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Featured This Month...

In This Issue...

FOUNDATION BRIEFS

Central and Eastern European marketing committee forms

GLOBAL NEWS & EVENTS

UK end-user seminar called 'great success!'

Fieldbus technology events planned around the world

Rockwell Automation readies for 2008 PSUG, Automation Fair

Fieldbus Center announces 2009 technology training schedule

TECHNOLOGY NEWS

Sponsors

Foundation releases final diagnostic profiles specification

Tutorial: Understanding what ITC/PLTC listings mean

END USER INFORMATION

Emerson system ensures bottle filling operation is 'right first time'

PRODUCTS & SOLUTIONS

ABB participates in FOUNDATION SIF proof-of-concept testing

Coastal Skills offers 14 online training courses in FOUNDATION fieldbus systems

MooreHawke system guards against single-point failures

Pepperl+Fuchs online configuration tool builds cordsets in 10 steps

FOUNDATION BRIEFS

Central and Eastern European marketing committee forms

The newly established Fieldbus Foundation Central and Eastern European Marketing Committee (FFCEEMC) will seek to increase awareness and adoption of FOUNDATION technology throughout the Central and Eastern European (CEE) region through end user-focused activities such as training, technical support, trade show participation, and seminars, the Fieldbus Foundation announced recently. The FFCEEMC will be responsible for marketing activities in Austria, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Greece, Hungary, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, and Turkey.

Celebrating the formation of the new committee are (left to right) Borislav Mladenov (Emerson Process Management), Tibor Farkas (Pepperl+Fuchs, chairman, Fieldbus Foundation Hungarian marketing committee), Veress Aprad (R. Stahl), Laszlo Marosi (Honeywell), Jozef Schulcz (Yokogawa), Marian Bartal (Pepperl+Fuchs), Juergen George (Pepperl+Fuchs), and Marc Van Pelt (Vice President, Fieldbus Foundation EMEA Operations).

The FFCEEMC was formally launched at an inaugural meeting Sept. 2, 2008, in Prague, Czech Republic. Participants included representatives from Emerson Process Management, Honeywell, Pepperl+Fuchs, R. Stahl, and Yokogawa. Tibor Farkas, chairman–Fieldbus Foundation Hungarian marketing committee, also attended the event. Farkas has been actively promoting FOUNDATIONtechnology throughout Hungary for several years. FFCEEMC members thanked him and the Hungarian committee for all the work that has already been done in Hungary through successful end-user seminars and participation at exhibitions and conferences. The Hungarian committee will continue to function separately, but will be linked closely to the FFCEEMC.

Marc Van Pelt, vice-president-Fieldbus Foundation, EMEA operations, and chairman of the Fieldbus Foundation EMEA steering committee was on hand to support the effort and welcome the establishment of the FFCEEMC. "I am delighted that a committee has been formed that can build on the Hungarian Marketing Committee's achievements and take the benefits of FOUNDATION technology to a broader audience throughout the whole Central and Eastern European region," said Van Pelt. "The automation market across this region is diverse and rapidly evolving, and therefore has a wide range of needs in terms of local support—from basic introductory training in the benefits of a fieldbus system through to advanced implementation support."

During the committee election, Juergen George (Pepperl+Fuchs) was named chairman, Jozef Schulcz (Yokogawa) vice-chairman, and Laszlo Marosi (Honeywell) treasurer.

The FFCEEMC also is supported by the Fieldbus Foundation EMEA executive advisory council (EAC) and the Fieldbus Foundation EMEA steering committee. They will play an important role in promoting the primary value propositions of FOUNDATION technology. These include process integrity, business intelligence, and open, scalable integration of information across process

manufacturing plants.

For more information on the new committee, contact: CEE_info@fieldbus.org or visit the Fieldbus Foundation Web site.

Return to Top

GLOBAL NEWS & EVENTS

UK end-user seminar called 'great success!'

The Fieldbus Foundation UK Marketing Committee (FFUKMC) welcomed more than 50 end users and engineering contractors to its most recent end user seminar. The event, held Sept. 25 at Wembley Stadium, London, followed the format of previous road shows, taking place at a well-known sporting venue.

