

# Safety First!

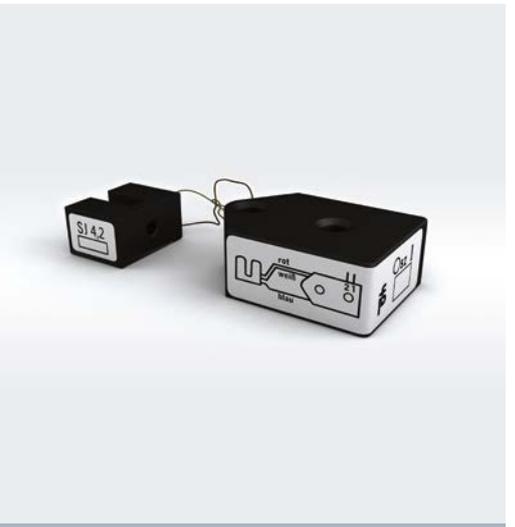
Products, solutions, and digital services for tomorrow's trends in process automation.

Explosion Protection  
from Pepperl+Fuchs



Your automation, our passion.

 **PEPPERL+FUCHS**



Pepperl+Fuchs

## Partners in Thinking Ahead

“Your automation, our passion” has been our company mission for over 75 years in the development, manufacture, and support of products and solutions which meet the continuous global requirements of the automation markets which we serve.

Throughout our history, the family ownership of Pepperl+Fuchs reveals not only a strong focus on innovation but also a fundamental corporate mindset. These have been the most important pillars of our success story since the very beginning: working in partnership with you, our customers.

Since the invention of the proximity switch in 1954, there have been numerous milestones and significant achievements that will continue into the present and beyond. In both our key expertise areas of industrial sensor technology or electrical explosion protection, the individual needs and challenges of each customer are always at the forefront of our thoughts and actions.

This applies in particular to Industry 4.0 with its digital transformation, which enables companies to make better use of technology and expertise than ever before. Our commitment to innovation will enhance processes and create IIoT-capable applications, particularly in tandem with proven technology innovations such as Ethernet-APL, which brings increased intelligence to process automation.

Always thinking one step ahead, always realizing visions for the industry and shaping the development of automation in the future, this is what drives us.

Welcome to our world—we are ready for your next challenge!

[www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

Explosion Protection

# “Safety First!” for Process Industries

**“Safety first!” As the world’s leading supplier for and pioneer in electrical explosion protection, safety is our top priority. We protect and connect the global process industry with our products and solutions across all types of hazardous area protection and for a wide range of applications.**

As a reliable industrial partner, we are aware of the special challenges you face every day. A team of more than 600 engineers is committed to developing tomorrow’s solutions today—and driving our expertise in topics like functional safety, including the world’s only complete SIL 3 portfolio and 10 million installed SIL components. Our commitment to optimizing the productivity of mobile workers is reflected in significant investments in the development of digital communications. With more than 500,000 mobile devices supplied worldwide, limitless connectivity and safer working conditions are becoming a reality, wherever you are.

We develop, manufacture and support our products through a network of eighty locations around the world. We provide support wherever it is needed—with products that are globally certified and suitable for your working environment. From initial application analysis to project implementation through one of our six Solution Engineering Centers we have across four continents, the only path to success is through strong partnerships with clear communication and good collaboration.

While the ethics of business that forms the foundation of our company have not changed to this day, the entrepreneurial spirit to always develop the latest technologies to meet our customers’ demands is greater than ever. Whether we are developing intrinsic safety interfacing and surge protection systems for conventional applications or introducing new technologies like fieldbus or smart wearables, our drive for continuous improvement remains the same. This is particularly evident in the example of the new Ethernet-based Advanced Physical Layer (Ethernet-APL) for process automation: with this technology, we are at the forefront of the digital transformation in the context of Industry 4.0. Ethernet-APL enables companies to leverage technology and expertise to enhance their processes and implement IIoT-capable applications.

Whether conventional applications or complex tasks such as the digital transformation of your application to IIoT level: with the rethinking of established technologies, we pave the way for upcoming challenges.

Join us in the future of process automation!

