VIP-ER with input/output accessories

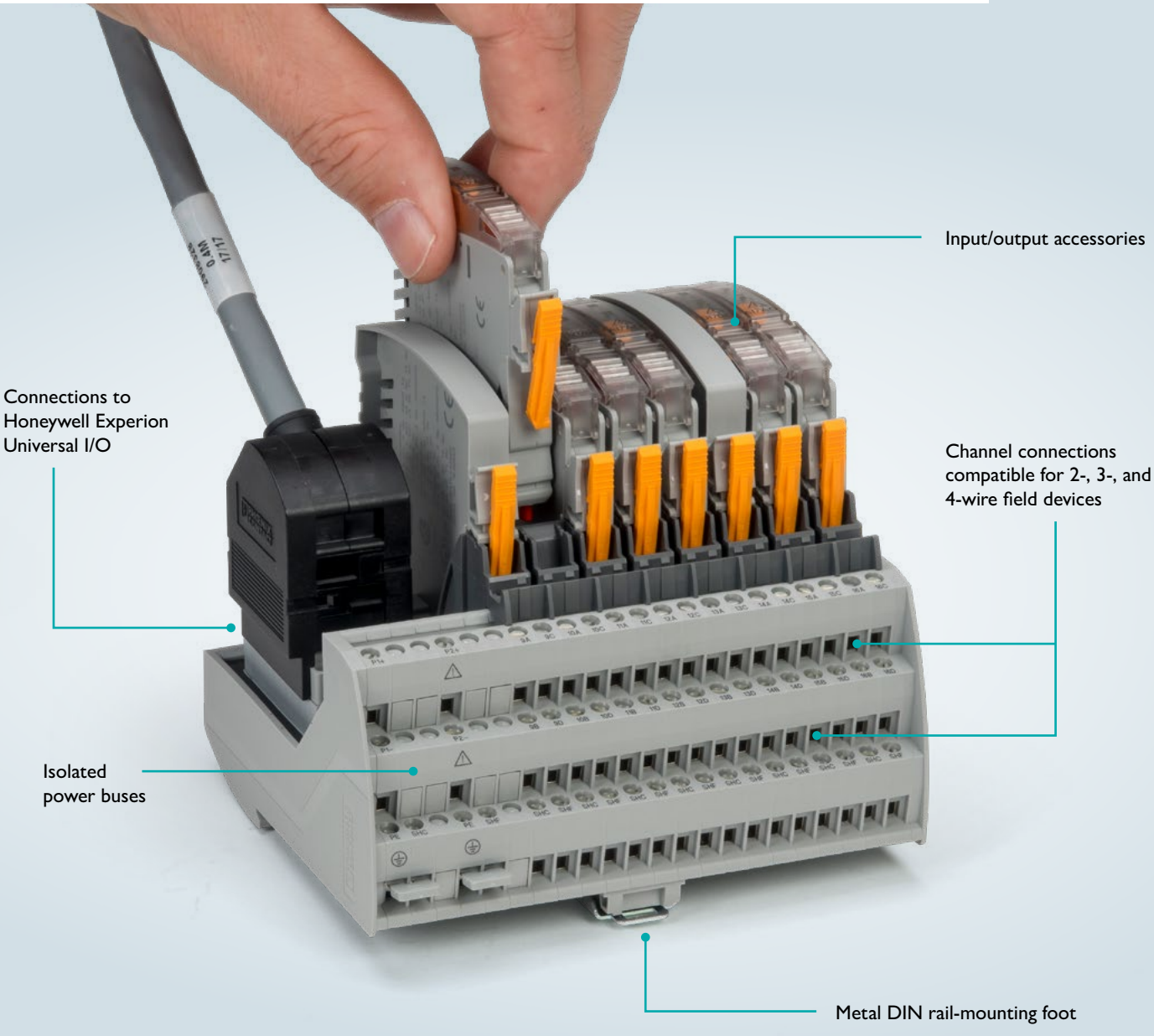
Configurable marshalling: optimized for Honeywell Experion Universal I/O

PHOENIX CONTACT
INSPIRING INNOVATIONS

Configurable marshalling

VIP-ER with input/output accessories

The introduction of configurable I/O has given users a new world of opportunity and advantages. With this evolution, though, there remain traditional requirements and challenges, like safely marshalling signals, converting voltages, and simplifying loop checks. This is where VIP-ER with IOAs comes into play – unlocking the full potential of any configurable I/O-based system.



Your advantages with VIP-ER with IOAs

Easy checkout and maintenance

Functional IOAs are equipped with a hinged cover to allow access to removable fuses, signal disconnects and test points; making system validation and future maintenance quick and easy.

Error-proof versatility

Each IOA variant is equipped with a unique pair of male/female plugs preventing future replacement IOA versions from being installed without deliberate intention.

Configurable flexibility

Each channel can be individually matched to the programmed I/O function. Additionally, each channel can be wired for compatibility to 2-, 3- and 4-wire field devices, and provides multiple shield options.

Features and benefits

- ☑ Plan overall I/O count during FEED stage and assign IOAs during installation
- ☑ Easily accommodate late binding project changes
- ☑ Decrease inventory overhead with a common base that spans 24 V – 240 V
- ☑ Compatible with configurable I/O-based controllers from any manufacturer
- ☑ Agency approval package allowing worldwide use

IECEx C SA US FM APPROVED

Step 1 – Select VIP-ER base module

Each VIP-ER base module accommodates eight channels: Four VIP-ER base modules support a 32-channel Honeywell Universal I/O (UIO) module. Any channel can be wired to support 2-, 3-, and 4-wire field signals. Any base module can support either low-voltage (TC/RTD, 24 V) or high-voltage (120 V, 125 V DC, 230 V) signals. Multi-channel splitter cables connect the VIP-ER base module to the Honeywell UIO eliminating any cabling errors. Cable selection is completed in Step 3.

IOA-compatible, 8-channel base interface module with two rows of screw terminals for direct connection to I/O card. Each individual channel has four connections (A, B, C, D) and multiple shield options.

Versions are available with conformal coating of the printed circuit board assembly.