The seminar targeted current and prospective end users, contractors, specifiers, and implementers of FOUNDATION fieldbus technology. Following the theme "Fieldbus Comes Alive," the seminar showed how FOUNDATION fieldbus technology unifies process integrity, business intelligence, and open, scalable integration into one, plant-wide solution. Practical demonstrations on how to build, maintain, and modify working fieldbus segments followed the presentations. ABB, Emerson Process Management, and Honeywell provided host systems. Devices came from BEKA, Endress+Hauser, Smar, Krohne, Invensys, Topworx, and VEGA, and physical layer interfaces were supplied by MTL, MooreHawke, Pepperl+Fuchs, Stahl, and Turck.

Following a complimentary buffet lunch, attendees toured the stadium facilities. John S Hartley, chairman of the Fieldbus Foundation UK Marketing Committee, said he was pleased to add Wembley Stadium to the list of UK seminar venues. "The UK marketing committee enjoys hosting its Fieldbus Foundation end user events at some of the major sports venues across the UK," said Hartley. "To deliver such a clear and focused message for today's enterprise in such a unique venue is very satisfying and makes for a very beneficial and memorable day!"

For more information about activities in the UK and Ireland region, contact uk_info@fieldbus.org

Return to Top

Fieldbus technology events planned around the world

The Fieldbus Foundation offers many informational and educational events around the world. Make plans now to attend an event in your area.

LOCATION	DATE	EVENT and CONTACT INFORMATION
Guangzhou, China	Nov. 6, 2008	FOUNDATION Fieldbus End User Seminar More information to come
Savannah, Georgia, USA	Nov. 6, 2008	FOUNDATION Fieldbus End User Seminar Click here for more information

Chicago, Illinois, USA	Nov. 20, 2008	FOUNDATION Fieldbus End User Seminar Click here for more information
Suntec, Singapore	Dec. 2-5, 2008	OSEA Exhibition More information to come
Basel, Switzerland	Dec. 3, 2008	FOUNDATION Fieldbus End User Seminar Click here to email for more information
Doha, Qatar	Dec. 16, 2008	FOUNDATION Fieldbus End User Seminar Click here to email for more information
Kuwait	Dec. 17, 2008	FOUNDATION Fieldbus End User Seminar Click here to email for more information
FUTURE EVENTS TO BE SCHEDULED IN THE EMEA (EUROPE, MIDDLE-EAST, AFRICA)		
Duesseldorf, Germany	March 2-4, 2009	ARC Process Management Academy More information to come
Hannover, Germany	April 20-24, 2009	Interkama Trade Show More information to come
Frankfurt, Germany	May 11-15, 2009	ACHEMA Trade Show More information to come
Bahrain	October 2009	Multaqa 2009-FOUNDATIONFieldbus End User Conference More information to come
Frankfurt, Germany	November 2009	FOUNDATION Fieldbus End User/EPC Seminar More information to come
Le Havre, France	To be determined	FOUNDATION Fieldbus End User/EPC Seminar More information to come
Italy	To be determined	FOUNDATION Fieldbus End User/EPC Seminar More information to come
Russia (various locations)	To be determined	FOUNDATION Fieldbus End User/EPC Seminars More information to come
UK (various locations)	To be determined	FOUNDATION Fieldbus End UserUPC Seminars More information to come
FUTURE SEMINARS TO BE SCHEDULED IN SOUTH EAST ASIA		
Thailand	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Malaysia	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Jakarta, Indonesia	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
FUTURE SEMINARS TO BE SCHEDULED IN INDIA		
Chennai, India	Mid-December 2008	FF Technology Seminar More information to come
FUTURE SEMINARS TO BE SCHEDULED IN EAST ASIA		
Osaka, Japan	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Tokyo, Japan	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Korea	To be determined	To be determined

Click here for a complete list of events.

Return to Top

Rockwell Automation readies for 2008 PSUG, Automation Fair

Preparations are underway for two major Rockwell Automation events, set for Nashville, Tennessee in November. The Annual Process Solutions User Group (PSUG) will take place Nov. 17-18, 2008, followed by Automation Fair 2008 on Nov. 19-20. The events, both held at the Gaylord Opryland Complex, are well known for providing "a great process learning experience in one city during the same week."

PSUG 2008, an annual process event, will facilitate peer-to-peer exchange and provide an environment where attendees can hear innovative ideas, learn about best practices, and seek solutions. Customers from diverse industries will discuss their applications. PSUG 2008 is directed especially at plant managers and information managers, process control engineers, production operations personnel, vice presidents of operations and engineering, and quality and reliability directors.