[www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)



**World-leading innovative products**  
technology leaders



**Dedicated local support**  
over 80 offices globally



**Global warranty**  
products are supported worldwide



**Global hazardous area expertise**  
local approvals



**Leader in safety**  
live and work safe



**Reliable long-term partner**  
supporting customers for  
over 70 years



**Meets global quality standards**  
we manufacture what we design



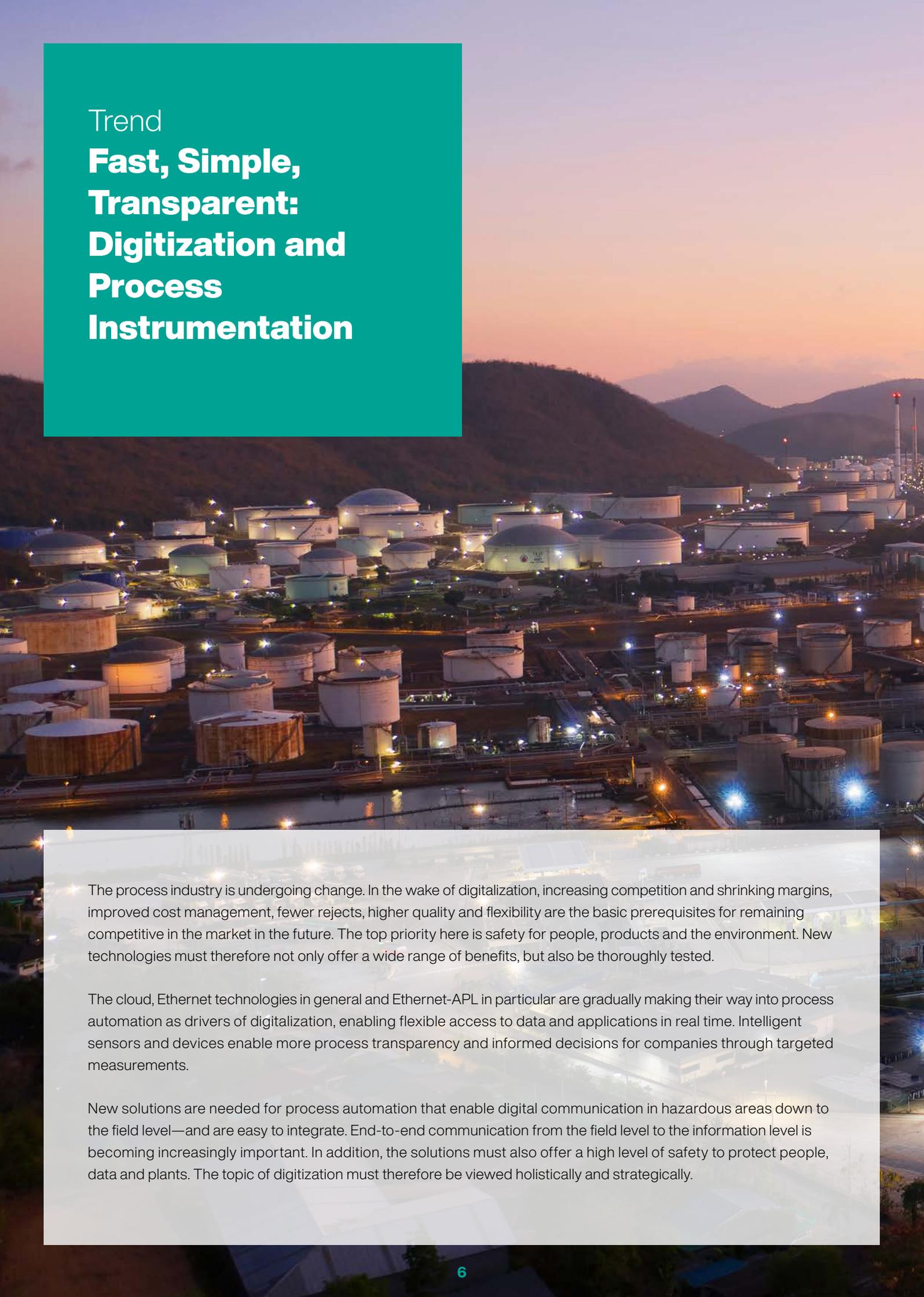
**Distribution centers**  
products delivered directly  
to you on time



ANZEX



**Oil and Gas**  
**Chemical**  
**Pharmaceutical**  
**Mining and Metals**  
**Power Generation**  
**Offshore and Marine**  
**Aviation**  
**Wastewater**  
**Food and Beverage**



