ABB F-series fieldbus adapter modules
for ACS355, ACS850, ACQ810, ACSM1 and ACS880

The F-series fieldbus adapter modules are flexible plug-in adapters that 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. Fieldbus networks also offer a cost reduction in wiring costs, compared to traditional I/O connections.

Combining these feature-rich adapter modules with ABB's drives offers a powerful drive solution to OEM's and system integrators focused on the food and beverage, material handling, printing, rubber and plastics, and textile industries.

Advantages of network connectivity
– Decreases mechanical and electrical installation 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, connectivity to any major PLC
– Reusability of system software
– Drive parameter setting

Advantages of ABB network connectivity
– Connectivity to virtually any automation architecture
– Fast and 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 startup cost
– Lower maintenance and diagnostic cost

Fieldbus	Max. devices	Baud rate
CANopen® FCAN-01	127	50 kbit/s to 1 Mbit/s
DeviceNet™ FDNA-01	64	125 kbit/s to 500 kbit/s
EtherNet/IP™/FENA-01/FENA-11	Nearly unlimited	10/100 Mbit/s
Modbus RTU FMBA-01	247	600 bit/s to 115.2 kbit/s
Modbus RTU FSCA-01	247	600 bit/s to 115.2 kbit/s
Modbus RTU FRSA-00	247	600 bit/s to 115.2 kbit/s
Modbus TCP FENA-01/FENA-11	Nearly unlimited	10/100 Mbit/s
PROFIBUS DP FPBA-01	32/segment, 126 total	9.6 kbit/s to 12 Mbit/s
LonWorks® FLON-01	127/subnet, 32 385 total	78 kbit/s
EtherCAT® FECA-01	65 535	100 Mbit/s
PROFINET FENA-01/FENA-11	Nearly unlimited	10/100 Mbit/s
PowerLink FEPL-02	240	100 Mbit/s

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CANopen®: FCAN-01 (+K457)

The adapter module 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)

The DeviceNet™ 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.

EtherCAT®: FECA-01 (+K469)

The adapter module supports the CANopen® DSP 402 (Device Profile Drives and Motion Control) profile or the ABB drives profile. The FECA- 01 implements the EtherCAT® state machine, four sync manager channels to control the access to the application memory, two watch dogs and specified EtherCAT® services, addressing modes and FMMUs.

EtherNet/IP™: FENA-01 (+K466)/ FENA-11 (+K473)

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.

LonWorks®: FLON-01 (+K452)

The FLON-01 LonWorks® adapter module includes two objects, a node object and a drive object. The node object is used to control the drive object. The drive object realises the LONMARK® Functional Profile: Variable Speed Motor Drive, version 1.1.

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.

FRSA-00 is a set of 20 adapters.

Modbus TCP: FENA-01 (+K466)/ FENA-11 (+K473)

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.

PROFINET IO: FENA-01 (+K466)/ FENA-11 (+K473)

The adapter module supports PROFINET IO DP-V1 communication. With the FENA-01/-11 module, the PROFINET network may employ either the PROFIdrive profile or the ABB Drives profile. In addition, two transparent modes – for 16-bit and 32-bit words respectively – are available.

Ethernet PowerLink: FEPL-02 (+K470)

Ethernet PowerLink is a communication profile for real-time Ethernet communication. The FEPL-02 module supports CiA 402 and the ABB Drives profile. In addition, two transparent modes – for 16-bit and 32-bit words respectively – are available.

Compatibility table

Fieldbus	ACS355	ACS850	ACQ810	ACSM1	ACS880
CANopen® FCAN-01	X	X	–	X	X
DeviceNet™ FDNA-01	X	X	X	X	X
EtherNet/IP™ FENA-01	X	–	–	–	–
EtherNet/IP™ FENA-11	–	X	X	X	X
Modbus RTU FMBA-01	X	–	–	–	–
Modbus RTU FSCA-01	–	X	X	X	X
Modbus RTU FRSA-00	X	–	–	–	–
Modbus TCP FENA-01	X	–	–	–	–
Modbus TCP FENA-11	–	X	X	X	X
PROFIBUS DP FPBA-01	X	X	X	X	X
PROFINET IO FENA-01	X	–	–	–	–
PROFINET IO FENA-11	–	X	X	X	X
LonWorks® FLON-01	X	X	X	–	–
EtherCAT® FECA-01	X	X	–	X	X
PowerLink FEPL-02	X	X	X	X	X

For more information please contact your local ABB representative or visit:

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