Dimensions	118.1 mm W x 102.7 mm H x 72.2 D mm
Operating temperature	-40 °C ... 75 °C
Approvals	FM APPROVED, Ex, CSA, CSA US, CSA C US

Standard versions	
Part number	**Description**
2906596	VIP/S/MC/BASE 1-8/L/EX
2906630	VIP/S/MC/BASE 9-16/L/EX
2907024	VIP/S/MC/BASE 17-24/L/EX
2907025	VIP/S/MC/BASE 25-32/L/EX

Conformal coated versions	
Part number	**Description**
2907186	VIP/S/MC/BASE 1-8/L/C/EX
2907187	VIP/S/MC/BASE 9-16/L/C/EX
2907209	VIP/S/MC/BASE 17-24/L/C/EX
2907210	VIP/S/MC/BASE 25-32/L/C/EX

Step 2 – Select input/output accessories (IOA)

A single input/output accessory (IOA) is inserted into each channel of the VIP-ER base module. In turn, a total of 32 IOAs are required for a single Honeywell 32-channel Universal I/O IOTA. Simply insert each IOA into the IOA guide found on each VIP-ER base module. A variety of IOA functions are available and should be selected based on the configured signal type.

Passive, feed-through

Direct feed-through of field signals, 30 V, 1 A maximum.

IOA FEED-THRU/EX	2906598

Analog protection

Analog input and output signals, fused with blown fuse indication, disconnect with test points, 500 mA rating.

IOA AI/AO/BFI/DS/0.5A/EX	2906599

Digital protection

Digital input and output signals, fused with blown fuse indication, disconnect with test points, 30 V, 1 A maximum.

IOA DI/DO/BFI/DS/1.0A/EX	2906600

Current isolation; HART capable

IOA with three-way repeater power supply with plug-in technology. HART-transparent, input or output signal 0(4)....20 mA. The device can be used in isolator and repeater power supply operation.

Current isolation; HART capable	
IOA RPSS-I-I/HART	2908452

Digital input relay

Digital relay input, fused with active signal indication, selectable NO or NC contact.

24 V relay	
IOA REL 24V DI/BFI/1.0A/EX	2910155
120 V relay	
IOA REL 120V DI/BFI/1.0A/EX	2910157
230 V relay	
IOA REL 230V DI/1.0A/EX	2910423

Digital output relay

Digital relay output, fused with active signal indication, selectable NO or NC contact.

24 V relay	
IOA REL 24V DO/BFI/3.0A/EX	2910153
120 V relay	
IOA REL 120V DO/BFI/3.0A/EX	2910154
230 V relay	
IOA REL 230V DO/BFI/NO/3.0A/EX	2910421
IOA REL 230V DO/BFI/NC/3.0A/EX	2910422

Step 3 - Select cables to connect VIP-ER base module to Experion Universal I/O IOTA

The final step is connecting the four populated VIP-ER bases to the Honeywell 32-channel Universal I/O IOTA. A total of two connection cables are required for each 32-channel Universal I/O IOTA. One cable supplies connection for channels 1-16, a second cable for channels 17–32. Each connection cable features a clam-shell cover for protection from shock and debris.

General data		
	Maximum permissible nominal operating voltage	< 30 V AC/DC
	Maximum current-carrying capacity per path	2A
	Ambiant temperature range (operation)	-40°C ... 90°C (static)
	Shield	Yes: tinned copper-braided shield, approx. 85 percent covering
	Conductor cross-section/wire gauge	22 AWG, 0.36 mm²
	Outside diameter	8.5 mm

Description	Positions	Length	Type	Part number
16-channel cable for use with Honeywell C300 Universal I/O, 22 AWG	16	0.5 m	CAB-MSTB32/2XMC9/22/ 0,5M/C3/S	2906874
	16	1.0 m	CAB-MSTB32/2XMC9/22/ 1,0M/C3/S	2906884
	16	2.0 m	CAB-MSTB32/2XMC9/22/ 2,0M/C3/S	2906886
	16	3.0 m	CAB-MSTB32/2XMC9/22/ 3,0M/C3/S	2906887
	16	4.0 m	CAB-MSTB32/2XMC9/22/ 4,0M/C3/S	2906888
	16	6.0 m	CAB-MSTB32/2XMC9/22/ 6,0M/C3/S	2906889
	16	8.0 m	CAB-MSTB32/2XMC9/22/ 8,0M/C3/S	2907783
	16	10.0 m	CAB-MSTB32/2XMC9/22/10,0M/C3/S	2907784
	16	15.0 m	CAB-MSTB32/2XMC9/22/15,0M/C3/S	1065475
	16	20.0 m	CAB-MSTB32/2XMC9/22/20,0M/C3/S	2907785
	16	25.0 m	CAB-MSTB32/2XMC9/22/25,0M/C3/S	1065474
	16	35.0 m	CAB-MSTB32/2XMC9/22/35,0M/C3/S	2909901

Accessories

Printed circuit-board connector kit

Pair of screw-clamp plugs to connect to VIP base module with pre-marked screw terminals. Required only when not using the pre-fabricated cables above.

Connectors with side entry	
VIP/S/MC/KIT 1-8	2907031
VIP/S/MC/KIT 9-16	2907267
VIP/S/MC/KIT 17-24	2907268
VIP/S/MC/KIT 25-32	2907269
Connectors with top entry	
VIP/S/FRONT-MC/KIT 1-8	2907032
VIP/S/FRONT-MC/KIT 9-16	2907270
VIP/S/MC/KIT 17-24	2907268
VIP/S/MC/KIT 25-32	2907269

Partition plate

Safety divider provides physical separation between field terminals and power bus terminals on VIP base module.

VIP/S/BASE 3L DIVIDER	2907715

Two-terminal jumper

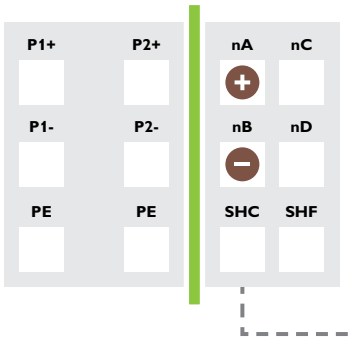
Insertion bridge, fully insulated, for connectors with 5.0 or 5.08 mm pitch, number of positions: 2.