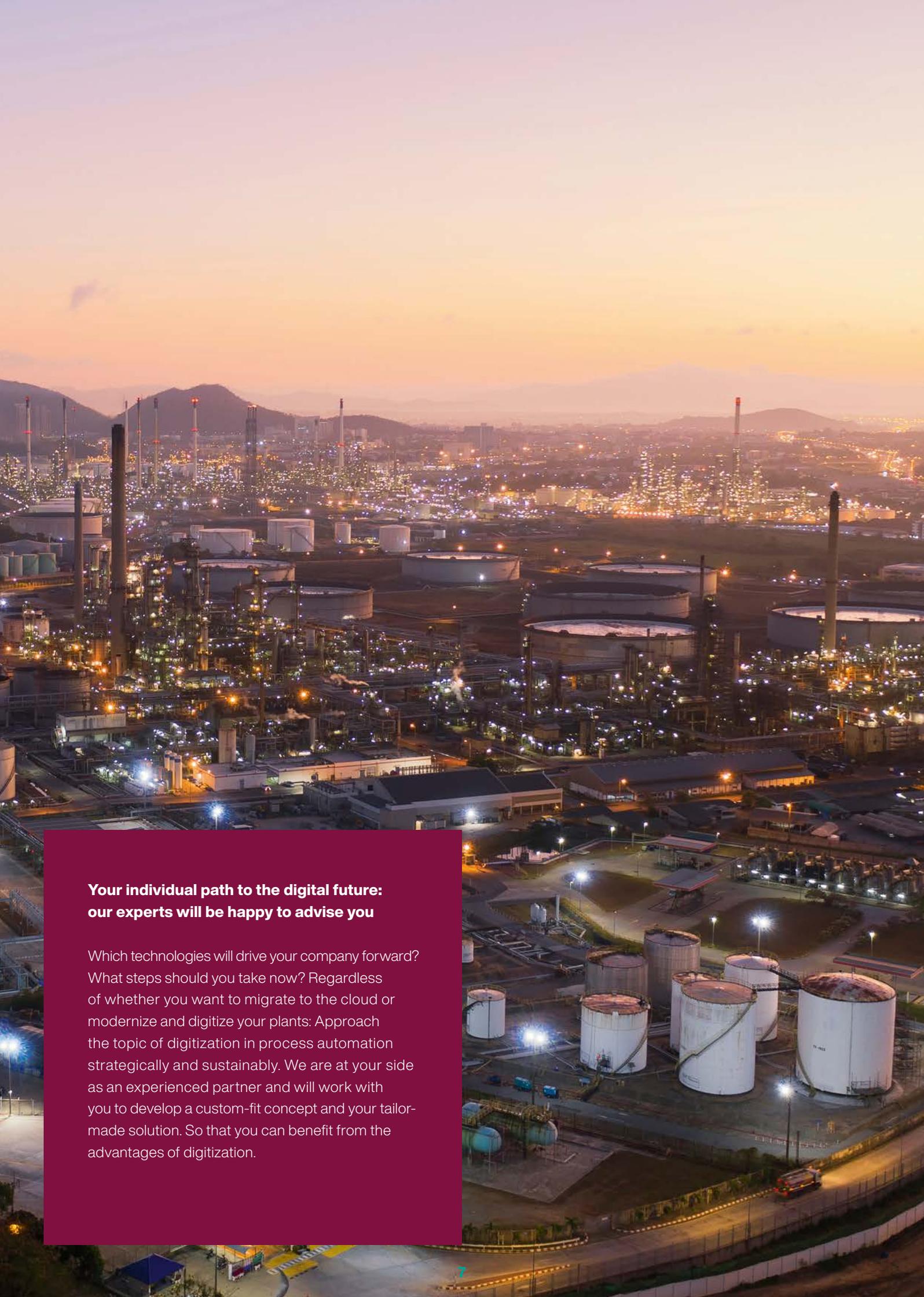
Trend

## **Fast, Simple, Transparent: Digitization and Process Instrumentation**

The process industry is undergoing change. In the wake of digitalization, increasing competition and shrinking margins, improved cost management, fewer rejects, higher quality and flexibility are the basic prerequisites for remaining competitive in the market in the future. The top priority here is safety for people, products and the environment. New technologies must therefore not only offer a wide range of benefits, but also be thoroughly tested.

