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People for Process Automation

Endress+Hauser is a leading supplier of industrial measurement and automation equipment. It has a comprehensive

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People for Process Automation

FOUNDATION fieldbus and HART instrument portfolio covering flow, level, pressure, analysis, temperature and system components. Solutions and field-based services around field network engineering, asset management, calibration and maintenance ensure quick commissioning plus reliable, safe and economic operation of your plant. Our pioneering IIoT services and applications integrate seamlessly into existing plant technology, providing more added value.

Visit Endress+Hauser.

In This Issue: The Power of Process Automation Protocols

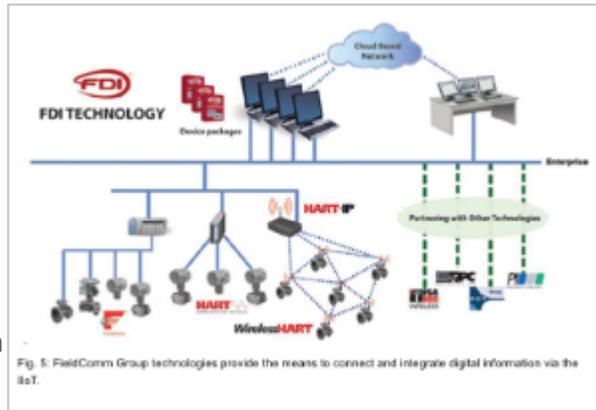
In today's era of the Industrial Internet of Things (IIoT), process automation protocols play a crucial part in digital transformation. They provide the means to connect and integrate digital information, using intelligent field devices to reduce waste, improve safety and increase operational efficiency. The protocols are quite literally the foundation that the IIoT is built upon.

The possibilities of smart connected devices and software applications within an industrial plant are endless, and once a connection across the Internet is also provided, this value can be extracted to varying levels within the organization.

FieldComm Group technologies have been driving digital transformation for more than two decades. FOUNDATION Fieldbus™,

HART™ and WirelessHART™ devices can be the basis for digitization supporting IIoT initiatives.

Read more about the Power of Process Automation Protocols in this issue.



NEWS



FieldComm Group Strengthens its Position in the Process Automation Ecosystem

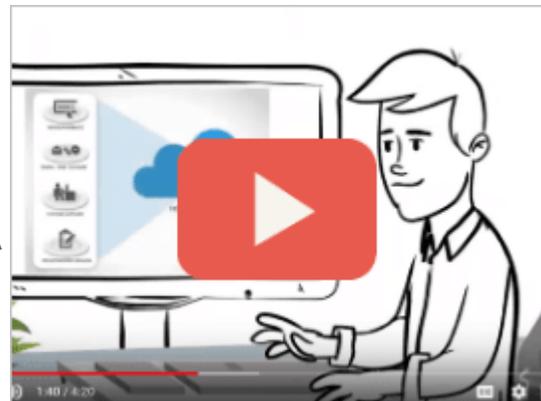
OPC Foundation, PROFIBUS/PROFINET International, and The Open Group/Open Process Automation Forum endorsed the Process Automation Device Informational Model.

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New Video Describes FDI Package Repository Solves Device Revision Problems

When it comes to industrial instrumentation, device revision management is a critical task. A new video from FieldComm Group describes how its cloud-based FDI Package Repository enables automation end users and system



suppliers to auto-update a host system with the appropriate FDI Package without human intervention.

2019 Plant of the Year Nominations Now Open

Do you know of a process plant or other industrial facility that sets the standard for use of FOUNDATION Fieldbus, HART or FDI technology?

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WirelessHART Adapter – Enable Device Wireless

Microcyber's A1110 *WirelessHART* Adapter can integrate traditional instruments into a wireless network without requiring any development work, and they will co-exist with the system without affecting each other. The adapter is powered by a 4-20mA loop or an external power supply, and supports HART and 4-20mA devices.

Features:

- Enables wired device to have wireless communication capability
- Digs deeper into diagnostic information and process data of instrument terminal
- Easy and fast installation, able to connect several wired instruments
- Increases process control invisibility, runs more efficiently, and decreases downtime
- Intrinsic safety

Visit Microcyber Corporation.

TECHNOLOGY

Refinery's "Do Things Better" Culture Leverages FieldComm Group Protocols

The 2018 Plant of the Year winner, Mangalore Refinery and Petrochemicals Ltd., is the first award recipient from India, and continuously strives for more effective utilization of its resources and facilities.