Automation Fair, called a premier industry event by many, will focus on advanced process automation products, integrated control and information architectures, and valued-add services and solutions. It includes targeted process industry forums and labs designed to provide an educational experience for professionals at all levels. The program includes more than 50 technical sessions, 20 hands-on labs, and 6 focused industry forums. More than 100 Rockwell Automation partner companies are expected to display their latest innovations and products.

For more details and registration information, visit the Rockwell Automation Web site.

Return to Top

Fieldbus Center announces 2009 technology training schedule

A comprehensive training curriculum covering digital control technology is now available at the Fieldbus Center at Lee College. The Center is one of only two fieldbus training sites in the United States licensed to provide Fieldbus Foundation certified courses. Veteran instructors with years of field experience in instrumentation teach all classes. One-day courses do not require any previous experience with digital control systems.

Fieldbus for Sales Professionals is a basic introduction from a sales person's point of view. Course 401 classes provide in-depth information about fieldbus technology and include hands-on labs. The courses offer a vendor-neutral perspective on key aspects of fieldbus technology, but can be customized to highlight specific supplier solutions or product features. Classes are taught at the Center's state-of-the-art classroom, or may be held at a company's facilities.

The 2009 training schedule includes:

Course 102: Fieldbus for Sales Professionals

- January 22
- March 2
- May 4

Course 201: Fieldbus Applications

- February 10-11
- March 30-01

Course 401: Fieldbus Applications

- November 10-14
- December 15-19
- February 23-27
- April 20-24
- June 15-19

For questions or for more information, contact The Fieldbus Center at 832-556-4446 or visit the Center's Web site.

Return to Top

TECHNOLOGY NEWS

Foundation releases final diagnostic profiles specification

The final FOUNDATION fieldbus Diagnostic Profiles specification is now available. Based on guidelines established by the NAMUR Working Group 2.6, this specification builds upon the robust diagnostic features already provided by FOUNDATION fieldbus devices. At the same time, it allows end users to harness enhanced Electronic Device Description Language (EDDL) technology to achieve true, actionable diagnostics.

In May 2006, the Fieldbus Foundation and NAMUR, an international user association for automation technology in the process industries, began collaborating on enhancements to FOUNDATION technology to improve its usability. A key objective of this work was to unify the integration of fieldbus self-monitoring data and ensure the availability of valuable diagnostic information to process plant operators, engineers, and technicians.

According to the NAMUR NE107 recommendation, Self Monitoring and Diagnosis of Field Devices, fieldbus diagnostic results should be reliable and viewed in the context of a given application. The document recommends categorizing internal diagnostics into four standard status signals. It also stipulates configuration should be free, as reactions to a fault in the device may be very different depending on the user's requirements. According to NE107, plant operators should only see status signals; only device specialists should view detailed information.

Using the power of FOUNDATION fieldbus, and considering the NAMUR NE107 (Self Monitoring and Diagnosis of Field Devices) recommendations for diagnostic profiles support, the Fieldbus Foundation developed a profiles specification enhancing organization and integration of device diagnostics within FOUNDATION fieldbus systems. The specification will also help ensure future fieldbus devices are consistent with NAMUR guidelines.

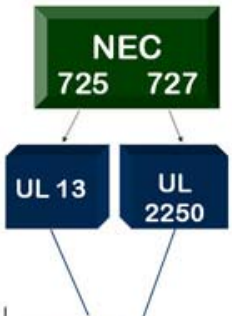
Stephen Mitschke, Fieldbus Foundation manager-fieldbus products, said, “Cooperation between the Fieldbus Foundation and NAMUR enabled all parties to develop a greater understanding of end-user requirements during this period of rapid fieldbus adoption. Users will benefit from our collaboration thanks to easier diagnostic configuration, greater application flexibility, and fewer spurious alarms.”

The FOUNDATION fieldbus Diagnostic Profiles specification identifies “role-based diagnostics” for fieldbus equipment and defines a consistent set of parameters for diagnostic alarming. This approach supports categorization of diagnostics according to NE107, thus ensuring the right diagnostic information is available to the right person—at the right time. In addition, it allows diagnostics to be applied, as most appropriate, for a particular plant application (such as process control engineering or asset management maintenance).

