

Network Communications

ABB F-Series Fieldbus Adapter Modules

ACS350, ACS850, and ACSM1 Network Connectivity

These flexible plug-in adapters provide fast and simple universal connectivity to all major controllers. Universal connectivity means ABB Low Voltage Drives connect to virtually all controller brands and communication networks, allowing users to choose the best network to meet their needs.



Network connectivity of products provides simplified interface for control and management of drives; improving quality, productivity, flexibility and scalability. Combining these feature-rich adapter modules with ABB's machinery drives offers a powerful drive solution to OEM's and system integrators focused on the food & beverage, material handling, printing, rubber & plastics, and textile industries.

Advantages of Network Connectivity

- Decreases mechanical and electrical installation time
- Reduces down time
- More data is available at a lower cost
- Reduces time and cost of machine expansion or relocation
- Remote data access
- Diagnostics provide predictive failure warnings
- Open protocols provide multi-vendor interoperability
- Ease of machine expansion or relocation
- Reusability of system software

Advantages of ABB Network Connectivity

- Connectivity to virtually any automation architecture
- Fast & simple connectivity
- Products designed and tested to conform to protocol specifications
- Best in class support resources

End User Benefits

- Decrease in mechanical and electrical installation cost
- Decrease in down time
- Increase in productivity
- Diminished start-up cost
- Lower maintenance and diagnostic cost

Fieldbus	Max. Devices	Baud Rate
Canopen	127	10 kbit/s -
FCAN-01		1 Mbit/s
DeviceNet	64	125 kbit/s -
FDNA-01		500 kbit/s
EtherNet/IP	Nearly	10 100 100
FENA-01	Unlimited	Mbit/s
Modbus-RTU	247	600 bit/s -
FMBA-01		19200 kbit/s
Modbus-RTU	247	600 bit/s -
FSCA-01		19200 kbit/s
Modbus-RTU	247	600 bit/s -
FRSA-00		19200 kbit/s
Modbus-TCP	Nearly	10 100 100
FENA-01	Unlimited	Mbit/s
Profibus-DP	32/segment	9.6 kbit/s -
FPBA-01	126 total	12 Mbit/s

CANopen: FCAN-01 (+K457)

The adapter fulfils CiA (CAN in Automation) standard DSP 402 (Device Profile Drives and Motion Control). CANopen device profiles define both direct access to the drive parameters and time critical process data communication.

DeviceNet: FDNA-01 (+K451)

Adapter module acts as a Class 2 slave with predefined master-slave connection set services. These include the Explicit Messaging, the Poll-Response service and the Change of State/Cyclic service. The adapter supports the ODVA AC/DC Drive Functional Profile with additional features and ABB Drives Profile.

EtherNet/IP: FENA-01 (+K466)

The adapter module acts as an EtherNet/IP server with support for ODVA AC/DC Drive, ABB Drives and Transparent profiles. The adapter module supports both explicit messaging where each attribute of a class is set individually and implicit messaging using input and output instances.

Modbus-RTU: FMBA-01 (+K458) / FSCA-01 / FRSA-00

The adapter module enables the connection of the drive to a RS-485 Modbus-RTU network. Common read/write single and multiple register function codes are supported.

Modbus-TCP: FENA-01 (+K466)

The adapter module acts as a Modbus/TCP server with support for ABB Drives and Transparent profiles. Common read/write single and multiple register function codes are supported.

Profibus-DP: FPBA-01 (+K454)

The adapter module supports PROFIBUS DP-V0 and DP-V1 communication. The FPBA-01 automatically detects the telegram type used, and supports both PPO messages 1 to 6 and standard telegrams (STD) 1 and 20. Communication profiles; PROFIdrive, ABB Drives, Transparent 16 and Transparent 32 are supported.