

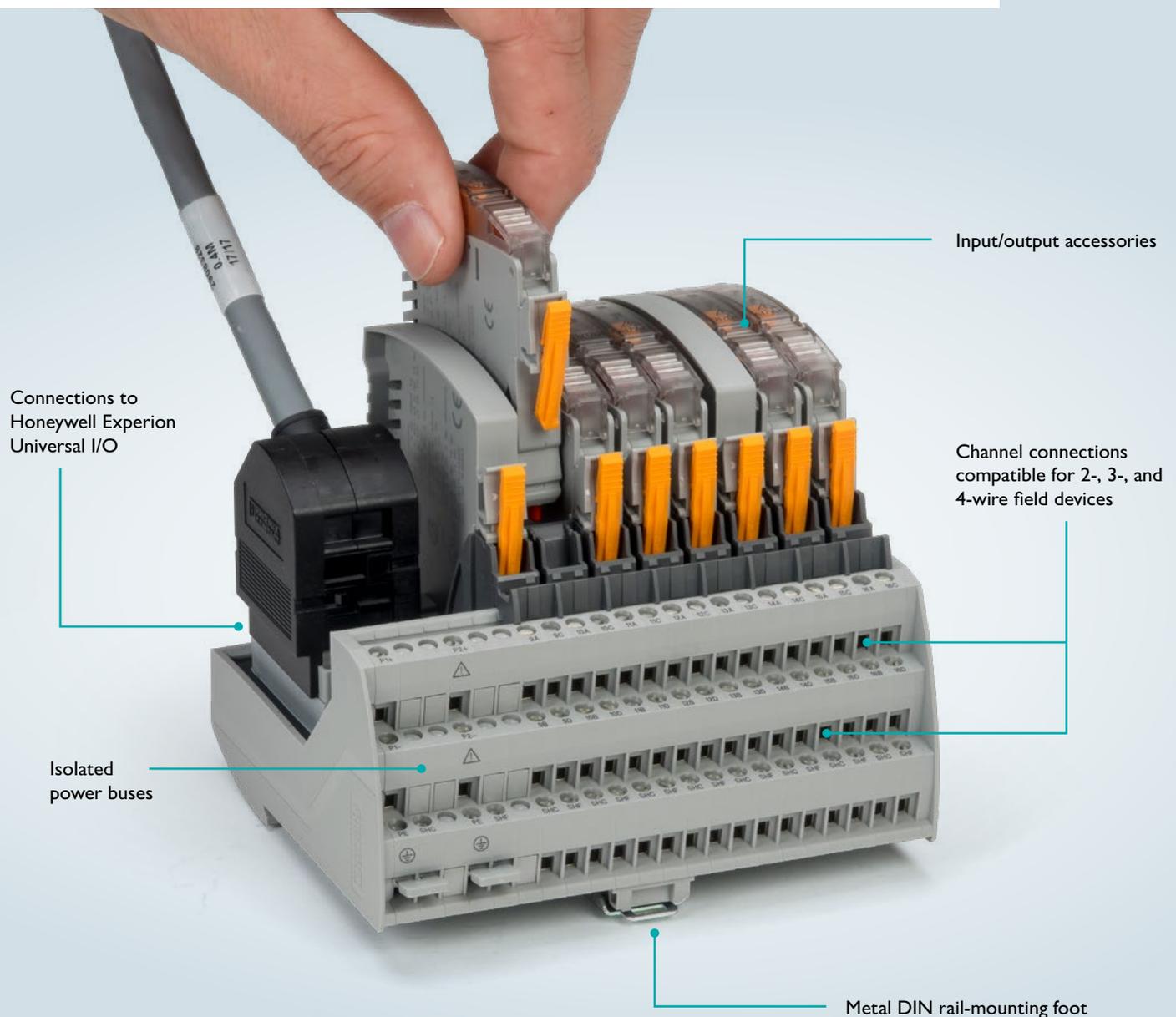
VIP-ER with input/output accessories

Configurable marshalling: optimized for Honeywell
Experion Universal I/O

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





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	    

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 mm ²
	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

