Safety in system
Protection for man and machine

SAFETY FIELDBOX
UNIVERSAL. SAFE.
COST EFFECTIVE.

SCHMERSAL
THE DNA OF SAFETY

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UNIVERSAL. SAFE. COST EFFECTIVE.

Device ports
8 x connectors M12, 8-pole

LED diagnostic
Extended status indication
of the safety switchgear

Communication
About PROFINET / PROFIsafe

Power supply
M12 power connector with 10 A

Signal assignment
- 2 x F-DI: 2-channel safety input
- 1 x F-DQ: Safety output, internal, 2-channel
- 1 x DI: Digital input for diagnostic signal
- 2 x DQ test pulse: 2 test pulse outputs for NC contacts
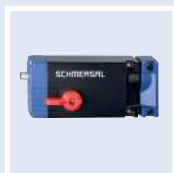- 24V and GND: Power supply of the connected safety switchgear

LED diagnostic
Extended status indication
of the safety fieldbox
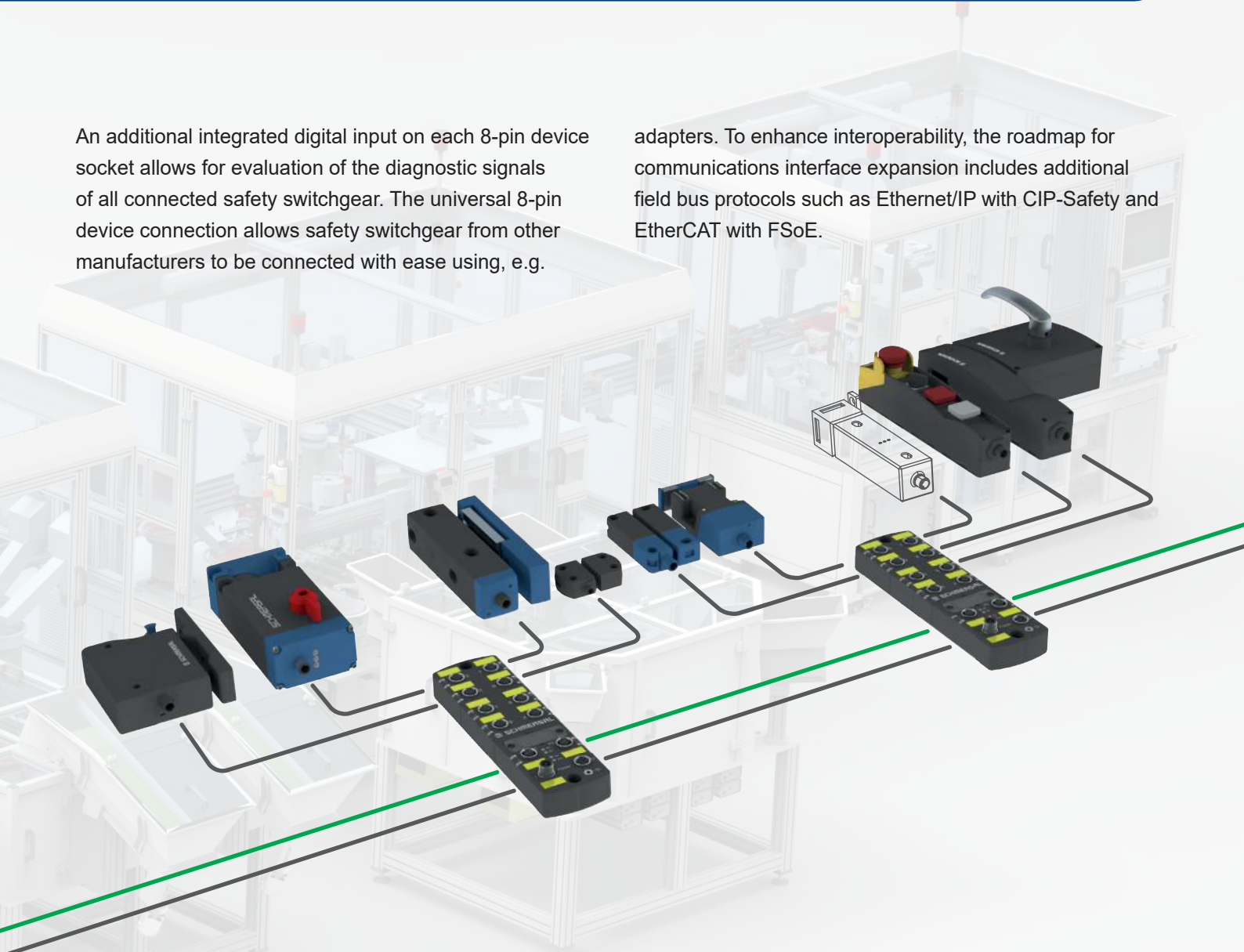
Flexible application options

The safety fieldbox allows for simple connection of up to eight safety switchgear devices with Plug and Play. The universal device interfaces for 8-pole M12 connectors allow for connection of a wide range of safety switchgear devices, including electronic and electromechanical solenoid interlocks, sensors, control panels, light curtains and switches. The version for 8-pole connectors enables connection of 2 safety inputs, 2 test pulse outputs, 1 safety output (internal 2-channel), 1 digital input for diagnostic signals as well as the power supply to connected safety switchgear devices. This enables transmission of locking device activation signals on solenoid interlocks, alongside secure signals and diagnostic signals. Signals are transmitted via a PROFINET/PROFIsafe field bus interface for evaluation. PROFIsafe-based communication is secure against modifications, changes to the telegram sequence, transmission errors, etc. Parallel transmission of safety signals enables free connection of safety switchgear devices in the safety controller.

