ABB Drives

User's Manual
Ethernet Adapter Module
NETA-01



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User's Manual

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EN
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Overview

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This chapter contains a short description of the NETA-01 Adapter module, a delivery checklist, and warranty information.

The NETA-01 Ethernet Adapter module

The NETA-01 Ethernet Adapter module is an optional device for browser-based remote monitoring of ABB drives via Ethernet. Multiple drives (up to 9) can be connected to the network through the DDCS Branching Unit (NDBU-85/95) or using ring topology. Through the use of the NETA-01 Ethernet Adapter module, it is possible to

- monitor the drive
  - read and adjust drive parameter values
  - read status information and actual values from the drive
  - set up and monitor (numerically or graphically) the data logger and save its content to a file
  - read and clear the contents of the fault log and save it to a file
  - send e-mail messages (max. 9) on events
  - use e-mail for continuous monitoring of the drive
  - acquire data from the drive and the process with Modbus TCP server
- control the drive
  - give control commands (Start, Stop, Run enable, etc.) to the drive
  - feed a motor speed or torque reference to the drive
  - reset a drive fault.

The adapter module is mounted onto a standard mounting rail inside or outside the drive unit, depending on drive type and configuration. See the user's manual of the drive for module placement options.

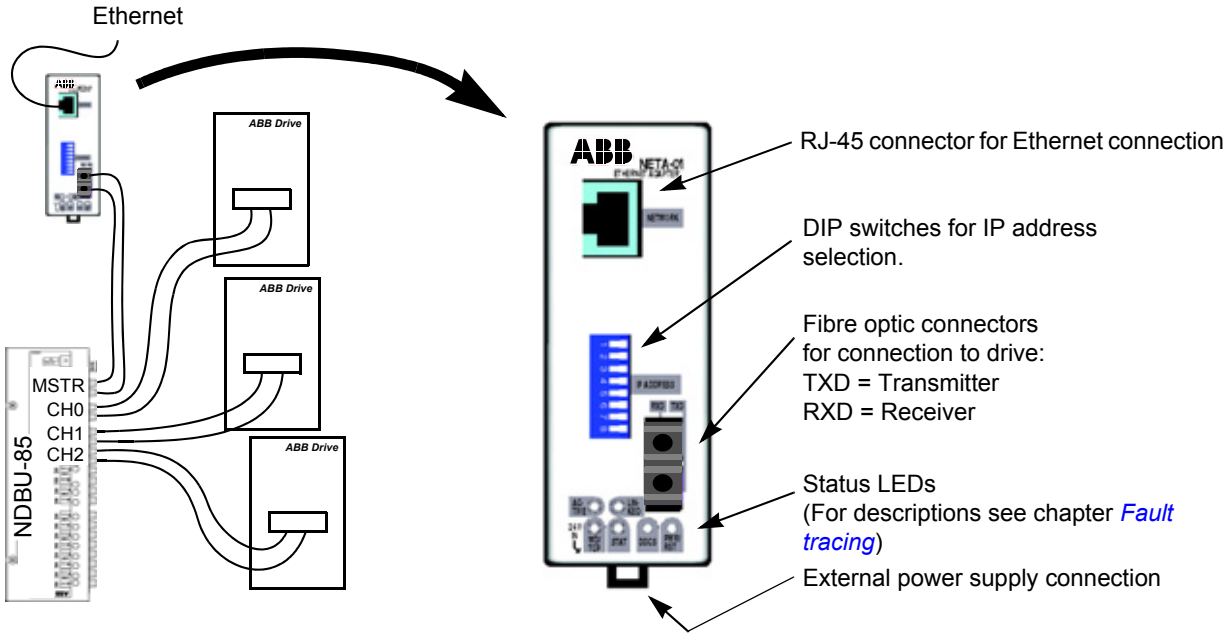


Figure 1. Star topology link with the NBDU-85/95 and the NETA-01 Adapter module

Compatibility

The NETA-01 is compatible with:

LV AC Drives

- ACS800
- ACS 600
- ACX 400

LV DC Drives*

- DCS 800
- DCS 600

MV AC Drives

- ACS 6000
- ACS 1000
- ACS 5000

(* DC drives do not support the “Motor control” -applet.)

DIP switch settings

The DIP switches on the front of the NETA-01 module can be used to select the IP address for the module.

Note: The new settings take effect only when the module is powered up or rebooted for the next time.

By default, the IP address is defined by software settings (see chapter *Communication*). Setting any DIP switch to ON enables the DIP switch selection. DIP switches 1 to 8 define the last octet of the IP address 192.168.0.xxx as a binary number (in decimals 1…254, 255 is reserved for broadcast), DIP switch 8 being the least significant bit.

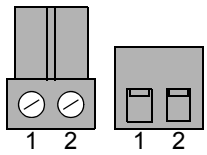
NETA-01 connections

Ethernet connection

The network cable is connected to the RJ45 connector on the NETA-01. The connector is internally terminated. Add a ferrite core to the PC end of the network cable to avoid EMC disturbance caused by power cables.

