable)
- feed a motor speed or torque reference to the drive
- give a process actual value or a process reference to the PID controller of the drive
- read status information and actual values from the drive
- reset a drive fault.

The protocols used to access these functionalities over Ethernet are described in chapters:

- *Modbus/TCP – Communication protocol*
- *EtherNet/IP – Communication protocol*
- *PROFINET IO – Communication protocol*.

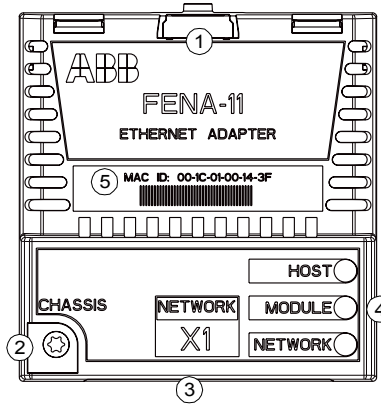
The adapter module supports 10 Mbit/s and 100 Mbit/s data transfer rates and automatically detects the data transfer rate used in the network.

Note: PROFINET IO uses only 100 Mbit/s in the Full duplex mode.

The adapter module is installed into an option slot on the drive control unit. See the drive manuals for module placement options.

Layout of the adapter module

This figure shows the layout of FENA-01/-11.



No.	Description	See chapter
1	Lock	*Mechanical installation*
2	Mounting and grounding screw	*Mechanical installation*
3	Connector X1 to Ethernet	*Electrical installation*
4	Diagnostic LEDs	*Modbus/TCP – Diagnostics* *EtherNet/IP – Diagnostics* *PROFINET IO – Diagnostics* *NONE - Diagnostics*
5	MAC address	-

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Mechanical installation

Contents of this chapter

This chapter contains a delivery checklist and instructions to install the adapter module.

Necessary tools and instructions

You will need a Torx TX10 screwdriver to secure the FENA adapter module to the drive. See also, the applicable drive hardware manual.

Unpacking and examining the delivery

1. Open the option package.
2. Make sure that the package contains:
   - Ethernet adapter module, type FENA-01/-11/-21
   - this manual.
3. Make sure that there are no signs of damage.

Installing the adapter module

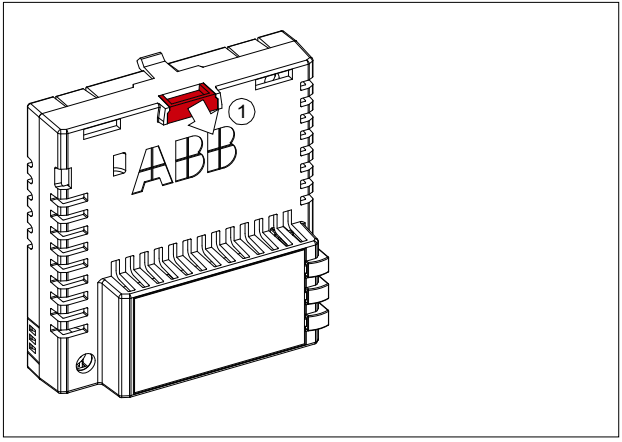
WARNING! Obey the safety instructions. See chapter *Safety instructions* on page *19*. If you ignore the safety instructions, injury or death can occur.

The adapter module has a specific position in the drive. Plastic pins, a lock and one screw to hold the adapter module in place. The screw also makes an electrical connection between the module and drive frame for cable shield termination.

When the adapter module is installed, it makes the signal and power connection to the drive through a 20-pin connector.

When you install or remove the adapter module from the control unit:

1. Pull out the lock.



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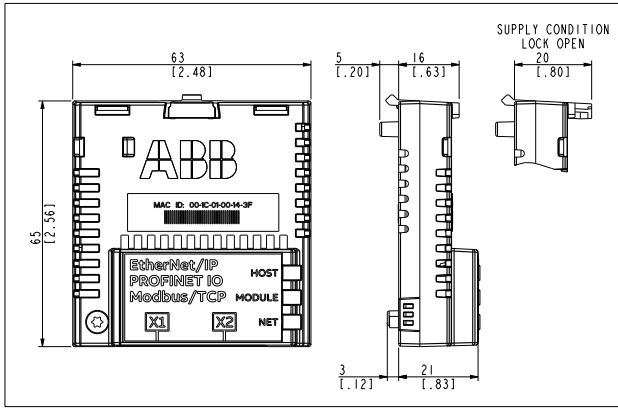
Technical data

Contents of this chapter

This chapter contains the technical specifications of the adapter module and the Ethernet link.

FENA-01/-11/-21

The figure below shows the enclosure of the adapter module from the front and side.



Installation	Into an option slot on the drive control unit
Degree of protection	IP20
Ambient conditions	The applicable ambient conditions specified for the drive in its manuals are in effect.
Package	Cardboard. Plastic wrapping: Antistatic air bubble sheet (PE).
Indicators	Three bicolor LEDs (HOST, MODULE, NETWORK/NET)
Connectors	A 20-pin connector to the drive RJ-45 connector to Ethernet (X1) FENA-21 only: RJ-45 connector for chaining another adapter module (X2)
Power supply	+3.3 V ±5% max. 400 mA (supplied by the drive)
General	Complies with EMC standard EN 61800-3:2004 Printed circuit board conformal coated

Ethernet link

Compatible devices	Ethernet Standard IEEE 802.3 and IEEE 802.3u devices
Medium	10BASE-TX or 100Base-TX with Auto-negotiation and Auto-MDIX (Auto-crossover) • Wiring: CAT5/6 UTP, CAT5/6 FTP, CAT5/6 STP • Connector: RJ-45 • Termination: Internal • Maximum segment length: 100 m / 328 ft
Topology	Bus or star. Max. 50 nodes allowed for FENA-21 in a daisy chain topology.
Transfer rate	10 Mbps or 100 Mbps
Serial communication type	Half or full duplex
Protocol	Modbus/TCP, EtherNet/IP, PROFINET IO