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APPLICATIONS



***WirelessHART* Network Benefits Pharmaceutical Plants by Delivering IIoT Data**

Pharmaceutical manufacturing facilities are deploying *WirelessHART* instrumentation to control costs, boost performance and improve efficiency.

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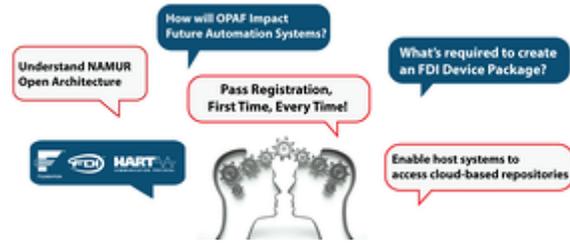
PRODUCTS

New product news you might be interested in:

- [Emerson's *WirelessHART* Radar Level Device Meets API 18.2 Standard](#)
- [Endress+Hauser Supports Mobile Device Configuration in Ex Zone 1](#)
- [Microcyber Announces NCS-TT106x Temperature Module](#)
- [Moore Industries Accelerates HART Data to the Speed of Ethernet](#)
- [Vega 80 GHz Radar Available with HART or FOUNDATION Fieldbus](#)

Participate in Our Americas Member Meeting

FieldComm Group is holding its first-ever Americas Member Meeting on April 24-25 in Austin, TX. This is an opportunity for management, marketing and technical personnel to gain valuable insights on current technology initiatives, product developments, emerging technologies, how to prepare for FDI, and industry trends as seen by ARC and Putman Media. This event is for members of FieldComm Group only.



Register today!

CALENDAR

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Inaugural Americas Member Meeting

Austin, Texas, USA
April 24-25, 2019

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Honeywell User Group

Dallas, Texas, USA
June 10-14, 2019

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Asia Pacific

FCG-J (Japan) General Assembly

Tokyo Sinagawa, Japan
May 10, 2019

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Europe

World Interoperability Conference: Networking with OPC UA Standardization Groups

Hannover, Germany
April 1, 2019

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FieldComm Group Strengthens its Position in the Process Automation Ecosystem

OPC Foundation, PROFIBUS/PROFINET International, and The Open Group/Open Process Automation Forum endorse Process Automation Device Information Model (PA-DIM) specification

By FieldComm Group

Mar 25, 2019



FieldComm Group has announced the endorsement of its Process Automation Device Information Model (PA-DIM) specification, based on NAMUR requirements, by OPC Foundation, PROFIBUS/PROFINET International, and The Open Group/Open Process Automation Forum. This development validates FieldComm Group's position at the center of process automation standards development and product conformance testing.

In a presentation at the 2018 ARC Forum in Orlando, FL, FieldComm Group and OPC Foundation presented their joint vision for creating a protocol-independent PA-DIM specification to implement the requirements of the NAMUR Open Architecture (NOA). PROFIBUS/PROFINET International is also participating in this effort.

FieldComm Group President and CEO Ted Masters stated, "The goal of PA-DIM, when used alongside registered products that support FieldComm Group and PI's joint FDI technology, is to simplify field device integration to systems and clouds, as recommended by NAMUR and ZVEI, by standardizing on a single information model that supports the many field device protocols used in process automation. This includes HART, FOUNDATION Fieldbus, ISA100.11a, PROFIBUS PA, PROFINET and *WirelessHART*."

OPC Foundation President and Executive Director Stefan Hoppe commented, “Using the OPC UA-based PA-DIM with FDI products will enable end users to dramatically reduce time-to-market for advanced analytics, Big Data, and enterprise cloud solutions that can often rely on information from thousands of geographically dispersed field devices employing multiple process automation protocols.”



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The graphic on the left is a dark blue square with white text. It reads: 'CASE STUDY: Industrial IoT-Enabled Remote Monitoring Improves O&M Service Performance'. Below this text is the ARC Advisory Group logo, which consists of the letters 'ARC' in a circle above the words 'Advisory Group'.