The cloud, Ethernet technologies in general and Ethernet-APL in particular are gradually making their way into process automation as drivers of digitalization, enabling flexible access to data and applications in real time. Intelligent sensors and devices enable more process transparency and informed decisions for companies through targeted measurements.

New solutions are needed for process automation that enable digital communication in hazardous areas down to the field level—and are easy to integrate. End-to-end communication from the field level to the information level is becoming increasingly important. In addition, the solutions must also offer a high level of safety to protect people, data and plants. The topic of digitization must therefore be viewed holistically and strategically.



**Your individual path to the digital future:  
our experts will be happy to advise you**

Which technologies will drive your company forward? What steps should you take now? Regardless of whether you want to migrate to the cloud or modernize and digitize your plants: Approach the topic of digitization in process automation strategically and sustainably. We are at your side as an experienced partner and will work with you to develop a custom-fit concept and your tailor-made solution. So that you can benefit from the advantages of digitization.

A photograph of industrial machinery, likely a fire extinguisher or a similar device, with a prominent red horn and various pipes and electrical components. The background is a blurred industrial setting.

Trend

## **Smart Mobility: Digital Communication and Information in Real Time**

Today, data and information are more important than ever to ensure the modern and efficient operation of plants. In the process industry, employees can respond quickly and flexibly to requirements if information is available digitally in real time and they can communicate easily with each other wherever they are.

Companies can minimize incidents, reduce downtime, increase safety levels and productivity, and save time and money. Companies also need a constant overview of their personnel within the plant. This enables them to respond quickly and flexibly in the event of an emergency. Thanks to modern digital processes, the team can also access real-time digital data of the plant or individual components, such as detailed drawings of a process or control element, at any time and from any location. This makes maintenance work much easier.

The prerequisite is modern, mobile equipment that employees can also use in potentially explosive areas. This way, your team is intelligently networked, can support each other at all times, and can access important information at any time. Use the latest technology profitably to master the challenges of everyday life without any problems.



### **Optimally networked due to our Smart Mobile Worker Ecosystem**

We know your requirements in process automation and have therefore developed a portfolio, including phones, tablets and accessories, that enables your team to work more efficiently and safely. Our portfolio interlocks perfectly and enables mobile exchange and access to data in real time, even in hazardous areas.

Get in touch with us now, our experts will be happy to work out a tailor-made concept for smart collaboration.



More information:  
[pepperl-fuchs.com/pf-mcc](https://pepperl-fuchs.com/pf-mcc)



Trend

## Functional Safety: Protecting People and the Environment

The safe operation of plants and machines is the top priority in order to protect people and the environment—keyword: functional safety. Plants must be subjected to a risk analysis and the identified risks quantified: This is done with the help of risk assessment methods, which provide a SIL requirement for individual signal circuits as a result. If the identified risks are higher than the tolerable ones, you have to take risk-reducing measures.

It quickly pays off for companies to rely on an experienced partner when it comes to functional safety. With Pepperl+Fuchs, you can benefit from the know-how of certified experts. We offer you a broad portfolio of interface barriers, with over 10 Million SIL products installed globally: Our certified product development processes ensure a consistently high level of quality. Protect people and the environment through the safe operation of your plants and machines—safety and reliability are our top priority.



**We accompany you on your way to a holistic approach to functional safety**

Pepperl+Fuchs not only offers you high-quality products whose quality is ensured by changing certification companies—but goes one step further. Whether modern calculation tools, in-depth literature in the form of our functional safety compendium, or e-learning and live training: we take your safety concept to the next level.

We would be happy to develop a customized approach to the topic of functional safety with you. Get in touch with us now!