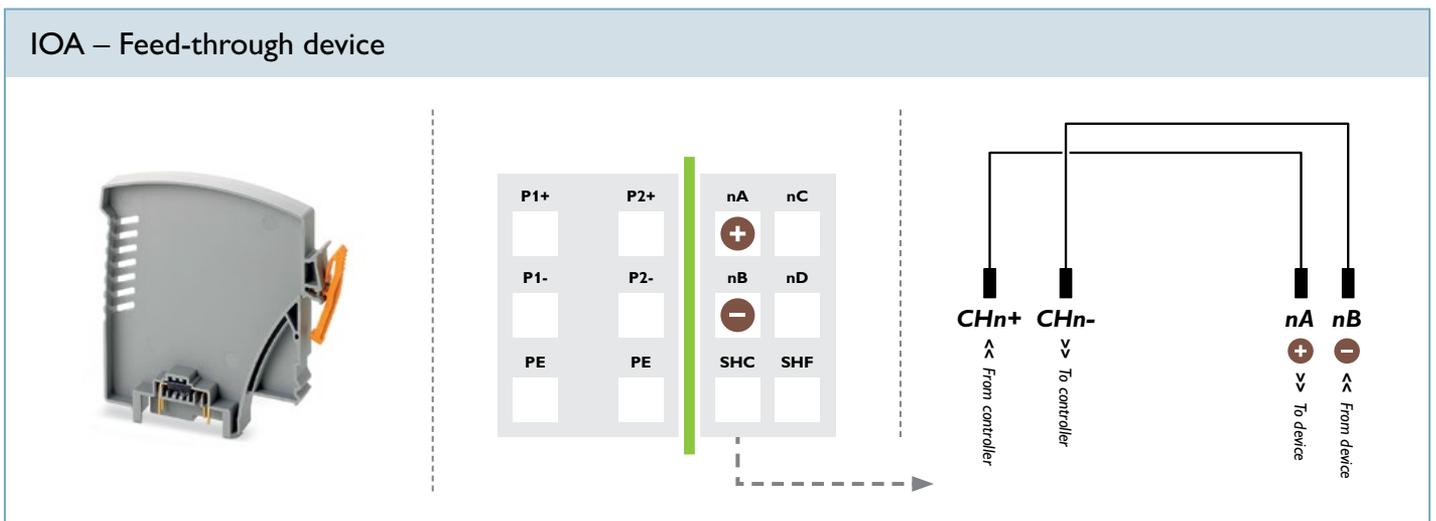


Insertion bridge, fully insulated, for connectors with 5.0 or 5.08 mm pitch, number of positions: 2.