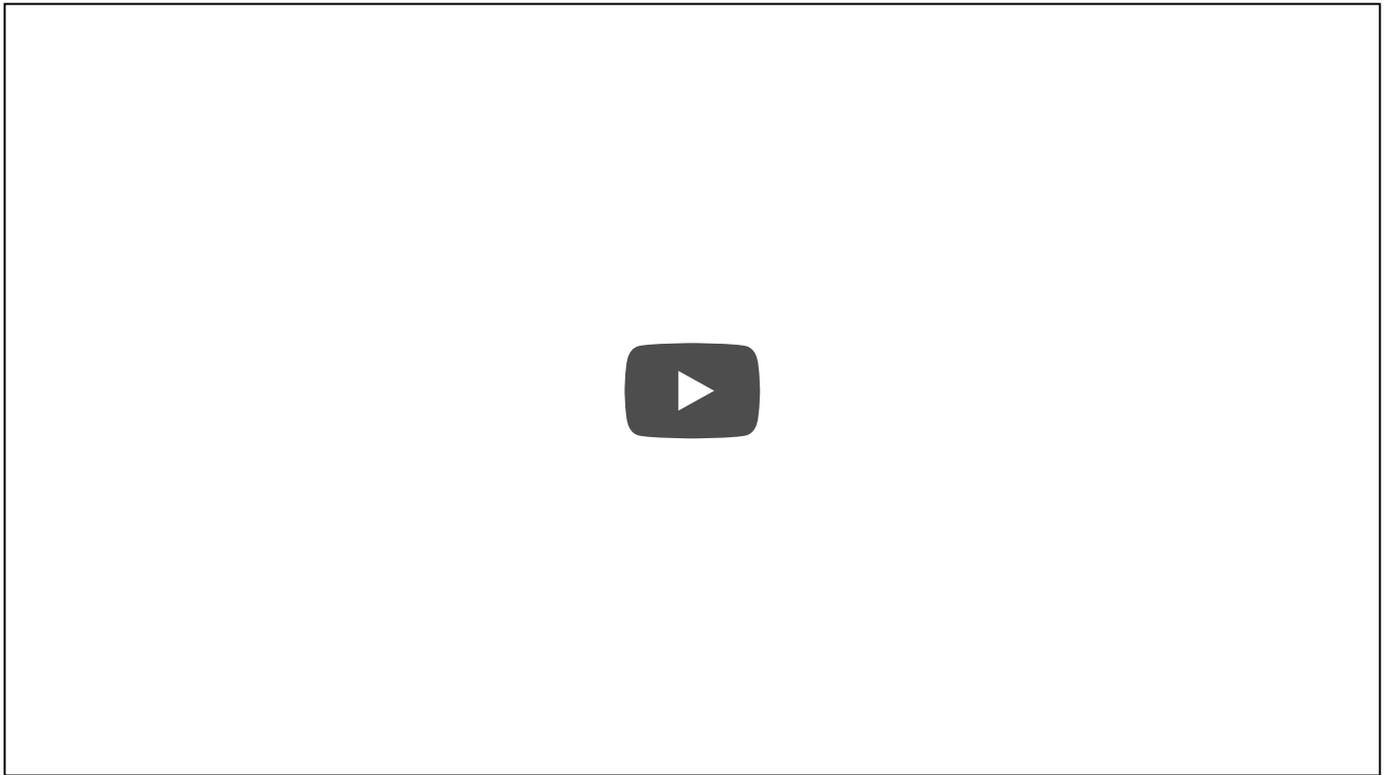
Dr. Peter Wenzel, executive director, PI Germany, also confirmed the importance of PA-DIM to the industrial automation industry. He said, “Industry 4.0 requires a high degree of digitization and standardization, which triggers a need for a series of future-oriented innovations in the field of industrial automation. For PI, PA-DIM is one of the essential enabling technologies that support this fact. PI is looking forward to continuing the years of successful cooperation with FieldComm Group and OPC Foundation in the new field of standardization of PA-DIM.”

Building on the success of PA-DIM standardization, FieldComm Group now has a liaison agreement in place with The Open Group/Open Process Automation Forum. As part of the agreement, the OPA Forum and Open Group have joined the membership of FieldComm Group – further underscoring the importance and relevance of its technologies and their fit-for-future process automation architectures. This and other related developments place FieldComm Group at the center of a global effort to digitally transform the process industry to realize the benefits brought by IIoT and Industry 4.0.

“FieldComm Group technologies, such as Function Blocks and FDI, are important enablers of interoperability, interchangeability, and portability in the standards-based open process automation architecture envisioned by OPAF,” said Don Bartusiak, co-chair, Open Process Automation Forum.

Standards development working groups are actively engaged in finalizing specifications for the first release of PA-DIM during the first half of 2019.

For more information, please visit the FieldComm Group website.