More information:  
[pepperl-fuchs.com/pf-safety-hub](https://pepperl-fuchs.com/pf-safety-hub)

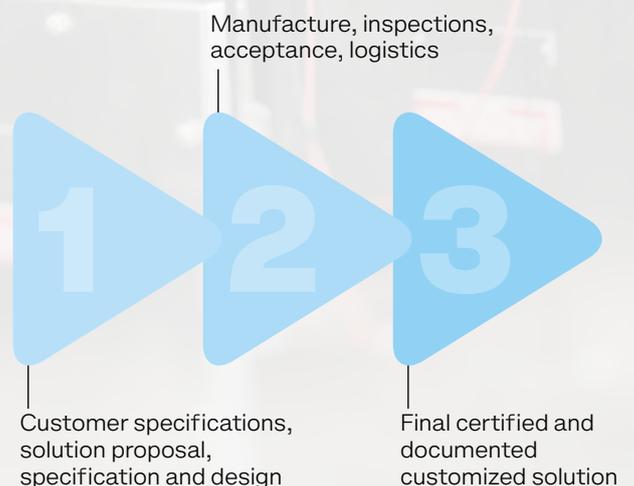
Trend

# Customized Solutions: Designed to Meet your Explosion Protection Needs



Plants in the process industry present increasingly complex challenges, not least in terms of explosion protection. Numerous legal regulations must be complied with, after all, people and the environment need to be protected even more so than plant and machinery. Not surprisingly, these changes are impacting the types of problems and tasks that companies face. To ensure that companies can continue to focus on their own core business, customized solutions from Pepperl+Fuchs are developed in collaboration with our customers and meet the global approval standards of a trusted partner.

## 3 steps to your next solution





### Solutions tailored to your needs

We support you with individual solutions and accompany you in partnership on the path to a digital future. For the demanding requirements of the process industry, Pepperl+Fuchs has therefore established special Solution Engineering Centers (SEC) worldwide, where experienced experts plan, develop and design customer-specific solutions on a daily basis. Here, customers receive ready-to-use complete solutions from a single source—in all explosion protection types, including certification for hazardous areas.



More information:  
[pepperl-fuchs.com/pf-solutions](https://pepperl-fuchs.com/pf-solutions)

# Solutions

## Ethernet-APL

### Shaping the Future of Process Industries

With the new Ethernet Advanced Physical Layer, or Ethernet-APL for short, Pepperl+Fuchs, together with other companies, is setting a decisive milestone in this area. Ethernet-APL defines long cable lengths, explosion protection and interoperability, and therefore enables continuous, transparent communication across all hierarchy levels. Learn more about this pioneering technology that paves the way for sophisticated IoT applications in the process industry.



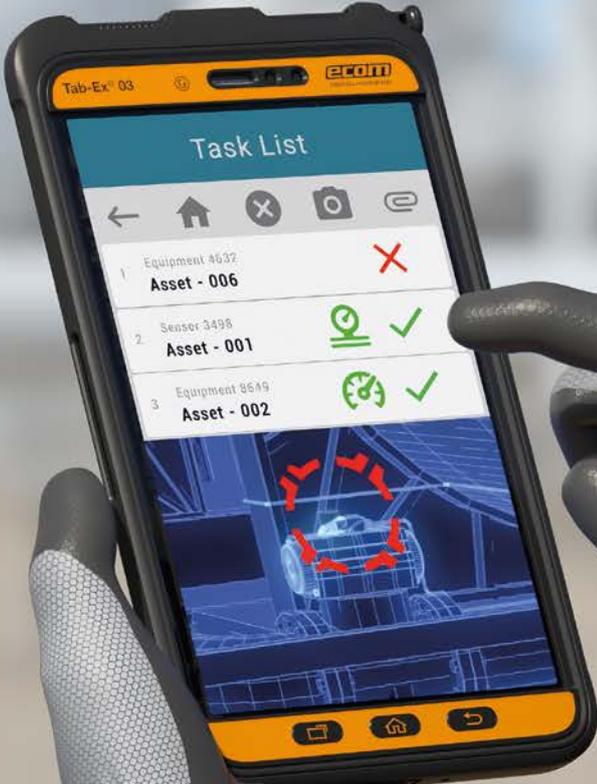
**Ethernet-APL Rail Field Switch**

The Ethernet-APL rail field switch is the first product that enables direct, fast and barrier-free access to field devices of the process plant via Ethernet-APL. The Ethernet-APL rail field switch from FieldConnex® is a field switch for installation in a control cabinet or junction box. It connects Ethernet-APL spurs to the plant's Ethernet trunk cable. It draws power for itself and the spurs from an external auxiliary power supply.