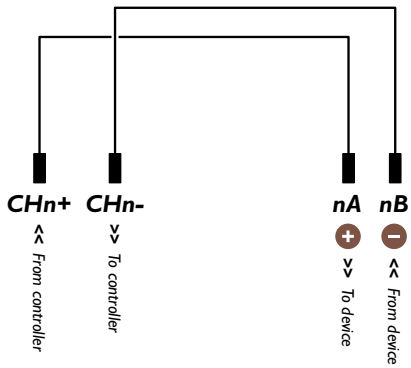
2EBP 2-5	1733169

Application examples

Direct connect to field device

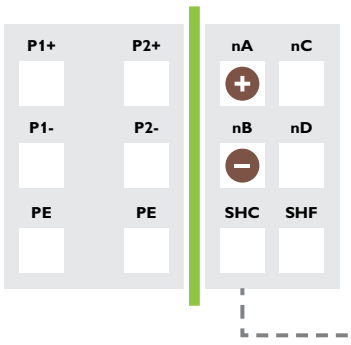
IOA – Feed-through device

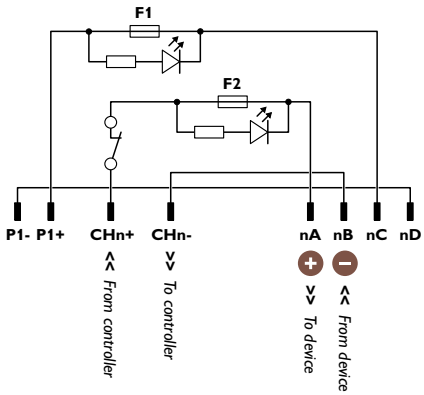




Direct connect to field device

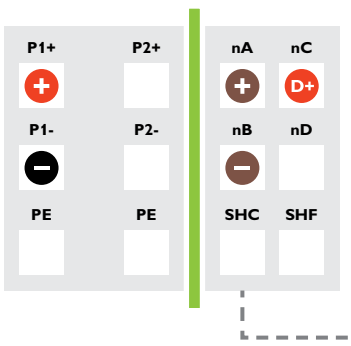
IOA – DI/DO and AI/AO, loop-power device

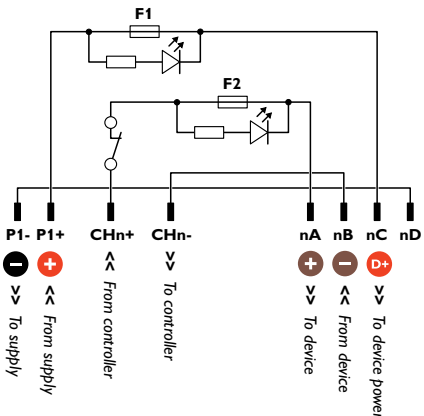




Powering a field device

IOA – Analog input, 3-wire device

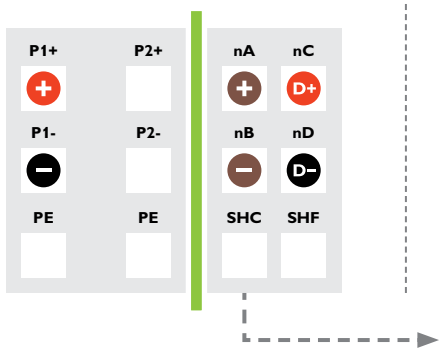


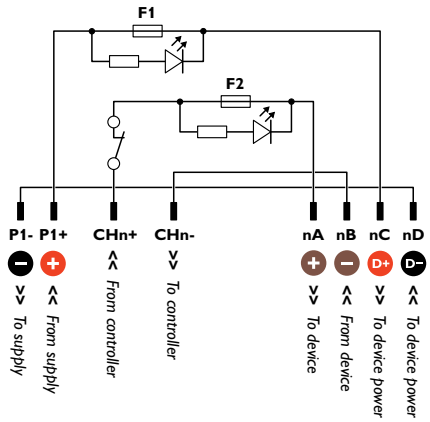


Application examples

Powering a field device

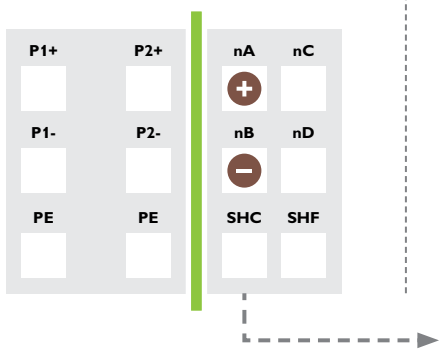
IOA – Analog input, 4-wire device

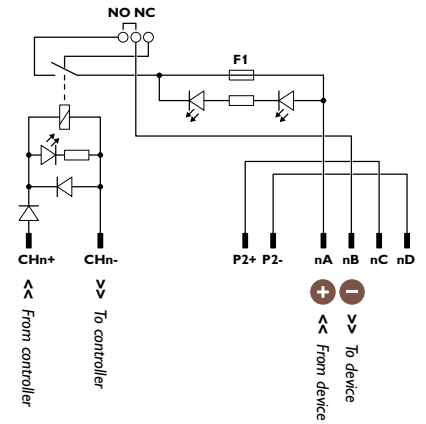




Direct connect to field device

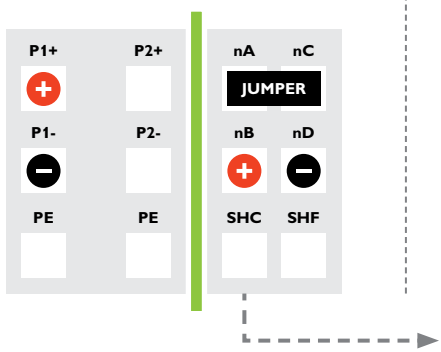
IOA – 24 V digital output, field powered