FDI - Package Repository

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FieldComm Group

Published on Jan 31, 2019

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This video describes Field Device Integration (FDI) technology used in industrial process automation and how devices and systems can be more easily maintained through built-in cloud repository capabilities - thus reducing maintenance efforts. FDI Technology is owned by

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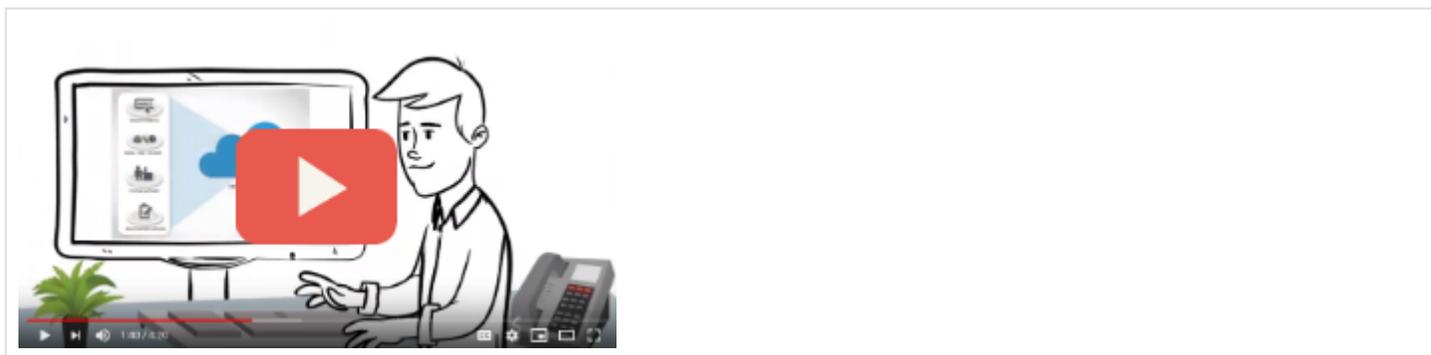
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New Video Describes FDI Package Repository Solves Device Revision Problems

FieldComm Group's cloud-based FDI Package Repository enables automation end users and system suppliers to auto-update a host system

By FieldComm Group

Mar 25, 2019



When it comes to industrial instrumentation, device revision management is a critical task. It's important to keep the control system and handheld field communicator aligned with the latest devices and revisions. Problems arise when multiple, non-standardized sources for device drivers are available. A new video from FieldComm Group describes how its cloud-based FDI Package Repository enables automation end users and system suppliers to auto-update a host system with the appropriate FDI Package without human intervention.

Watch the video now.

For more information, please visit the [FDI website](#).

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2019 Plant of the Year Nominations Now Open

Nominations due by May 31

By FieldComm Group

Mar 25, 2019



Do you know of a process plant or other industrial facility that sets the standard for use of FOUNDATION Fieldbus, HART or FDI technology? If so, you can enter it for FieldComm Group's 2019 Plant of the Year Award.

Don't delay – submit your nomination by May 31, 2019. All entries are eligible to win a great prize!

For more information, please visit the FieldComm Group website's Plant of the Year webpage.

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Refinery's "Do Things Better" Culture Leverages FieldComm Group Protocols

Mangalore Refinery continuously strives for more effective utilization of its resources and facilities.

By FieldComm Group

Mar 25, 2019



When it comes to industrial plants that have implemented process automation protocols, only a select group of facilities receive FieldComm Group's annual Plant of the Year Award. These plants earn the much-deserved recognition that goes with being a leading adopter of FOUNDATION Fieldbus, HART, *WirelessHART* or FDI technologies.

The 2018 Plant of the Year winner, Mangalore Refinery and Petrochemicals Ltd., is the first award recipient from India. The company has a "do things better" culture that led to the adoption of advanced digital communications for process control. Mangalore continuously strives for more effective utilization of its resources and facilities.

To read the full article, [click here](#).

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WirelessHART Network Benefits Pharmaceutical Plants by Delivering IIoT Data

Pharmaceutical manufacturing facilities are deploying *WirelessHART* instrumentation to control costs, boost performance and improve efficiency.

By FieldComm Group

Mar 25, 2019



Pharmaceutical manufacturing plants, both full-scale production facilities and laboratories, are generally networked using IT platforms such as Ethernet and Wi-Fi. These are essentially office networks that have been extended into manufacturing environments to serve a variety of functions, but were not designed with manufacturing support as their primary purpose.