More information:  
[pepperl-fuchs.com/pf-apl](https://pepperl-fuchs.com/pf-apl)

Solutions  
**Enterprise Mobility**





### **Smart-Ex® 03, Tab-Ex® 03—High Performance Smartphone and Tablet for Hazardous Areas**

Equipped with 5G and Wi-Fi® 6, the Smart-Ex 03 sets new standards for flexible deployment in public and private networks of mobile network providers or the companies themselves. This offers state-of-the-art communication and collaboration options: from remote support and video conferencing to digital radio communication with minimal latency via Push-to-Talk over Cellular (PoC).



More information:  
[pepperl-fuchs.com/pf-mcc](https://pepperl-fuchs.com/pf-mcc)

# Solutions

## Human Machine Interfaces



### **VisuNet from Pepperl+Fuchs—Industrial HMI for Process Automation**

From shock and vibration resistance to outdoor suitability and compliance with GMP (Good Manufacturing Practice) guidelines—the VisuNet portfolio from Pepperl+Fuchs offers a wide range of HMI solutions to meet the diverse requirements of the process industry. The VisuNet product family includes an extended range of rugged industrial monitors, industrial box thin clients, thin client software and the corresponding peripherals.



### **Engineered HMI Solutions**

Off-the-shelf products do not always meet the exact requirements for every application. VisuNet developed HMI solutions are a simple way to get exactly the HMI you need. Whether the requirement is for a remote monitor or an intrinsically safe panel PC, Pepperl+Fuchs can design a solution that fits your application and budget.



More information:  
[pepperl-fuchs.com/pf-hmi](https://pepperl-fuchs.com/pf-hmi)

# Solutions

## Remote I/O Systems



### Remote I/O—Bridge Between Two Technologies

Uniquely assigning a signal to a terminal, while retaining existing instrumentation and wiring, is a key benefit of remote I/O. A second advantage is the considerably reduced wiring effort due to the use of a bus interface to the control system. Remote I/O is therefore ideally suited for modernization and expansion of process plants.



More information:  
[pepperl-fuchs.com/pf-rio](https://www.pepperl-fuchs.com/pf-rio)