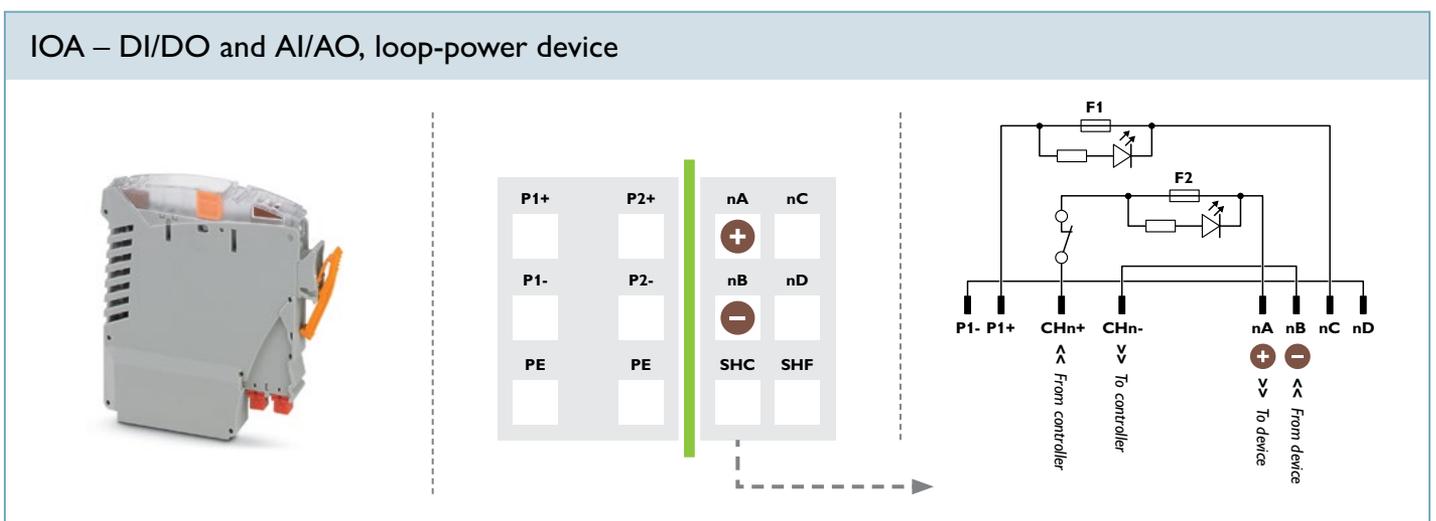
2EBP 2-5 1733169

Application examples

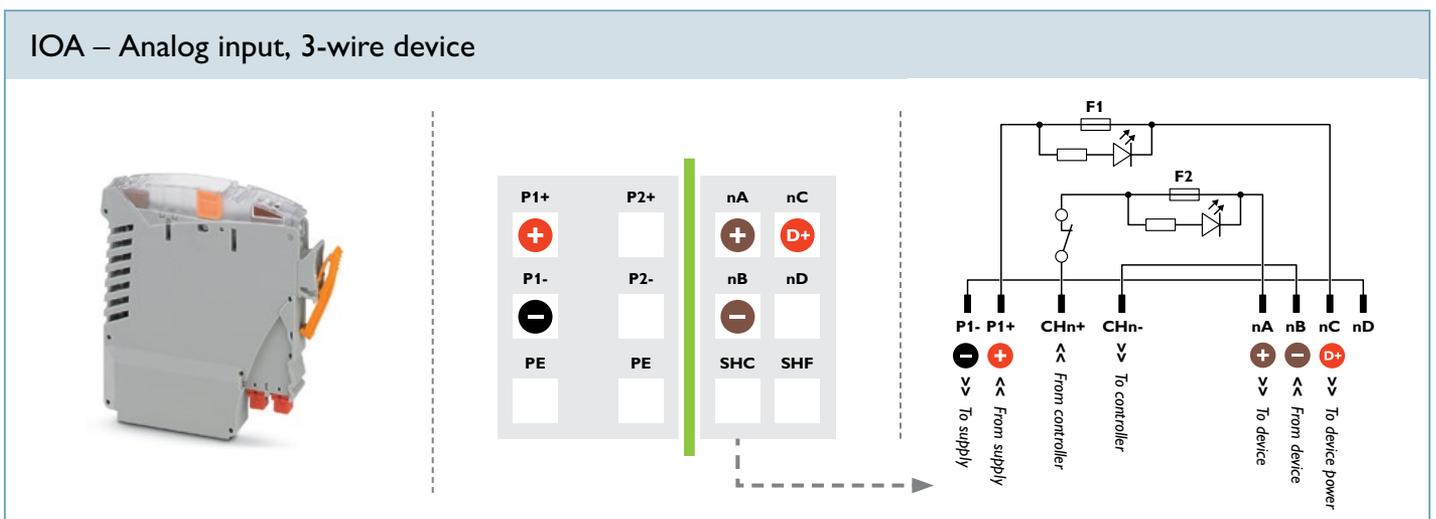
Direct connect to field device



Direct connect to field device



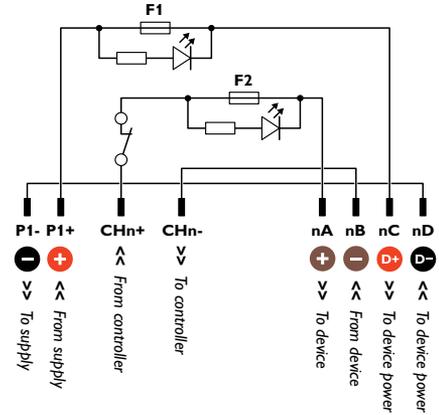
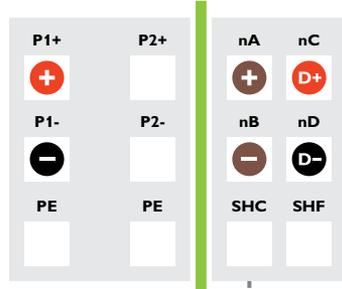
Powering a field device



Application examples

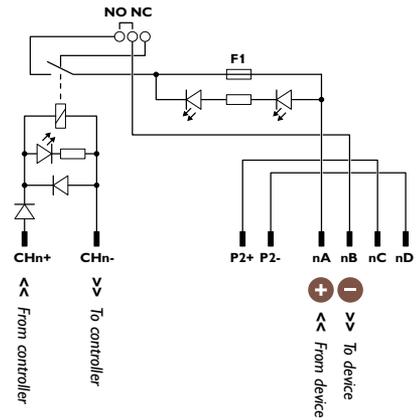
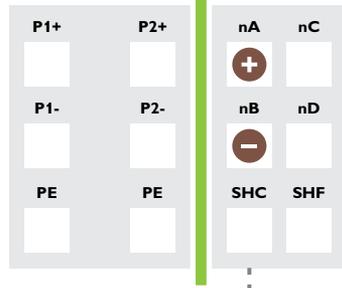
Powering a field device

