

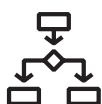
# Fieldbus and Industrial Ethernet solutions

## Drive's entry ticket for automation Eco-systems



A wide variety of fieldbus and Industrial Ethernet systems are available on the market and all major protocols are supported by ABB drives, giving you the required flexibility, compatibility and security. So, no matter what preference you may have for communication networks and automation systems, we offer the correct solution to satisfy the specifications.

**ABB drives ensure connectivity to automation systems thanks to embedded Protocols and a wide range of F-series fieldbus interface modules, giving you a simplified interface to control and manage all ABB drives in low to medium voltage ranges.**



**Network connectivity of products** provides simplified interface for control and management of drives; improving quality, productivity, flexibility and scalability. Communication 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.



**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
- Ethernet/IP™ with ring topology DLR (Device Level Ring)
- Profinet IO with ring topology MRP (Media Redundancy Protocol)



**Advantages of network connectivity**

- Decreases mechanical and electrical installation time
- Reduces downtime
- 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
- PC tool communication via installed PLC networks



**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
- Quick access to network drives with PC based start-up and maintenance software tools



PROFINET® IO is an open standard for Industrial Ethernet and it is used from process automation to motion control, as well as for functional-safety solutions. The interface module supports PROFIdrive and ABB drive profiles and it is equipped with 2 RJ45 connections with an integrated switch. It supports ring topology with Media Redundancy Protocol (MRP) and PROFIsafe with optional FSO-12/21 for ACS880 and with optional FSPS-21 for ACS380, ACS580 and ACS880.



EtherNet/IP™ is an industrial network protocol that adapts the Common Industrial Protocol (CIP) to standard Ethernet. It is one of the leading industrial protocols and it is widely used in a range of industries. The interface module acts as an EtherNet/IP™ server with support for ODVA AC/DC drive and ABB drive profiles. It supports both explicit messaging where each attribute of a class is set individually, and implicit messaging using input and output instances. It is equipped with 2 RJ45 connections with an integrated switch and support device-level ring (DLR). Add-On Instructions are available.



This is a Modbus® variant used for communications over TCP/IP networks. The interface module acts as a Modbus® TCP server with support for ABB drive profiles. Common read/write single- and multiple register function codes are supported. It is equipped with 2 RJ45 connections with an integrated switch.



EtherCAT® is a real-time Ethernet master/slave fieldbus system. The EtherCAT slave devices read the data addressed to them while the telegram passes through the device enabling fast real-time communication and the telegrams are only delayed by a few nanoseconds. Interface module supports CiA 402 and ABB drives profiles.



ETHERNET POWERLINK is a real-time protocol for standard Ethernet and the protocol guarantees transfer of time-critical data in very short cycles with configurable response time. Interface module supports CiA 402 and ABB drives profiles.



PROFIBUS® DP is the most widely used industrial network, ABB drives support PROFIBUS DP-V0 and DP-V1. Interface module supports PROFIdrive and ABB drives profiles.



CANopen® is a popular industrial communication network originally designed for motion-oriented machine control networks, such as handling systems. Interface module supports both cyclic and acyclic event driven communication. This makes it possible to reduce the bus load to a minimum and maintain short reaction times. It supports CiA 402 and ABB drive profiles.



DeviceNet™ offers robust, efficient data handling since it is based on a Produce/Consume model. Interface module uses CAN (Controller Area Network) as the backbone technology and defines an application layer to cover a range of device profiles. It supports ODVA AC/DC drive and ABB drives profiles.