# Solutions

## Electrical Explosion Protection Equipment

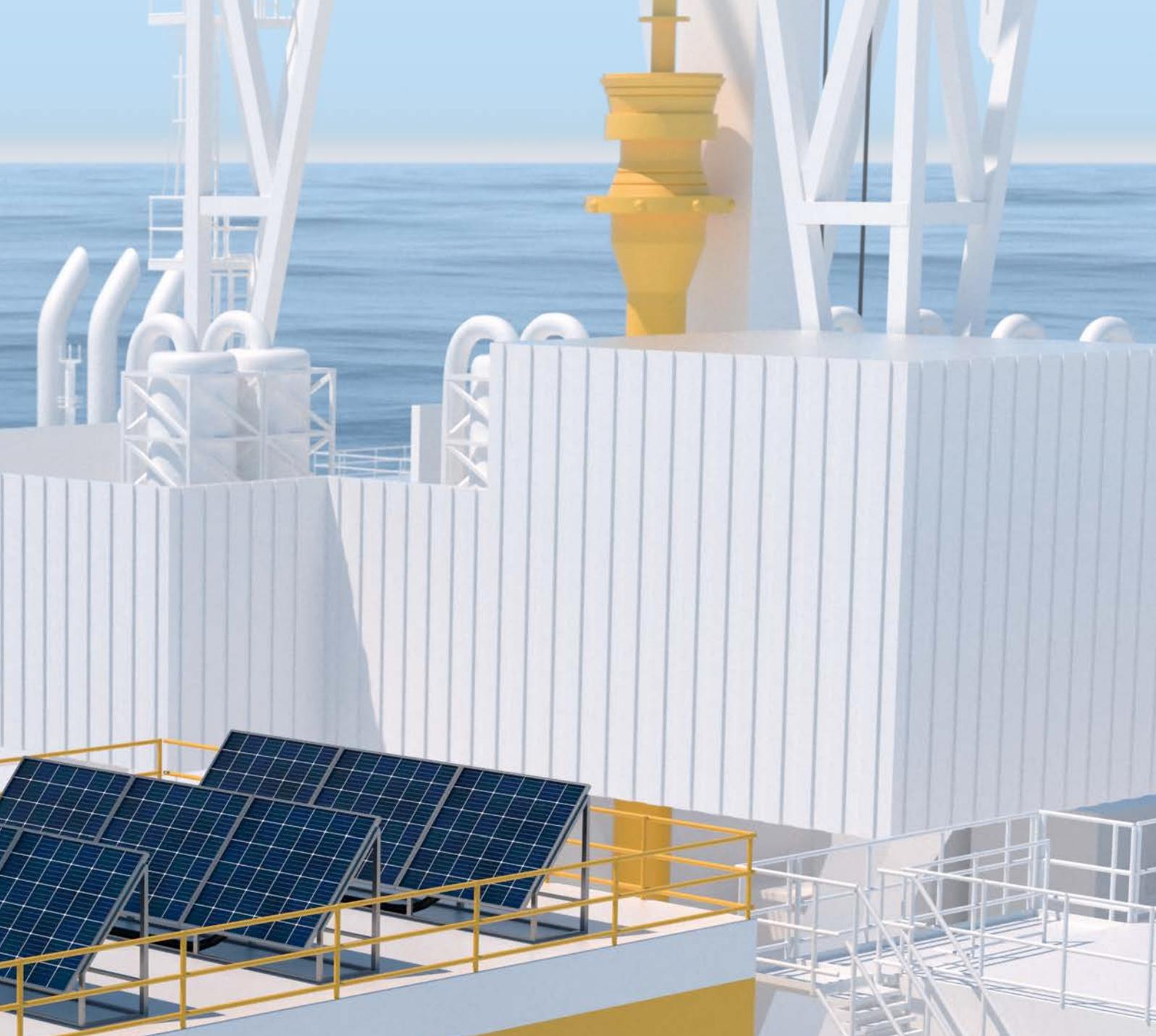


### Solutions in Explosion Protection

Pepperl+Fuchs offers a comprehensive range of devices and solutions for the installation and control of machines and electrical networks in harsh environments and hazardous areas. Various types of ignition protection and many housing variants, as well as a high degree of flexibility, allow the design of efficient control and distribution solutions for any application and industrial environment.



More information:  
[pepperl-fuchs.com/pf-epe](https://pepperl-fuchs.com/pf-epe)



### **Purge+Pressurization Solutions**

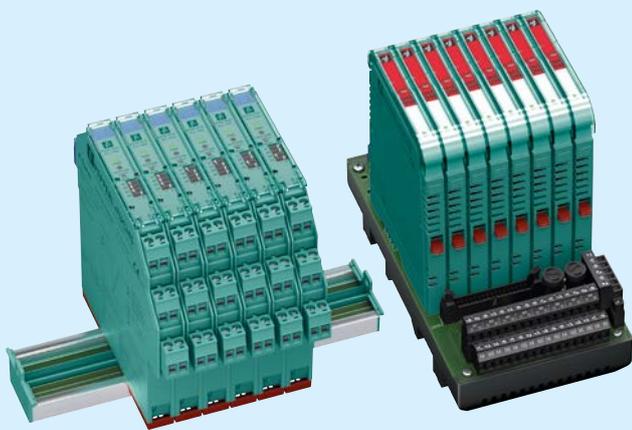
Bebco EPS® purge and pressurization by Pepperl+Fuchs is a household name in the process automation industry. As the leaders in Purging Technology®, we manufacture innovative solutions that are remarkably simple to use and easily handle any application.



More information:  
[pepperl-fuchs.com/pf-purge](https://pepperl-fuchs.com/pf-purge)

Solutions  
**Interface Systems**





### **Traditional Interface for Process Industries**

Pepperl+Fuchs has been active in the field of intrinsically safe explosion protection for more than 70 years. We guarantee high product quality through certified and audited manufacturing facilities. Our systems for galvanic isolation between the field and the controller, for explosion and overvoltage protection, and for digital communication based on the HART protocol ensure safe process operation.



More information:  
[pepperl-fuchs.com/pf-interface](https://pepperl-fuchs.com/pf-interface)

## Research and Development

over 200 engineers  
investing in future  
technologies



## Manufacturing

we produce  
what we design



## Engineering Centers

customized complete hazardous solutions

## Distribution Centers

serving you globally

No matter where you are in the world, Pepperl+Fuchs is close by—and always there for you.



# Your automation, our passion.

- **Enterprise Mobility**
- **Industrial Communication and Interfaces**
- **Industrial Sensors**
- **Hazardous Area Products and Solutions**

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