In contrast, HART and *WirelessHART* were designed for process manufacturing applications, and are thus better networking protocols for instrumentation and device-level communication.

Like the manufacturing systems they support, networks have to be flexible. While the pharmaceutical industry is known for being very static due to regulatory constraints, things change more than many realize. But wired networks, while highly reliable, are not easy to change or expand. Adding coverage for new equipment, moving equipment in a new location, or enlarging a building requires pulling wires, which is very expensive. This becomes increasingly important when setting an Industrial Internet of Things (IIoT) strategy to improve the overall safety, reliability, and energy use at a plant.

Adding wired infrastructure is often a large cost barrier when examining the feasibility of an extended monitoring program, not to mention the challenges with cleanability of power and signal cabling.



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Many pharmaceutical manufacturing facilities are deploying *WirelessHART* instrumentation designed to monitor various types of in-plant systems and utilities to control costs, boost performance and improve efficiency. A wide variety of devices can be used to monitor steam traps, check the various elements of pumps, measure processed water usage and the like. These monitoring devices can operate on the same networks as the *WirelessHART* process instruments, reporting their data through gateways and on to the larger plant networks.

In particular, laboratory and pilot-plant environments have been quick to recognize the value of *WirelessHART* networks and their ability to provide an exceptionally high degree of flexibility. In these areas where equipment is small, moveable and reconfigurable, wired networks are difficult to use without frequent extensions, modifications, and adding or moving wires.

One of the characteristics of the IIoT is its ability to reach the very edges of industrial networks. While implementing IIoT concepts does not require wireless device-level networks, they make the task far easier than traditional wired topologies. Sending data from *WirelessHART* devices to the gateway and on to the plant network allows for easy access to each of those devices.

WirelessHART networks also simplify deployment of new analytical tools such as pre-configured dashboards and condition-based maintenance programs. IIoT depends on data granularity, and these networks make it possible and practical to connect with individual field instruments, delivering the required level of detail.

This ability is changing manufacturing on all fronts, and it can have a profound impact on pharmaceutical producers. The IIoT facilitates data collection, analysis and movement more quickly than any mechanism to date. The ability to reach the cloud is very easy, supporting data access from anywhere.

For more information, please visit the Fieldcomm Group website.

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Emerson's *Wireless*HART Radar Level Device Meets API 18.2 Standard

Transmitter delivers enhanced accuracy which can be verified without having to open a tank's thief hatch

By FieldComm Group

Mar 25, 2019



Emerson's new high-performance version of its Rosemount™ 3308 Guided Wave Radar (GWR) Wireless Level Transmitter is the first standalone *Wireless*HART radar level device to comply with the API 18.2 custody transfer standard. The transmitter delivers enhanced accuracy which can be verified without having to open a tank's thief hatch, thereby increasing safety.

API 18.2 places strict accuracy demands on level measurement instrumentation because high levels of uncertainty during custody transfer can have significant financial implications. An upgraded microwave module makes the Rosemount 3308 more tolerant to difficult process conditions and able to deliver a more sensitive and repeatable measurement and higher accuracy.

Accuracy can be easily and quickly verified using the Rosemount VeriCase mobile verification tool. This straightforward procedure does not require a tank's thief hatch to be opened or any product to be transferred, making it an important safety improvement.



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In addition to providing the accuracy required for custody transfer applications, the Rosemount 3308 also delivers reliability in continuous level and interface monitoring applications in refineries, oil fields, offshore platforms and chemical plants, thereby providing a cost-effective standardized solution across an entire facility.

For more information, please visit the Emerson website.

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Endress+Hauser Supports Mobile Device Configuration in Ex Zone 1

Field Xpert SMT77 allows field device configuration from anywhere in a plant

By FieldComm Group

Mar 25, 2019



Field Xpert SMT77, Endress+Hauser's latest addition to its mobile asset management portfolio, allows users to configure field devices in practically all areas of a plant. Certified for use in Zone 1 (Class 1, Division 1) applications, it has ATEX, IEC and UL approvals. It can be connected remotely (HART over PROFIBUS/PROFINET) or point-to-point via a modem to HART, *WirelessHART* and FOUNDATION fieldbus as well as to PROFIBUS and Modbus devices.

Touch-enabled, Field Xpert SMT77 is sold as a complete solution with pre-installed driver libraries that can be securely updated online. Its state-of-the-art operating interface allows fast, single-tap connection to devices and a clear overview of important device parameters in up to 20 languages (dependent on DTM support). Maintenance activities are supported by NAMUR NE 107 diagnosis, PDF documented Heartbeat verification as well as device information and documentation. Endress+Hauser IIoT applications are also on call.