IOA – Analog input, 4-wire device



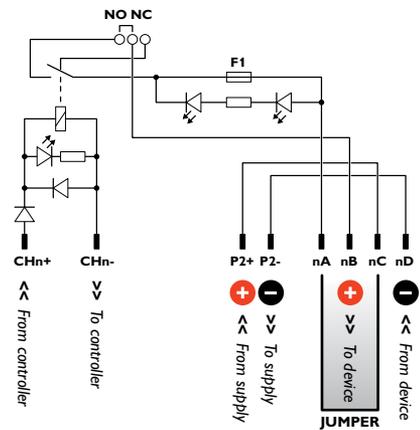
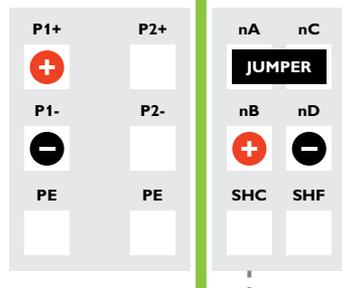
Direct connect to field device

IOA – 24 V digital output, field powered



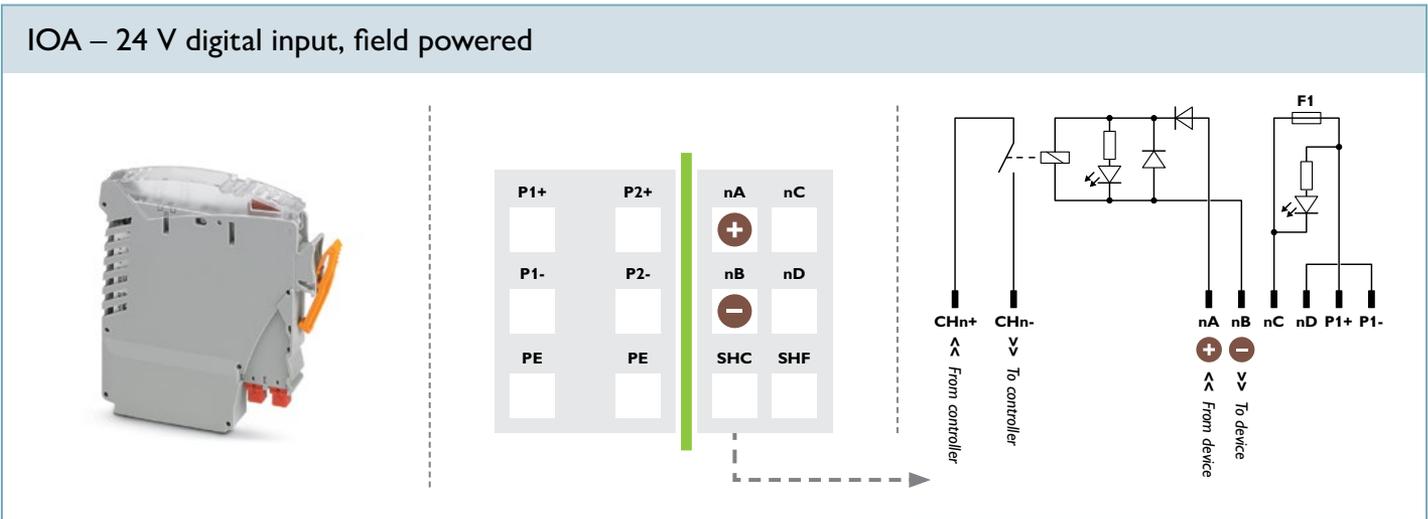
Powering a field device

IOA – 24 V digital output, inter-marshalled