An additional integrated digital input on each 8-pin device socket allows for evaluation of the diagnostic signals of all connected safety switchgear. The universal 8-pin device connection allows safety switchgear from other manufacturers to be connected with ease using, e.g.

adapters. To enhance interoperability, the roadmap for communications interface expansion includes additional field bus protocols such as Ethernet/IP with CIP-Safety and EtherCAT with FSoE.
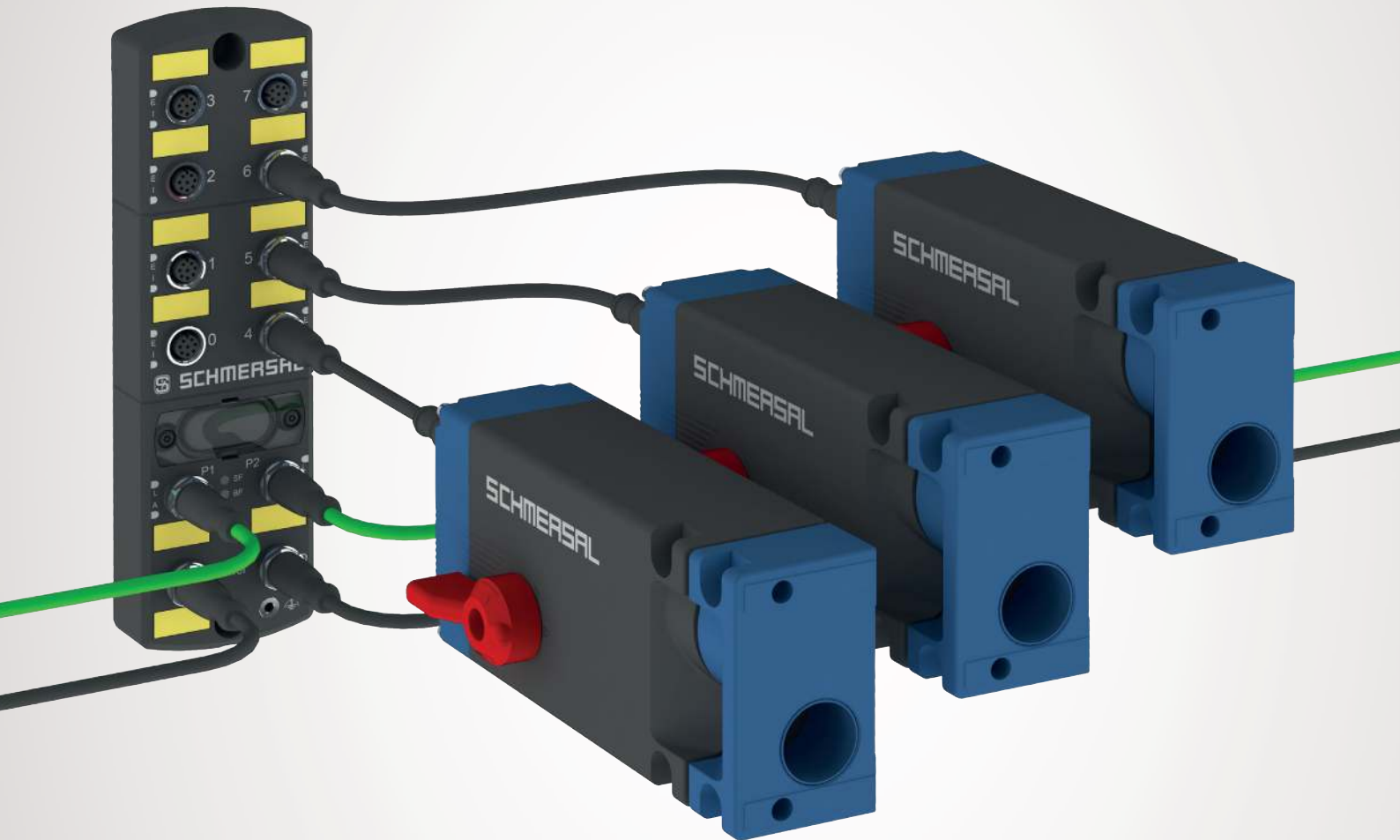
Your benefits at a glance

- Universal 8-pole device ports
- Smooth and fail-safe installation
- Cost-effective machine wiring
- Rapid installation with Plug and Play

Technical highlights

- 8 different safety switchgear connectable
- 4 control panels (with EMERGENCY STOP) connectable
- Power supply via M12 power plug connection with 10 A
- Safe communication via PROFINET / PROFIsafe

IT ALL COMES DOWN TO THE COMBINATION
AZM400 SOLENOID INTERLOCK PLUS SAFETY FIELDBOX

Higher machine availability and greater savings potential

The AZM400 solenoid interlock has only been on the market for a few years and has clearly proven its outstanding versatility. It boasts an exceptional clamping force of 10,000 N. For solenoid interlocks, the Safety Fieldbox fulfils the safety values PL e or SIL 3 for the interlocking function and PL d or SIL 2 for the unlocking function. Used in combination with the new Safety Fieldbox from Schmersal, it is now possible to connect several AZM400 units to a PROFINET/PROFIsafe node in a safety circuit. This solution is clearly more economically efficient than equipping each and every interlock with a PROFINET interface.

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