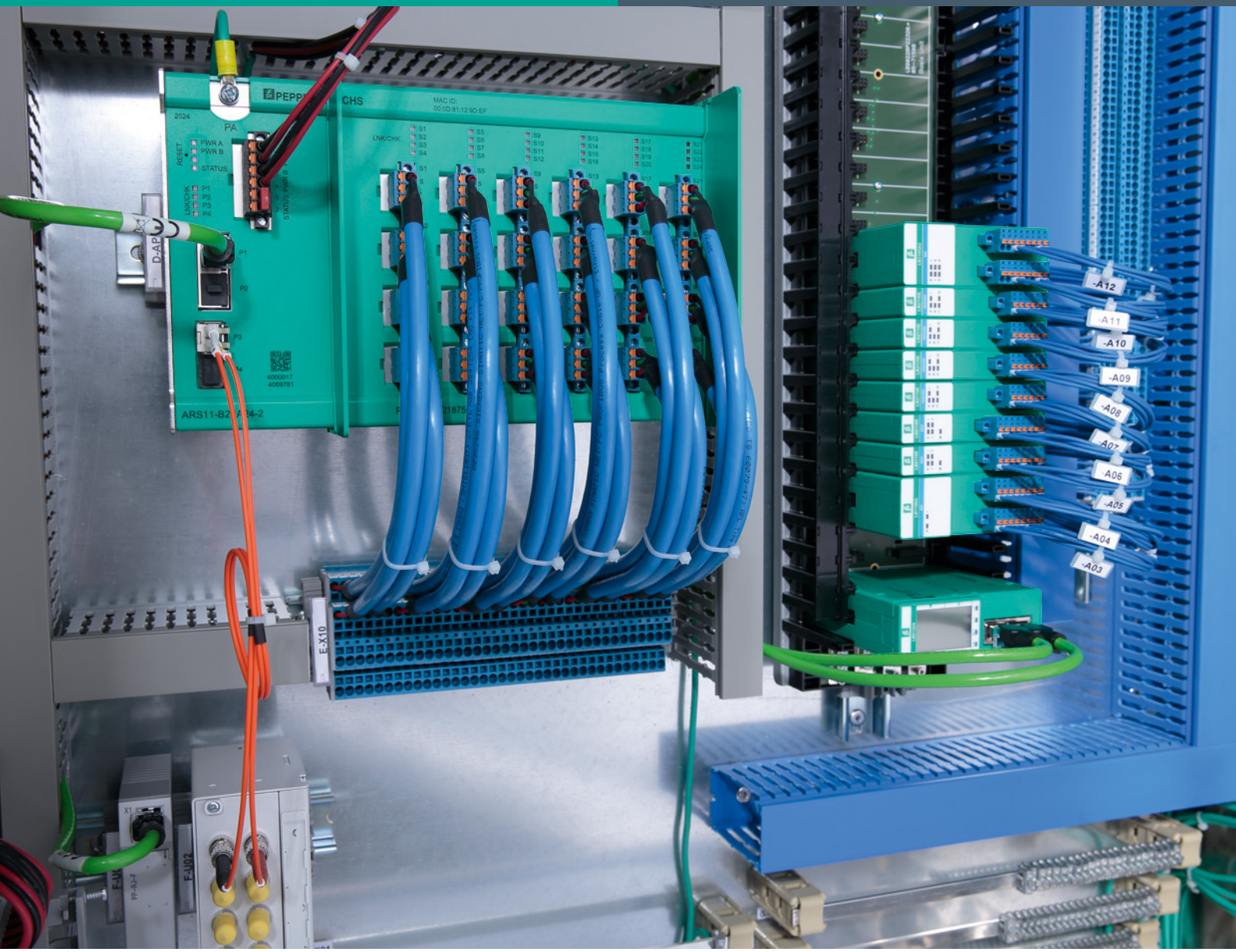
Solution Spotlight

Ethernet-APL Enclosure Solution

Global Engineered Solutions for Hazardous Areas from Pepperl+Fuchs



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Engineered Solutions for Hazardous Areas

Ethernet-APL-Based SR Enclosure Solution with the LB-System

This is one of the first Ethernet-APL-based solutions available on the market. Approximately 100 of these engineered enclosure solutions were constructed at a Pepperl+Fuchs Solution Engineering Center (SEC). These field cabinets are designed for use in a new plant and are connected to a Distributed Control System (DCS) via PROFINET.

Special Features: key-lockable quarter-turn locks

Solution Goal

The objective was to develop a solution that features state-of-the-art diagnostic options with digital communication capabilities. To securely and cost-effectively connect various types of signals to the control technology, traditional devices were gathered through remote I/O, while APL-capable field devices were connected directly through the switch.

Technical Features

- For Zone 2 environments
- Temperature range: –20 ... +45 °C
- Redundant 24 V DC supply for APL switch and LB system
- PROFINET connection to DCS

Highlights

- Approx. 100 solutions were developed
- The cabinet can be opened in the Ex-area without a hot work permit
- Components that are not intrinsically safe can be switched off without posing a fire hazard

Multi-Function Terminals

Suitable for protecting valve circuits, signal lamps, horns, or for diode decoupling of supply circuits.

Power Supply Connection Terminals

PS1000 type modules for the power supply are mounted on a separate DIN rail

Options

- Additional components can be installed according to customer requirements
- Terminals and power supply can be configured according to customer specifications

Communication System

In this example, an LB backplane with 22 slots is integrated with a 24-port APL switch. The vertically mounted LB Remote I/O system and the APL switch are both pre-wired to their connection terminals.

Options

The LB system can be customized in size and type based on customer specifications. The APL switch from Pepperl+Fuchs is available in a choice of configurations: it can be configured with 8, 16, or 24 ports and is offered in either intrinsic safety/ Ex ic IIC or Ex ia IIC variants.

Shield terminals

Shield terminals are used to connect the cable shielding to the APL switch and the LB Remote I/O system.

For more information, visit
pepperl-fuchs.com/pf-APL_solutions

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