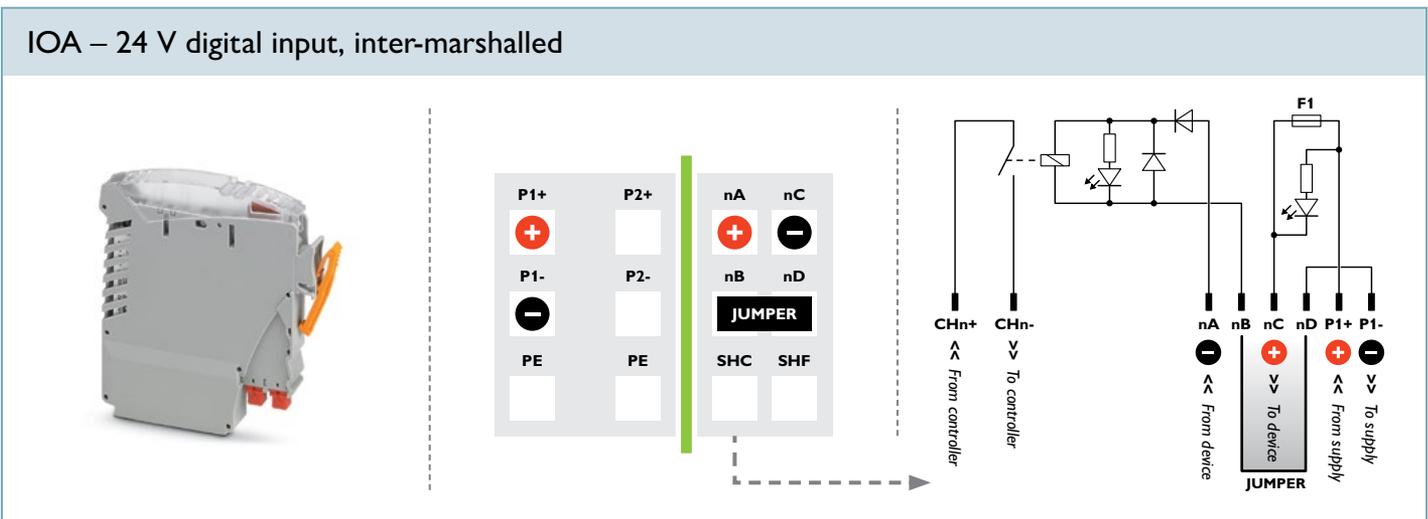


Application examples

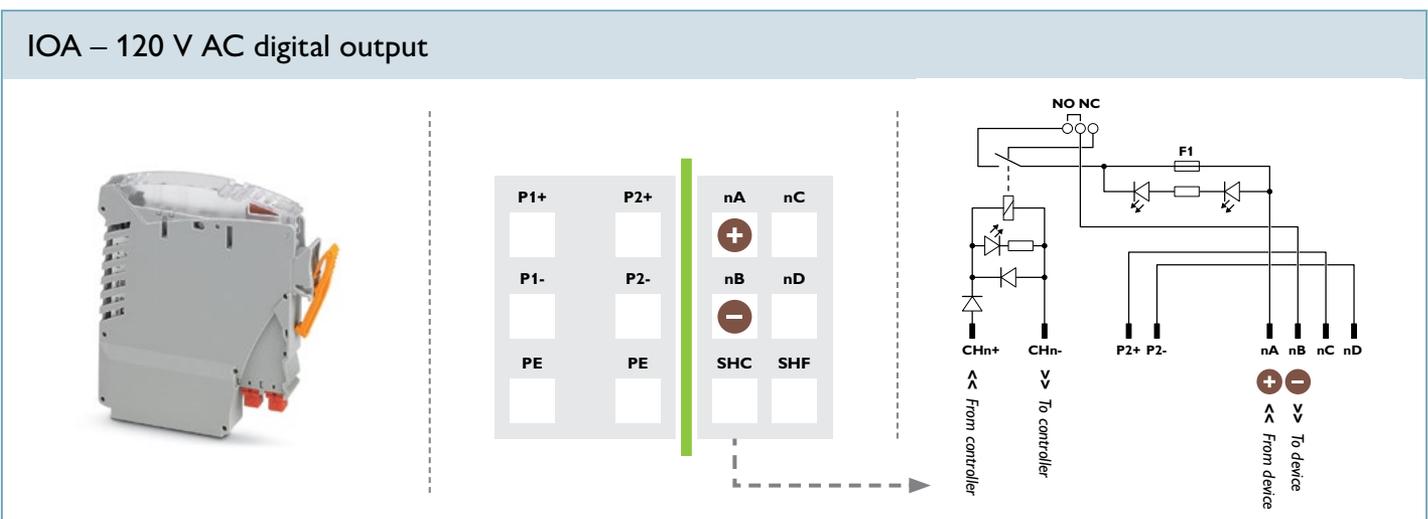
Direct connect to field device



Powering a field device



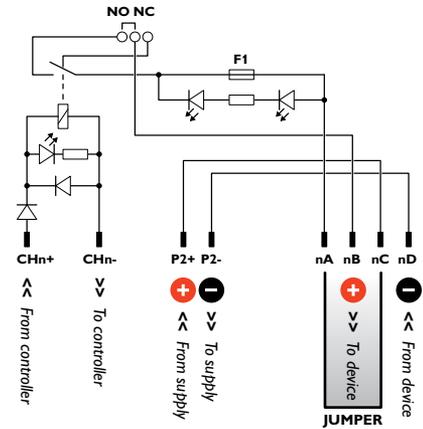
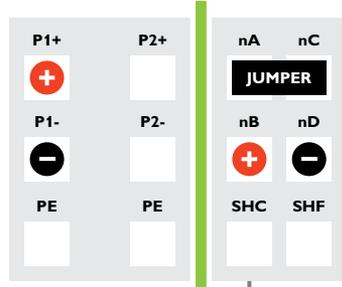
Direct connect to field device