Power supply connection

The NETA-01 module requires a 24 V DC power supply. Connect the supply wires to the connector on the lower side of the module.

Pole	Description	Terminal designations
1	+24 V DC	
2	0 V	

The power can be taken either from the drive's internal power supply (see drive manuals) or from a dedicated external power supply.

Drive connection

The NETA-01 module is connected to the drive using a fibre optic cable link. Consult the drive documentation as to the corresponding terminals inside the drive. Multiple drives are connected through the NDBU-85/95 DDCS Branching Unit or using ring topology. Drives can be configured through the web pages of the module.

With the ACS800 NETA module can be connected to channels CH0 and CH3. Fieldbus control channel CH0 is used for control and monitoring the drive. The tool channel CH3 is intended to monitoring and debugging purposes.

Appendix A: Technical data

DDCS link

Compatible devices: ABB ACS800, ACS 600, ACX 400, DCS 800, DCS 600, ACS 6000, ACS 1000, ACS 5000 drives.

Size of the link: 2 stations

Medium: Fibre optic cable

- Construction: Plastic core, diameter 1 mm, sheathed with plastic jacket
- Attenuation: 0.31 dB/m
- Maximum Length between Stations: 10 m
- Specifications:

Parameter	Minimum	Maximum	Unit
Storage Temperature	-55	+85	°C
Installation Temperature	-20	+70	°C
Short Term Tensile Force		50	N
Short Term Bend Radius	25		mm
Long Term Bend Radius	35		mm
Long Term Tensile Load		1	N
Flexing		1000	cycles

Topology: Point-to-point

Serial communication type: Asynchronous, half Duplex

Transfer rate: 4 Mbit/s

Protocol: Distributed Drives Communication System (DDCS)

Connectors: Blue – receiver; grey – transmitter

Fieldbus link

Compatible devices: Ethernet standard IEEE 802.3 and 802.3u devices

Medium: 10base-TX, 100base-TX

- Termination: Internal
- Wiring: CAT 5 UTP, CAT 5 FTP* or CAT 5 STP* (*recommended)
- Connector: RJ-45
- Maximum segment length: 100 m

Topology: bus, star

Serial communication type: half and full Duplex

Transfer rate: 10 / 100 Mbps

Carrier protocol: TCP/IP

Application protocols:

- HTTP (Port 80)
- FTP (Port 21)
- Telnet (Port 23)
- Modbus TCP (Port 502)
- SMTP
- DDCS over Ethernet (Default port 46823)

NETA-01

Enclosure: Plastic, dimensions 93 × 35 × 76.5 mm (H×W×D); degree of protection IP 20

Mounting: Onto a standard mounting rail

Settings: Through drive parameters and/or DIP switches

Current consumption: 80 mA at 24 V DC ±10%

Connectors:

- Light transmitter (grey) and receiver (blue) (Hewlett-Packard Versatile Link) for connection to the drive
- RJ-45 connector for Ethernet connection

General:

- All materials are UL/CSA approved
- Complies with EMC Standards EN 50081-2 and EN 50082-2

Appendix B: Ambient conditions

Ambient conditions, operation

Ambient operating conditions refer to the conditions the option module is subjected to when installed for stationary use.

Air temperature: 0 to +50°C

Relative humidity: 5 to 95%, no condensation allowed. Maximum allowed relative humidity is 60% in the presence of corrosive gases.

Contamination levels:
Chemical gases: IEC 60721-3-3, Class 3C2
Solid particles: IEC 60721-3-3, Class 3S2

Installation site altitude: 0 to 2000 m. If the installation site is above 2000 m, contact local ABB representative.

Vibration: Max. 0.3 mm (2 to 9 Hz), max. 1 m/s^2 (9 to 200 Hz) sinusoidal (IEC 60068-2-6)

Shock: Max. 70 m/s^2, 22 ms (IEC 60068-2-27)

Ambient conditions, storage

Ambient storage conditions refer to the conditions the option module is subjected to during storage in the protective package.

Temperature: -40 to +70°C.

Relative humidity: Less than 95%, no condensation allowed

Atmospheric pressure: 70 to 106 kPa

Vibration: Max. 1.5 mm (2 to 9 Hz), max. 5 m/s^2 (9 to 200 Hz) sinusoidal (IEC 60068-2-6)

Shock: Max. 100 m/s^2, 11 ms (IEC 60068-2-27)

Ambient conditions, transportation

Ambient transportation conditions refer to the conditions the option module is subjected to during transportation in the protective package.

Temperature: -40 to +70°C

Relative humidity: Less than 95%, no condensation allowed.

Atmospheric pressure: 60 to 106 kPa

Vibration: Max. 3.5 mm (2 to 9 Hz), max. 15 m/s^2 (9 to 200 Hz) sinusoidal (IEC 60068-2-6)

Shock: Max. 100 m/s^2, 11 ms (IEC 60068-2-27)

Bump: Max. 300 m/s^2, 6 ms (IEC 60068-2-29)

Free Fall: 250 mm