A copy of the FOUNDATION fieldbus Diagnostic Profiles specification is available to Fieldbus Foundation members on the Fieldbus Forums Web site under “Member Forums—New Specification Forum.” For more information, call 512-794-8890 or e-mail Fieldbus Foundation Member Services

Return to Top

Tutorial: Understanding what ITC/PLTC listings mean



By Sandy Fulton, Product Manager, Northwire Inc.

FF-844, the new Fieldbus Foundation cable compliance specification. includes the electrical requirements of ISA 50.02 and IEC 61158, but also contains some additional requirements that help you know your cable is the right one for use in FOUNDATION fieldbus control networks.

Cable certified by the foundation must be UL ITC and PLTC listed. What does that mean? At a minimum, it means these cables meet

important mechanical strength requirements and are UL-listed to comply with the National Electric Code.

Simply stated, UL ITC is UL standard 2250 instrumentation tray cable. UL PLTC is UL 13 power limited tray cable. UL writes cable standards that correspond to NEC articles, detailing the use of these cables in specific applications. UL 13 PLTC corresponds to NEC Article 725 Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits. UL 2250 ITC corresponds to NEC Article 727 instrumentation tray cable: Type ITC.

Article 725 has been around for a very long time. It is fairly complex and encompasses many types of circuits and other installations that are not always applicable to bus networks, including FOUNDATION fieldbus. Article 727 was written to simplify the guidelines when the instrumentation and control circuits operate at 150 V or less and 5 A or less.

Cable specifications for both articles and for UL 13 and UL 2250 are similar, though not exactly the same. The disparities do not apply to FOUNDATION fieldbus cables, so all cable requirements discussed here apply to both.

A FOUNDATION fieldbus Type A H1 cable, by definition, is a shielded twisted pair with maximum resistance of 23.5 §Ù/km @ 20°C (18 AWG minimum), characteristic impedance of 100 §Ù +/- 20 §Ù @ 31.25 kHz, and signal attenuation of < 3 dB/km @ 39 kHz.

Conformance to UL 13 PLTC and UL 2250 ITC adds physical property requirements, flame retardant requirements, and UV stability while offering some other attributes, which may be necessary for specific applications in specific locations.

Both UL listings require the cable to pass the UL 1685 flame test. This is a vertical tray test in which 8 ft of cable is suspended in the center of a test chamber; 70,000 BTUs from a 10-in. ribbon burner is applied for 20 min. If the flame propagates to the top of the cable tray, the cable fails. The CSA FT4 and IEEE 1202 flame tests are similar, though the angle at which the flame is applied differs, as do the pass/fail criteria. FT4 measures char length with a maximum of 150 cm (50 in.). IEEE 1202 measures melt/blistering.

The cable jacket must be a gas/vapor-tight continuous sheath and must be sunlight-resistant. The cable is submitted to a 720-hr Xenon arc test and must retain at least 80% of the original tensile and elongation strength. Tensile strength must originally be at least 1500 psi and the original elongation must be at least 100%.

UL standards require that every reel of cable be subjected to a 1.5 KVAC dielectric withstand test to ensure the cable has no shorts or insulation breakdown.

Cables must meet the flame test, UV test, and T&E tests to be listed, and bear ITC and PLTC in the legend on the cable. Some additional, optional attributes must be carefully defined and tested under these standards. These additional merit badges must be earned before they can appear as markings on the cable.

Temperature ratings can be tested, qualified, and marked on the cables. FF-844 requires a temperature range of at least -30 to +90°C. Cable manufacturers can achieve better performance than this, and ITC and PLTC allow cables to be marked with the temperatures they can sustain. Listings at -40, -50, and -60°C are available, assuming the cables meet cold bend test requirements consistently. Higher temperature ratings also exist with tests to support them.

Exposed run (formerly known as open wiring) listings are one of the options for ITC/PLTC-listed FOUNDATION fieldbus cables. The ER mark on the cable means the cables pass the same crush and impact tests applied to metal clad cables, without the metal (UL1569 crush and impact tests). These cables are strong!

NEC Article 725.154(D) hazardous (classified) locations (2) and Article 727.4(5) allow ER listed cable “to be installed exposed. The cable shall be continuously supported and protected against physical damage using mechanical protection such as dedicated struts, angles, or channels. The cable shall be secured at intervals not exceeding 1.8 m (6 ft).”