Application examples

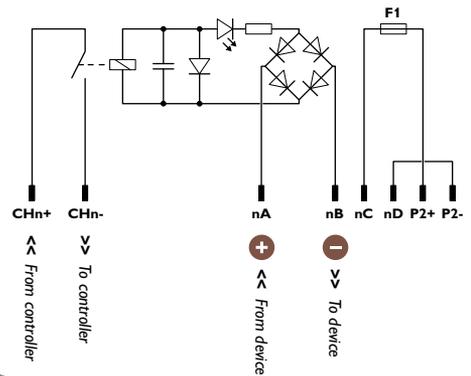
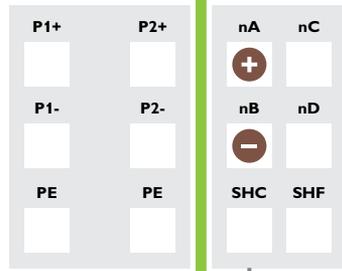
Powering a field device

IOA – 120 V AC digital output



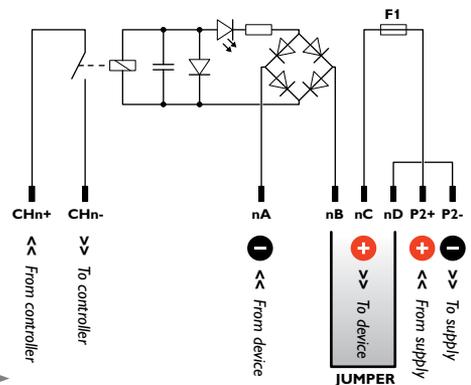
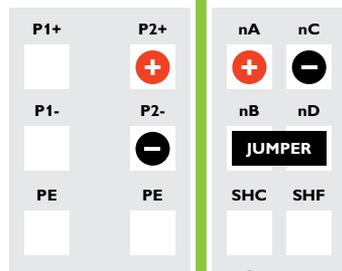
Direct connect to field device