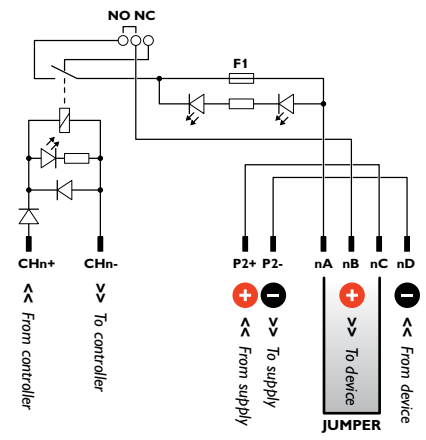




Powering a field device

IOA – 24 V digital output, inter-marshalled

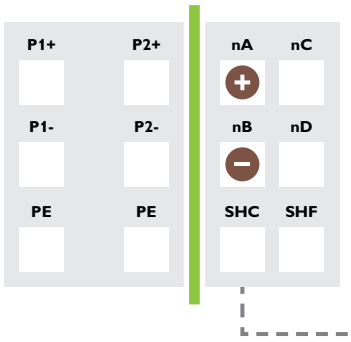


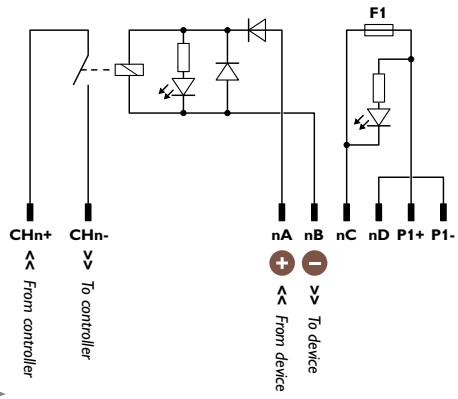


Application examples

Direct connect to field device

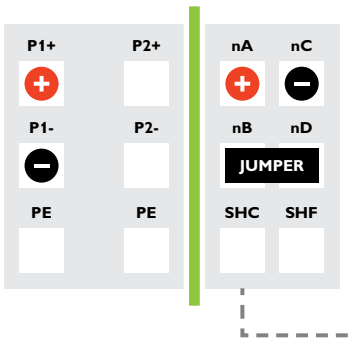
IOA – 24 V digital input, field powered

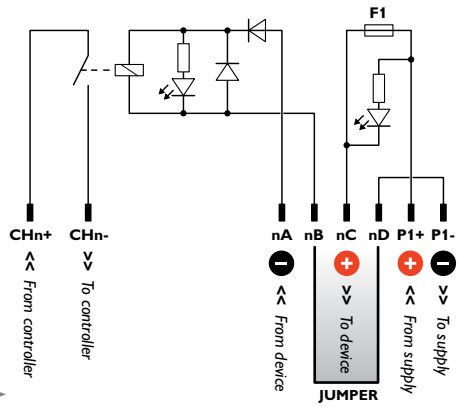




Powering a field device

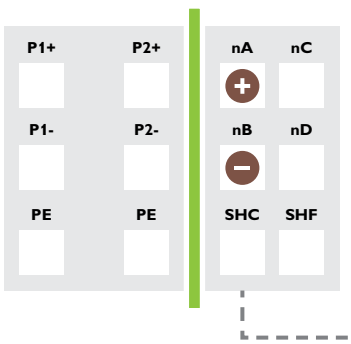
IOA – 24 V digital input, inter-marshalled