With IP65 protection and of ruggedized construction, Field Xpert SMT77 is a device ideally adapted to field environments. It has a large, easily-to-read 10.1-inch screen and a battery that can be exchanged in explosion-hazardous areas. Whether for commissioning or maintenance, a tablet that meets the highest demands!

For more information, please visit the Endress+Hauser website.



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Microcyber Announces NCS-TT106x Temperature Module

Temperature module supports multiple thermal resistances and thermocouples

By FieldComm Group

Mar 25, 2019



Microcyber's NCS-TT106x temperature module is a high-performance fieldbus temperature transmitter with an independent R&D communication controller. It supports multiple thermal resistances and thermocouples. Thermal resistance supports 2/3/4-wire connection mode, and thermocouples can use cold-end compensation functionality. Easy integration with multiple electrical integration files is available, such as DD, EDD, CFF and GSD

Multiple protocols:

- NCS-TT106H: HART Protocol
- NCS-TT106P: Profibus PA Protocol
- NCS-TT106F: FOUNDATION Fieldbus H1 Protocol

High accuracy (for common thermal resistance and thermocouples):

- $\pm 0.09\Omega$ for 0~500 Ω
- $\pm 0.7\Omega$ for 0~4000 Ω
- $\pm 0.2^{\circ}\text{C}$ for PT100 (-200 $^{\circ}\text{C}$ ~850 $^{\circ}\text{C}$)
- $\pm 0.2^{\circ}\text{C}$ for PT1000 (-200 $^{\circ}\text{C}$ ~850 $^{\circ}\text{C}$)
- 0.02mV for -100mV~+100mV
- 0.4 $^{\circ}\text{C}$ for K-Thermocouple (-200 $^{\circ}\text{C}$ ~1372 $^{\circ}\text{C}$)
- 0.9 $^{\circ}\text{C}$ for S-Thermocouple (0 $^{\circ}\text{C}$ ~1768 $^{\circ}\text{C}$)

For more information, please visit the Microcyber website.



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Moore Industries Accelerates HART Data to the Speed of Ethernet

HES HART to Ethernet Gateway System delivers critical information you need to address process and device problems before they turn into unplanned downtime

By FieldComm Group

Mar 25, 2019



Timely knowledge about your process enables better decisions and faster preventive action. Now you can get the process detail that you need from your HART 5, 6 and 7 field devices to MODBUS/TCP and HART-IP based monitoring and control systems at the speed of Ethernet with the Moore Industries HES HART to Ethernet Gateway System.

Connect up to 64 Smart HART devices to the HES and collect the Dynamic Variables and the Device Variables, along with diagnostic bits and bytes, from each device that help deliver critical information needed to help you address process and device problems before they turn into unplanned downtime.

The HES is simple to configure over Ethernet using PACTware or other FDT-compliant host with supplied HES DTM. Its support of open industrial protocols enables you to take advantage of any Industrial Internet of Things (IIoT) initiatives that deliver your process data to your higher-level systems. Plus, you can view all of the HART data from connected field devices in read-only mode with any web browser via the HES' built-in web server or a MODBUS/TCP compliant host.



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The new HES continues the Moore Industries reputation for rugged and reliable products that are designed and built to perform dependably year after year.

For more information, please visit the Moore Industries website.

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Vega 80 GHz Radar Available with HART or FOUNDATION Fieldbus

VEGAPULS 64 and the VEGAPULS 69 provide reliable and accurate measurements in tanks with internal installations and in compact vessels

By FieldComm Group

Mar 25, 2019



Get all the benefits of 80 GHz radar with HART and FOUNDATION fieldbus. The choice is simple with the VEGAPULS 64 and the VEGAPULS 69: one radar to measure level for liquids and one for bulk solids.

The higher frequency transmission gives operators unprecedented focus, allowing reliable and accurate measurements in tanks with internal installations and in compact vessels. Internal electronics make both radars immune to condensation and buildup. And finally, these radars are equipped with a high dynamic range, so they can measure even the smallest of signals.

The VEGAPULS 69 for solids is available with HART and FOUNDATION fieldbus, and the VEGAPULS 64 for liquids is available with HART. To learn more about the VEGAPULS 64, VEGAPULS 69, and other VEGA level products, call (800) FOR-LEVEL.

For more information, please visit the Vega website.