IOA – 120 V AC digital input



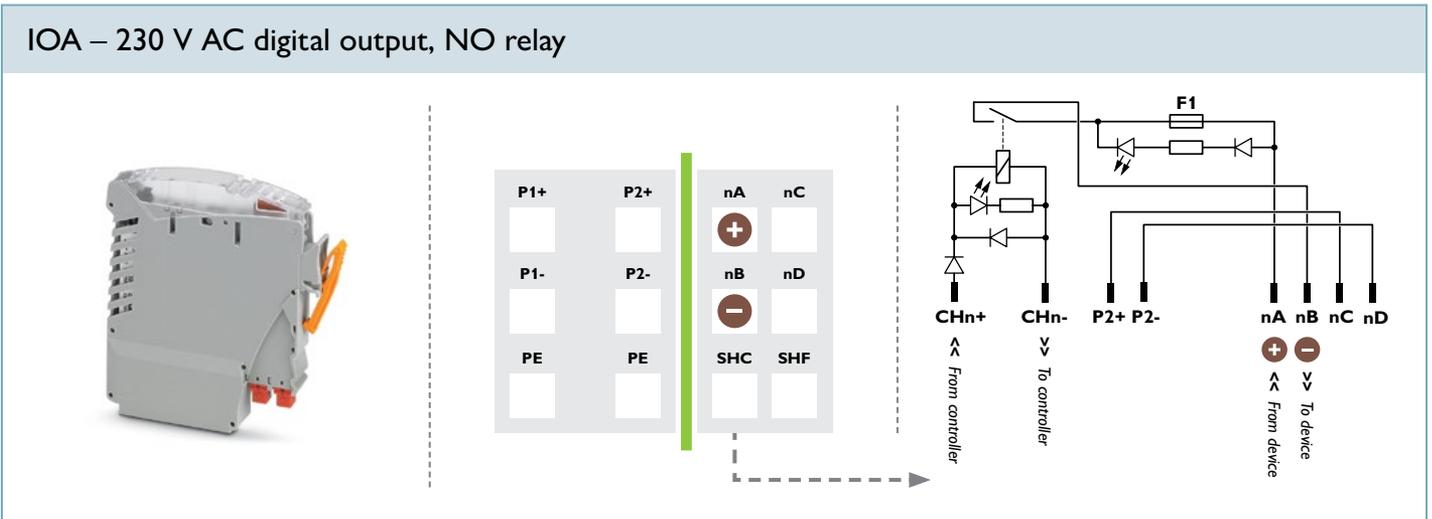
Powering a field device

IOA – 120 V AC digital input

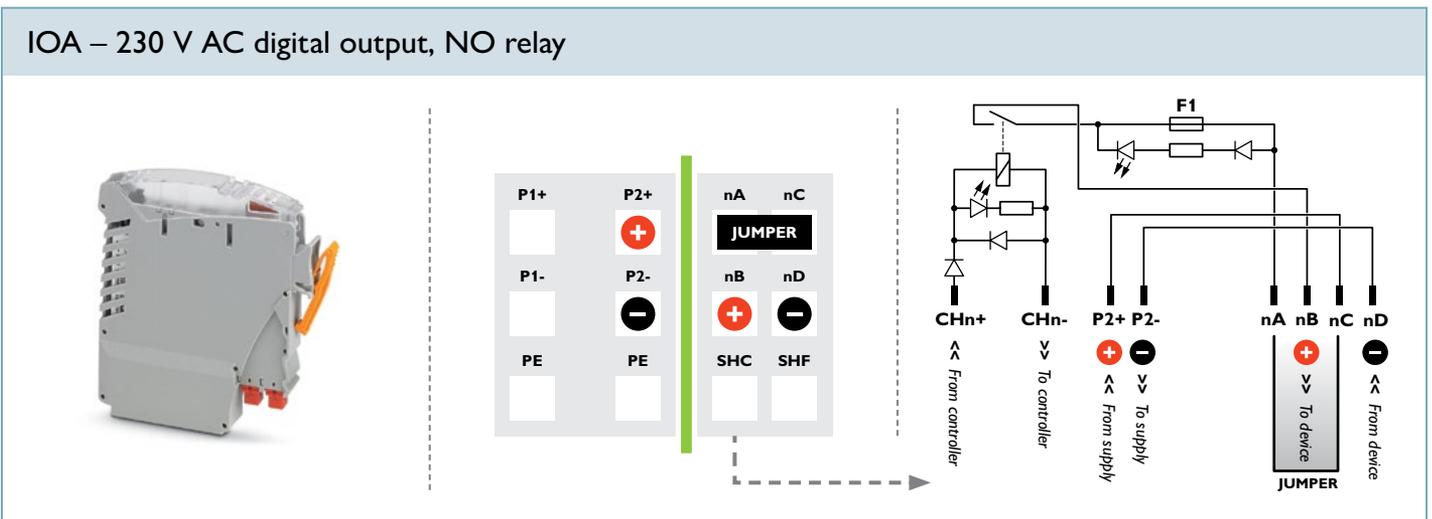


Application examples

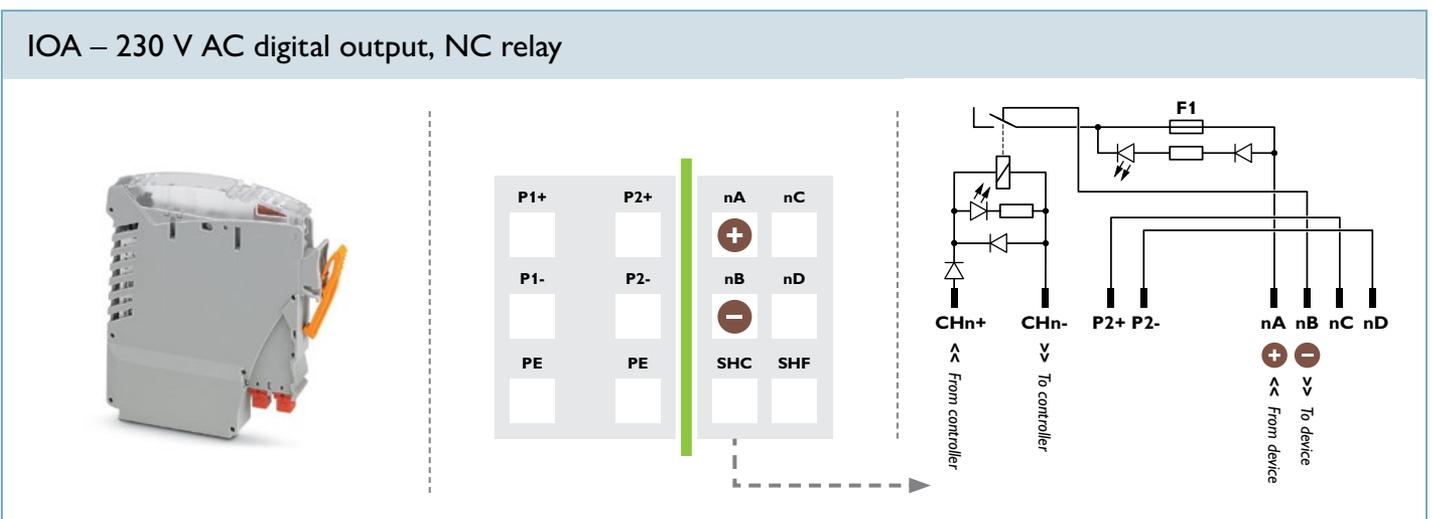
Direct connect to field device



Powering a field device



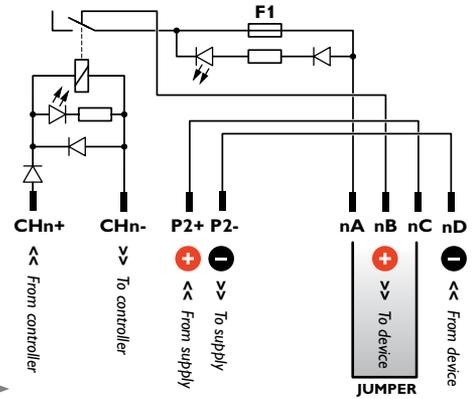
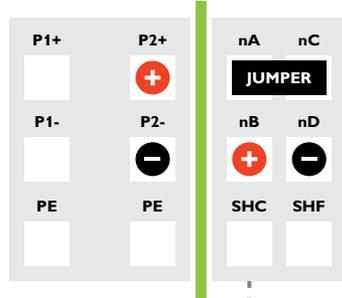