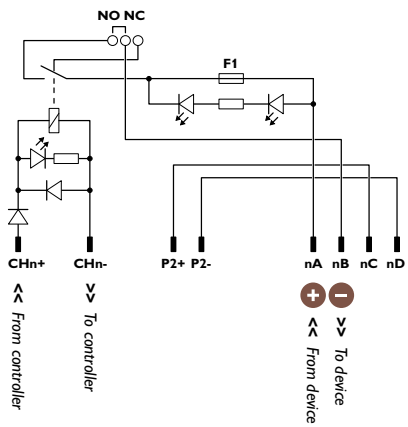




Direct connect to field device

IOA – 120 V AC digital output

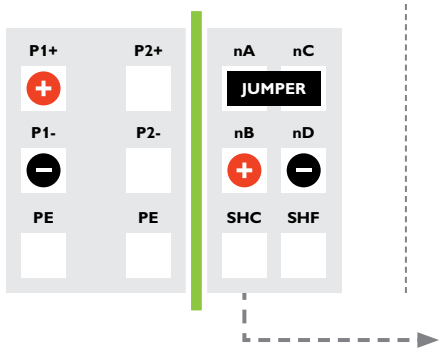


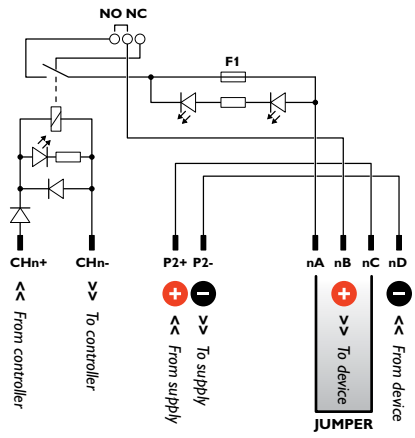


Application examples

Powering a field device

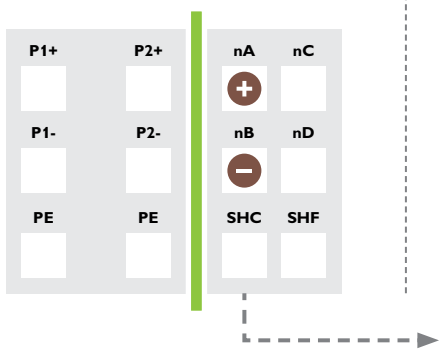
IOA – 120 V AC digital output

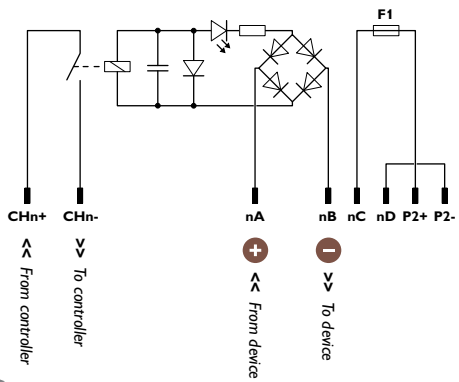




Direct connect to field device

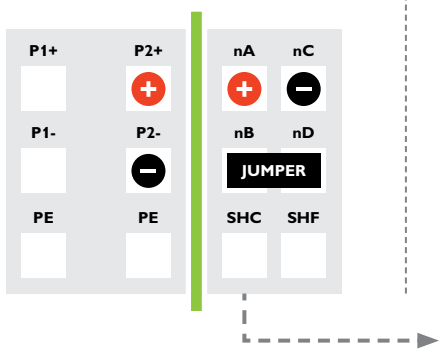
IOA – 120 V AC digital input

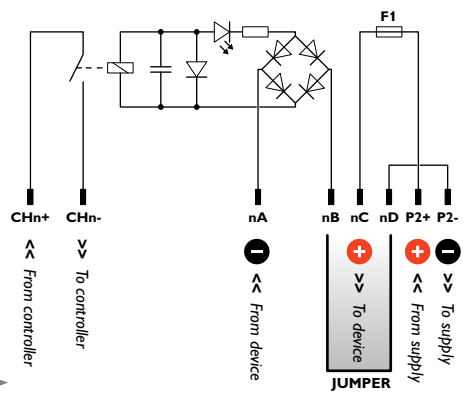




Powering a field device

IOA – 120 V AC digital input

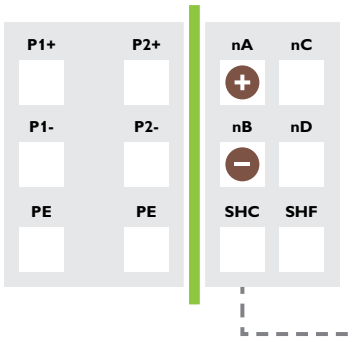


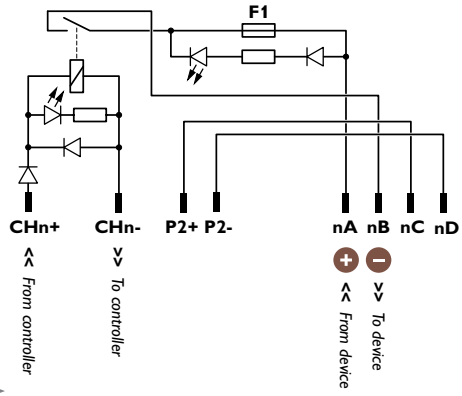


Application examples

Direct connect to field device

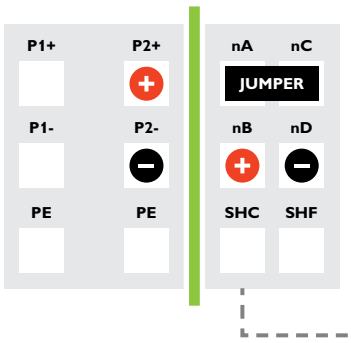
IOA – 230 V AC digital output, NO relay

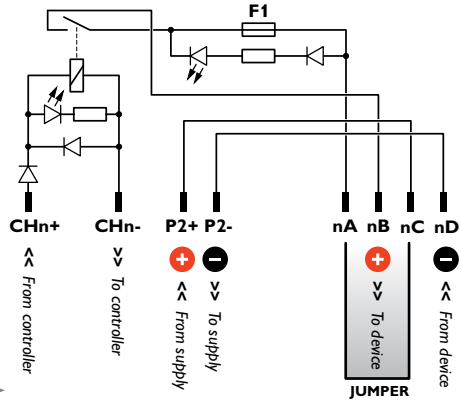




Powering a field device

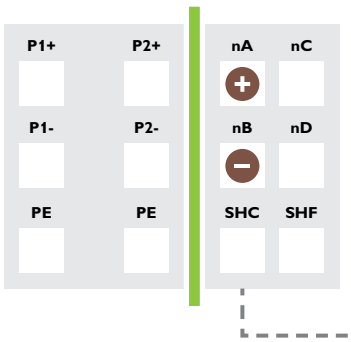
IOA – 230 V AC digital output, NO relay

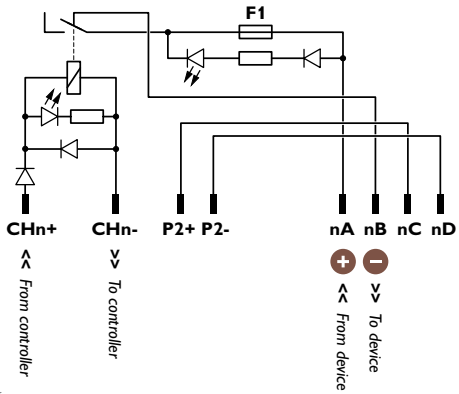




Direct connect to field device

IOA – 230 V AC digital output, NC relay

