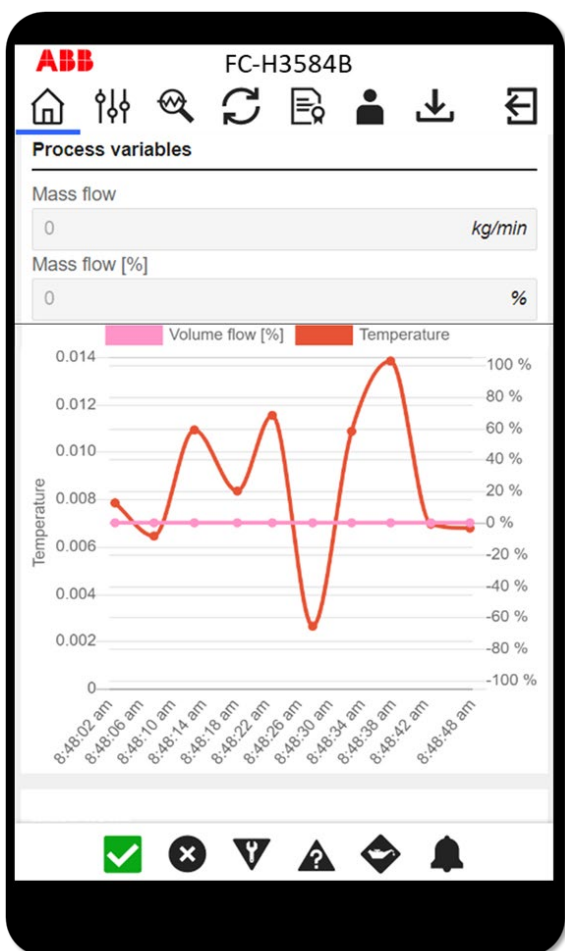


MEASUREMENT & ANALYTICS

# Ethernet for Flow Measurement

Measurement performance at the speed of light



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## **Ethernet for Flow Measurement**

Have you ever wondered why office and mobile communications are so simple, while industrial communications require an expert?

**ABB electromagnetic flowmeters and CoriolisMaster with Ethernet are communications made easy!**

Gain quick access to meters with a standard browser on a laptop, tablet or mobile device in parallel to PLC – secure and via the same cable.

But there is more:

- Power over Ethernet (PoE)
- Integrated device verification
- Redundant communication, ring and daisy chain wiring
- Prepared for TSN
- Multiple cybersecurity features

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# Industrial Ethernet enters Instrumentation

## ABB made Ethernet secure and easy to use

**ABB is a leading player in industrial communication.**

Our solid roots for the future of a connected world began with technological innovations from the early, industrial age in measurement and process control, and carried through to the pioneering, industrial communications of the 1960's.

While industrial Ethernet is a mature standard ensuring robust communication and wide interoperability, there is still room for differentiation.



ABB ProcessMaster and CoriolisMaster, with on board industrial Ethernet, reduce complexity and lower costs of infrastructure to a level of an office network. Get your flow measurement ready for IT/OT convergence, cloud connectivity and the requirements needed for a secure and encrypted communication.

- An integrated web server with full access to measurement data provides flexibility
- Diagnostics and configuration eliminate the need for tools and drivers, saving money
- Power over Ethernet (PoE) and an integrated switch simplify wiring (daisy chain), saving time
- Parallel use of 4..20 mA current output and Ethernet allow seamless migration of conventional instrumentation to full digitalized plants, optimizing resources

## **Cyber Security integrated**

ABB provides the defense-in-depth security required for digital solutions in mission-critical applications and industries.

With the early days of cloud enablement behind us, it is clear that security means much more than protection against cybercrime. Certainly, connections need to be safe, but the value of that data should also be protected. Customers should not be required to forfeit safety, value, nor control in order to realize the benefits of digitization. ABB Ability™ closes the loop between these needs with an innovative, multi-layered approach to security.

## **Connectivity**

The majority of the 70 million ABB connected devices working for customers around the world require built-in safety standards that, by definition, must also be secure. Everything from controller hardware to RAP software is designed to ensure optimized, uninterrupted operation.

## **Data**

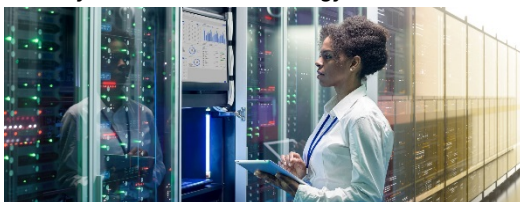
ABB Ability™ collaborates with Microsoft Azure to give customers access to an enterprise-grade cloud infrastructure built into the ABB Ability™ platform for customers to securely store their data.

## **Control**

Protecting intellectual property is a requirement often overlooked by customers hoping to participate in a large, open, digital industrial ecosystem. ABB Ability™ provides the functions and protocols to protect customer IP as rigorously as ABB protects its own.

## **Standards**

ABB innovates digital security via its Group Cyber Security Council and participates in standardization efforts such as Platform Industry 4.0 and Industrial Internet Consortium. It also works with dozens of universities and brings together leading minds annually for its Global Technology Forum.





### **Integrated Device Verification**

Conveniently check your meter via the web and print comprehensive reports via ABB Ability™ Measurement Verification Software SRV500



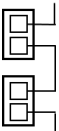
### **Dynamic QR-Code**

Quickly receive contactless transfer of device health and verification results to mobile devices



### **Secure WebServer (https)**

Easily check readings and troubleshoot problems with no need for tools and drivers to setup the meter



### **Integrated high performance industrial Ethernet switch**

Allows redundant connections to the PLC operator panel but also daisy chain wiring to save installation cost



### **Power over Ethernet (PoE)**

Omits the need for a separate DC power infrastructure - power and comms via the same cable



### **Leading industrial Ethernet protocols**

It is your choice to use any industrial protocol from simple Modbus TCP, to high performance EtherNet/IP.



### **Smart upgrade 4..20 mA installations**

Process automation means continuous evolution in plants. ABB's Ethernet MAGs and Coriolis combine robust 4..20 mA output and future proof digital comms with up to 100Mbit/s

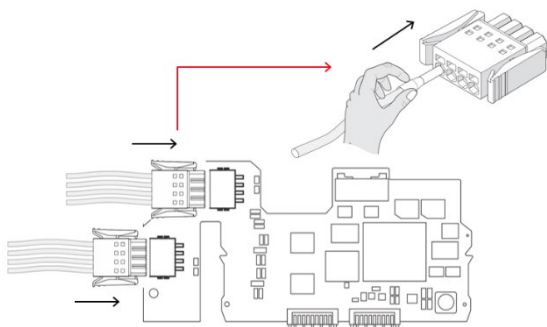


### **Ready for TSN and secure industrial protocols**

Soon to come, network convergence will be brought down to the meters with multiple protocols including non-industrials such as video, audio and VOIP. ABB's MAG and Coriolis hardware is prepared for time synchronized networks, a network traffic orchestration technology, actually in standardization.

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# Get ready for fully digital instrumentation



RJ45 plugs are currently used by most suppliers. They have, however, limitations of use in rough industrial installations due to vibration sensitivity. Because of this, they can require more effort to set up and the use of special tools.

ABB's new connector is vibration resistant, is easier to use and can be handled without any special tools!

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