This provision can result in a great deal of freedom for installers and system designers and in significant cost savings over armored cables or cables installed in conduit.

Cables can also be listed for direct burial. This additional listing requires a crushing test of the entire cable. It also requires the insulated conductors pass the long time insulation resistance in water requirements for Type TW wires in UL 83 and a mechanical water absorption test.

So what do ITC/PLTC listings mean? They mean that cables built to these requirements are strong and comply with the National Electrical Code—even for Class I, Div II areas. They guarantee you’re getting the cable you need for safe and secure installations of FOUNDATION fieldbus systems.

Contact author Sandy Fulton by email at sandy.fulton@northwire.com.

Return to Top

END USER INFORMATION

Emerson system ensures bottle filling operation is 'right first time'

Tighter control of acetylene production is among the benefits achieved at SABIC Europe B.V's Geleen, Netherlands plant thanks to Emerson Process Management's PlantWeb digital plant architecture. The system has enabled the facility to reduce annual costs by €300,000, increasing throughput and plant availability, and improving efficiency by 30%. SABIC Europe B.V. is part of the Saudi Basic Industries Corp.

At the Geleen production site, empty cylinders are refilled with acetylene gas. This process, which consists of loading, automatic filling, and administering and managing filling data, has been integrated into a newly installed plant automation system using Emerson's DeltaV digital automation system and FOUNDATION fieldbus networked instruments, including Emerson's Micro Motion Coriolis flowmeters for direct measurement of mass flow.

Throughput has increased by 25% over the previous manual method of weighing and filling, which often required cylinders to be reworked. In addition, man-hours have been reduced 20%, physical work has been reduced considerably, and, consequently, the safety, health, and welfare of operators have been improved.

The new automated process, which uses intelligent devices to ensure "right first time" filling of the acetylene bottles, has removed the possibility of under or over-filling. Under-filling leads to time-consuming rework (additional filling of the bottles) and over filling potentially could lead to an explosion. FOUNDATION fieldbus devices are used to enable condition-based maintenance strategies. Each valve has a built-in alert, which, when networked using FOUNDATION fieldbus, can tell operators when re-calibration is necessary.

Emerson also won the contract to maintain the automation/process instrumentation. The introduction of predictive maintenance has eliminated the downtime required for checking the accuracy of the flowmeters and valves. Previously, valves had to be checked during a planned shutdown an average of 24 times a year. Planned shutdowns now have been reduced to just 2 a year and the number of unplanned shutdowns has been reduced to zero.

Using a system of valve alerts has increased the availability of filling process equipment, improving overall efficiency of the plant some 30%. The increase in operator efficiency, reduction in number of planned shutdowns, increased plant availability, and lower maintenance costs has led to annual savings of €300,000 at the filling station.

Learn more by visiting the Emerson Web site.

Return to Top

PRODUCTS & SOLUTIONS

ABB participates in FOUNDATION SIF proof-of-concept testing

ABB is a proud contributor to the recent proof-of-concept testing for the FOUNDATION fieldbus Safety Instrumented Functions (SIF) program, having developed prototype SIF applicable differential pressure transmitters (Model 2600T) for the program.

The instruments were installed in pilot plants for three major oil-and-gas customers. The tests were executed flawlessly in the United States, Germany, and Saudi Arabia. These field installations demonstrate to FOUNDATION fieldbus users the full interoperability of ABB pressure transmitters with other devices and control systems of non-ABB suppliers.

For the testing, all devices were connected to different SIF logic solvers in each pilot system. The ABB devices did not require any special configuration or activity by the end user to be fully integrated and operable. The three pilot tests demonstrated that FOUNDATION SIF provides safe communication and maintains functionality and capability required for SIF applications using ABB and other devices.

ABB Instrumentation defines itself as a global leader offering a wide variety of FOUNDATION fieldbus-enabled instrumentation. For more information on ABB Instrumentation, visit the ABB Web site.

Return to Top

Coastal Skills offers 14 online training courses in FOUNDATION fieldbus systems

Coastal Skills Training's 14-part Fieldbus Process Control eLearning series is designed to train instrumentation operators and technicians in the operation, maintenance, and troubleshooting of FOUNDATION fieldbus systems. Produced in conjunction with The Fieldbus Center at Lee College, the series is an effective way for fieldbus device manufacturers to train their sales forces on fieldbus basics.