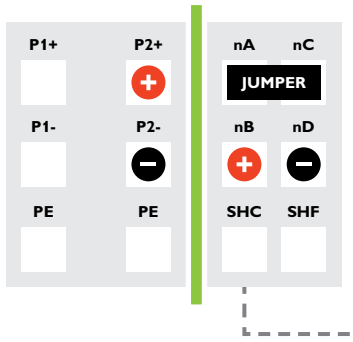


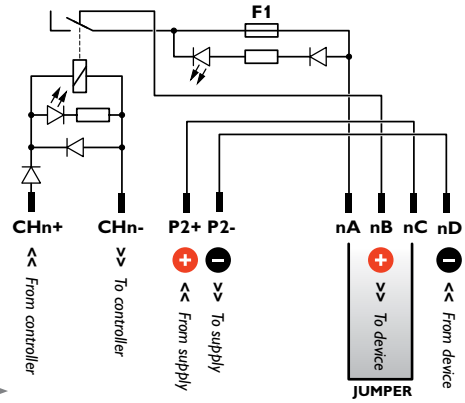


Application examples

Powering a field device

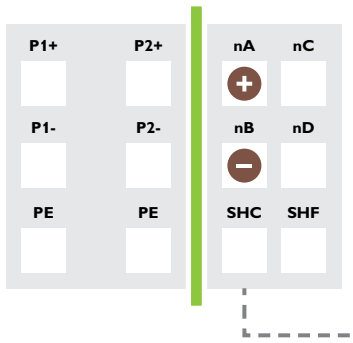
IOA – 230 V AC digital output, NC relay

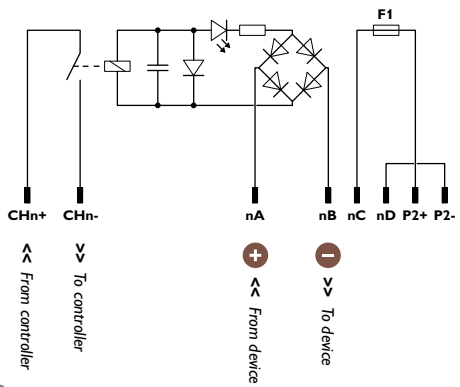




Direct connect to field device

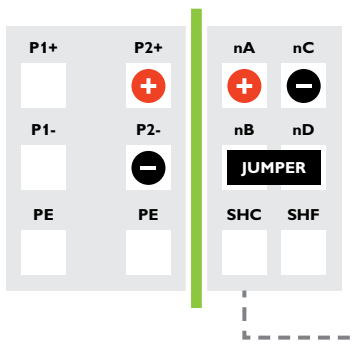
IOA – 230 V AC digital input

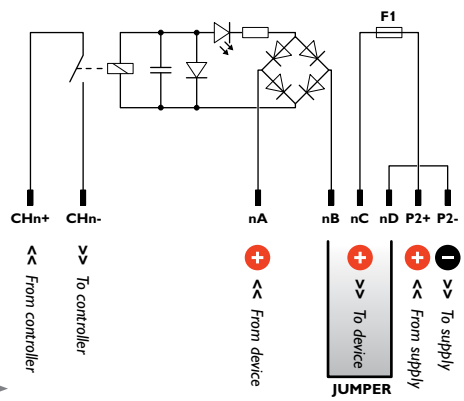




Powering a field device

IOA – 230 V AC digital input

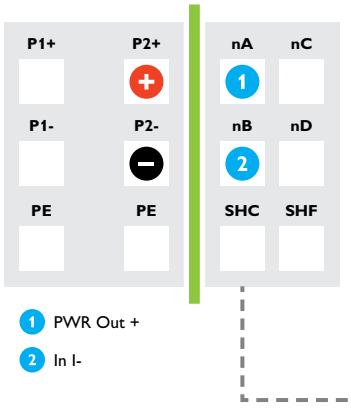


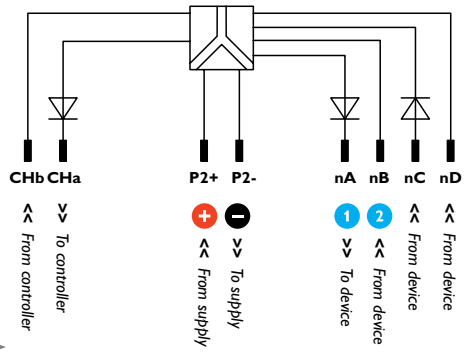


Application examples

Provides 3-way isolation and calibrated measuring range

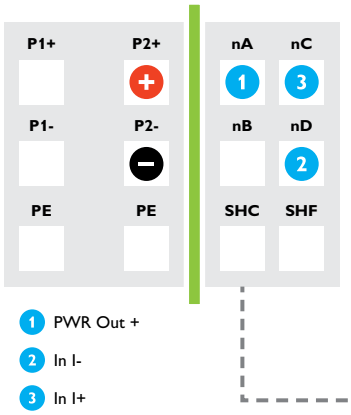
Signal conditioning – 2-wire I-to-I, HART®

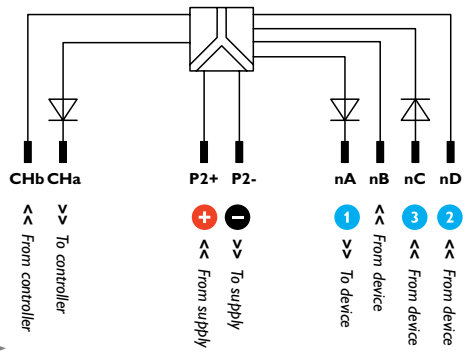




Provides 3-way isolation and calibrated measuring range

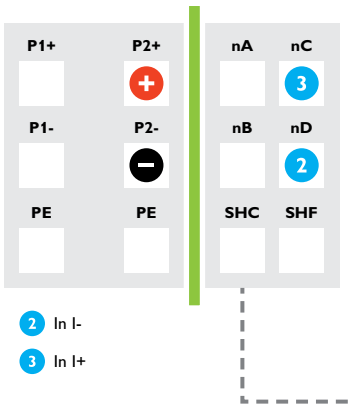
Signal conditioning – 3-wire I-to-I, HART®

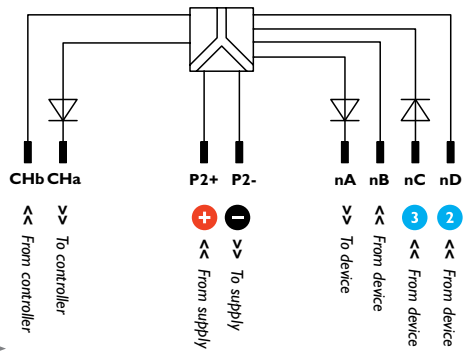




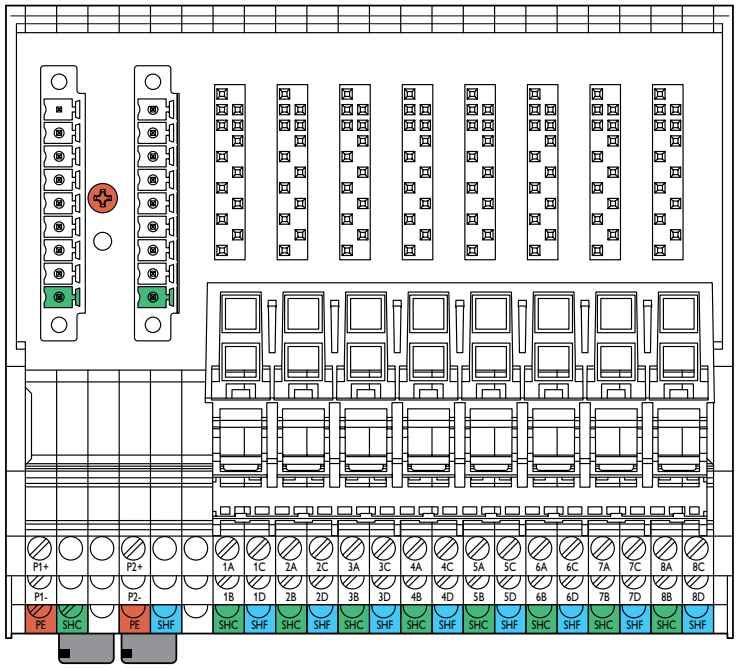
Provides 3-way isolation and calibrated measuring range

Signal conditioning – 4-wire I-to-I, HART®





Available shielding options



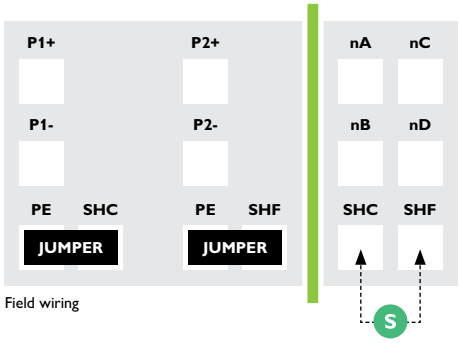
Three shielding bus options

= Protection earth bus

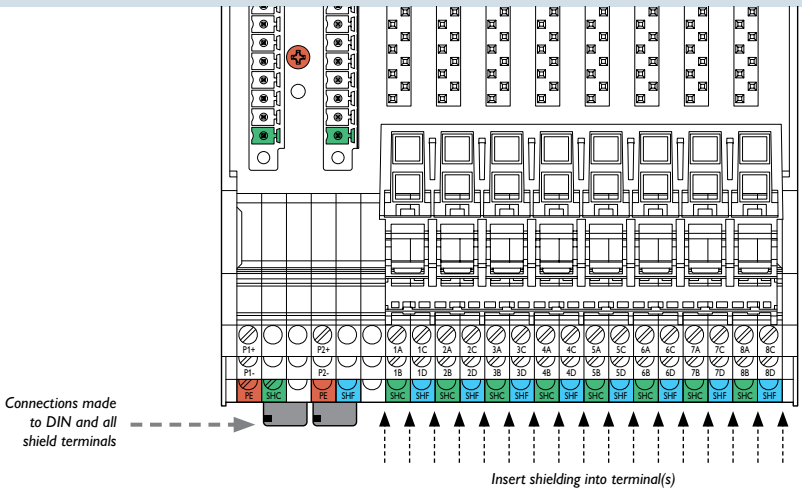
= Shield cable bus

= Shield field bus

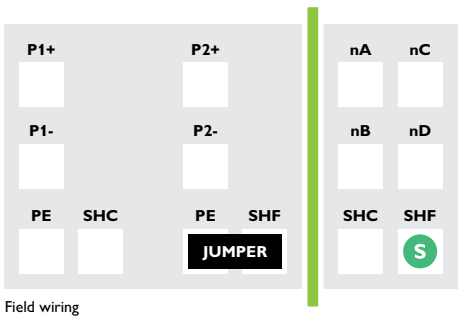
All shields tied to PE ground (DIN rail)