The Fieldbus Process Control eLearning series is available on Coastal's ClarityNet HD platform and features live action video, high-resolution graphics, pre- and post-testing, embedded questions, and interactive exercises. Course objectives are clearly stated at the beginning of each course.

The 14 courses in the series include:

1. Fieldbus Curriculum Overview
2. The Road to Fieldbus
3. Fieldbus Wiring
4. Fieldbus Devices
5. Introduction to Configuration
6. Introduction to Control Strategy
7. Control Strategy
8. Data Flow and Communications
9. Fieldbus Calibration
10. OPC
11. Introduction to Troubleshooting
12. Troubleshooting
13. Fieldbus Maintenance
14. Maintenance Exercises

Realize the power and flexibility of eLearning. More than 450 additional industrial skills training titles are available. For more information, or to order a free 15-day preview, call 1-800-501-0233 or visit the Coastal Skills Training Web site.

Return to Top

MooreHawke system guards against single-point failures

Moore HawkeTrunkSafe fault-tolerant fieldbus system from MooreHawke (a division of Moore Industries-International Inc.) provides a cost-effective, highly reliable strategy to maintain FOUNDATION fieldbus communications between the DCS and field devices without interruption should a single-point failure, such as an open-circuit or short-circuit, occur.

Delivering a complete fault-tolerant fieldbus physical layer, TrunkSafe consists of two redundant fieldbus dc power conditioners and a specially engineered device coupler that together provide a secure fieldbus physical layer. TrunkSafe:

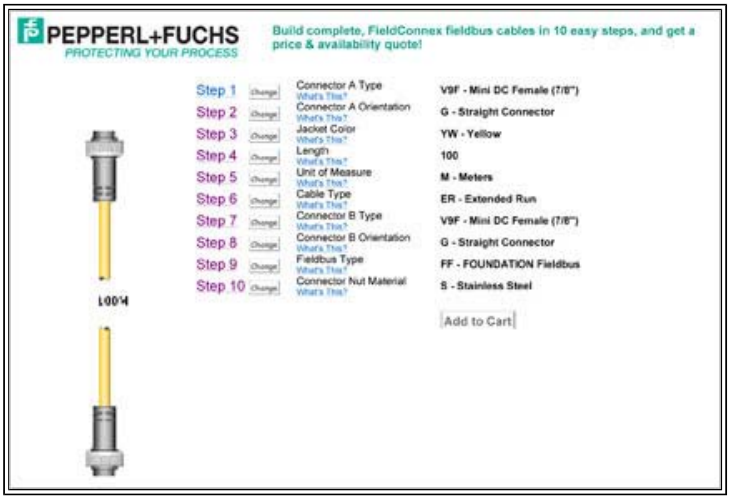
- Maintains all process and diagnostic communications without interruption, even if the network cable is broken or shorted;
- Is compatible with FOUNDATION fieldbus H1 networks and devices without hardware or software changes; and
- Includes advanced physical layer diagnostics that monitor and report open- and short-circuits, dc power status, and segment noise.

The product is the latest addition to the MooreHawke line of fieldbus interface solutions, which includes TrunkGuard Fieldbus device couplers and power supplies designed for general purpose, non-incendive (Class 1, Division 1), Zone 1 and Zone 2 areas; and RouteMaster Fieldbus system for intrinsically-safe (IS) applications. MooreHawke products are supported through the Moore Industries worldwide network of Interface Solution Centers.

For more information, visit the MooreHawke Web site.

Return to Top

Pepperl+Fuchs online configuration tool builds cordsets in 10 steps



Pepperl+Fuchs FieldConnex Cordset Product Configurator is a new online configuration tool that lets users design FieldConnex fieldbus Type A/ER cordset and extension cables in 10 easy steps, and obtain a price and availability quote. The tool is found on all Pepperl+Fuchs FieldConnex fieldbus products Web pages.

“Our easy to navigate, question-based menu builds the cordset in just 10 steps, and provides an image of the completed fieldbus cordset for the user’s inspection. What’s more, a Pepperl+Fuchs expert will contact the user within one business day to provide a price quote on the specific fieldbus cordset, and to answer any additional questions the user might have,” says Kristen Barbour, Pepperl+Fuchs FieldConnex product manager.

For more information and to access the FieldConnex Cordset Product Configurator, visit the Pepperl+Fuchs Web site.

Return to Top

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