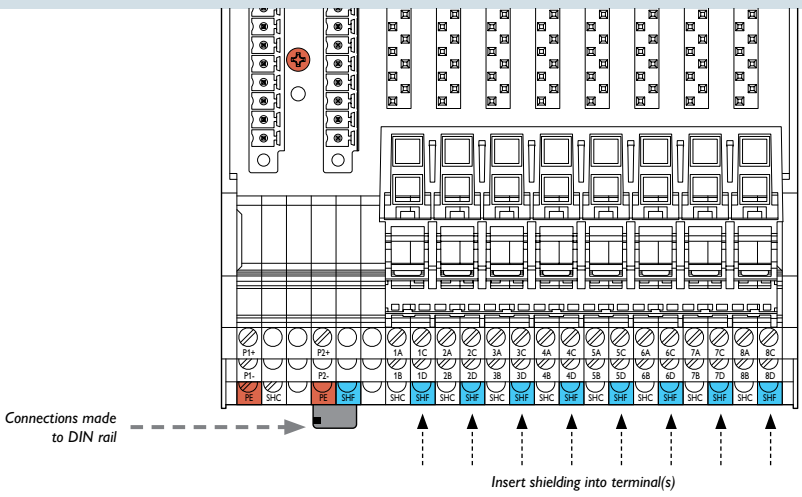
Field wiring



Field shield to DIN rail

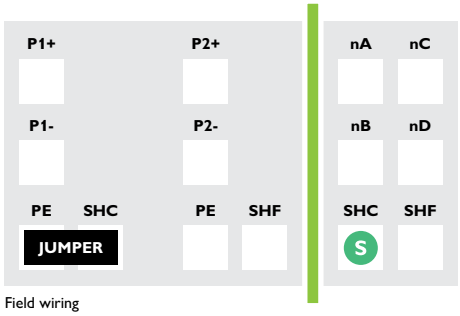


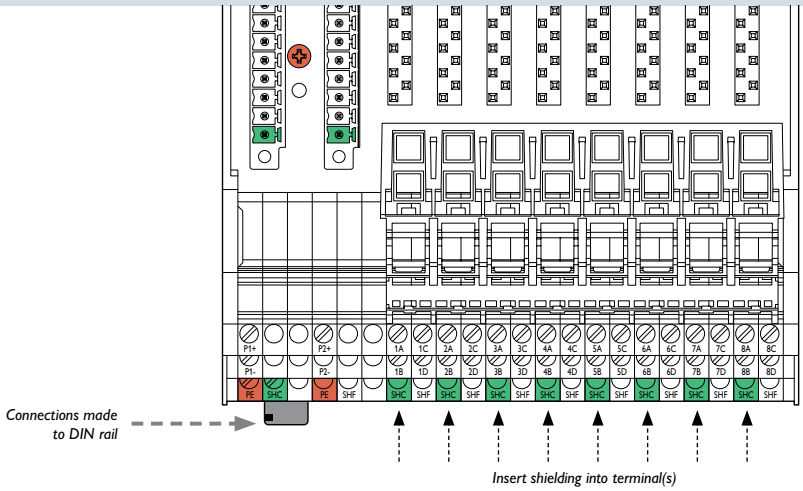
Field wiring



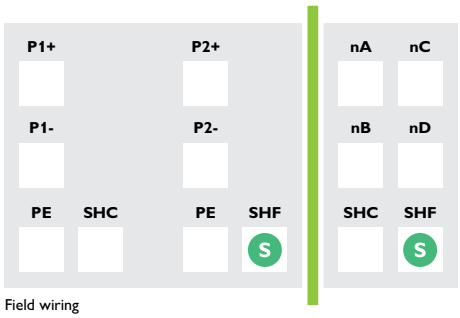
Available shielding options

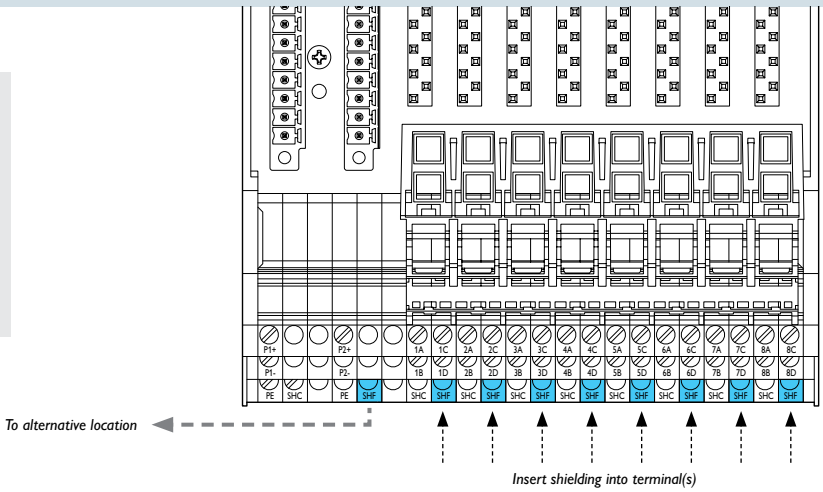
Cable shield to DIN rail



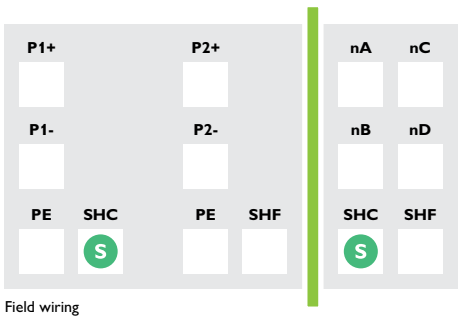


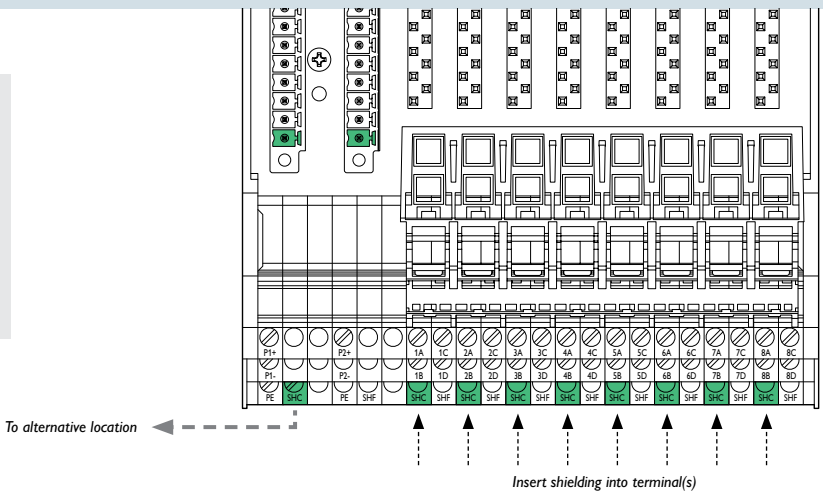
Field shield to alternative location





Cable shield to alternative location





Notes

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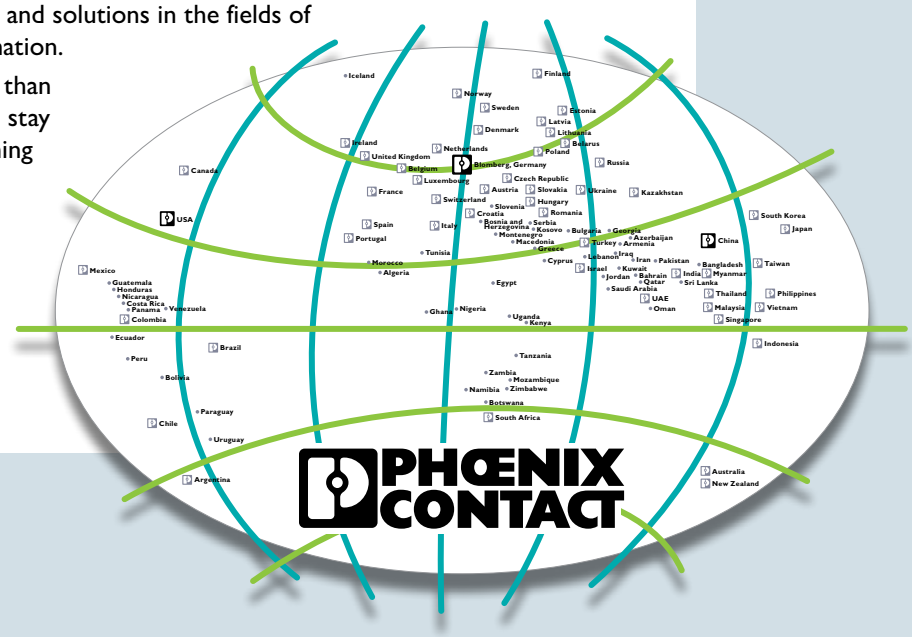
Ongoing communication with customers and partners worldwide

Phoenix Contact is a global, market leader based in Germany. Our group is known for its future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation.

With a global network reaching across more than 100 countries and 14,500 employees, we can stay in close contact with our customers, something we believe is essential to success. The wide variety of our innovative products makes it easy for our customers to find future-oriented solutions for multiple applications and industries. We especially focus on the fields of energy, infrastructure, process, and factory automation.



You will find our complete product range at:

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