Direct connect to field device



Application examples

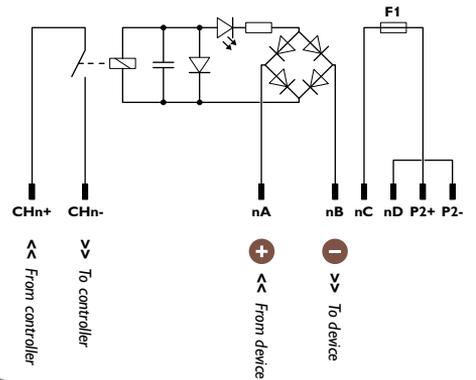
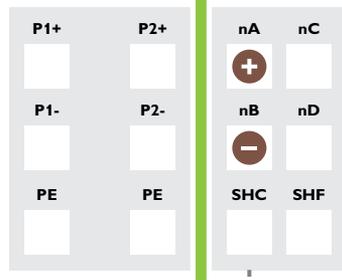
Powering a field device

IOA – 230 V AC digital output, NC relay



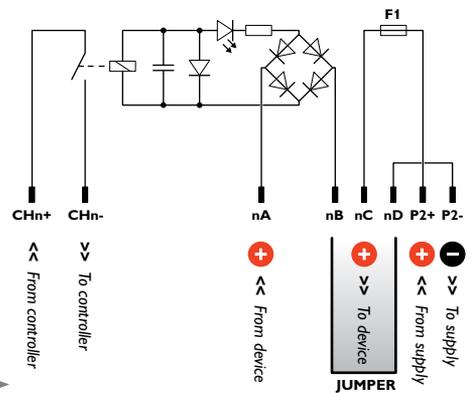
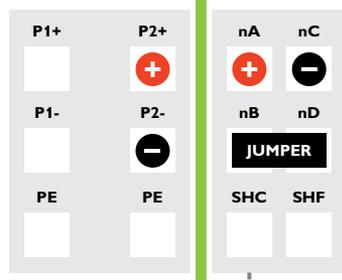
Direct connect to field device

IOA – 230 V AC digital input



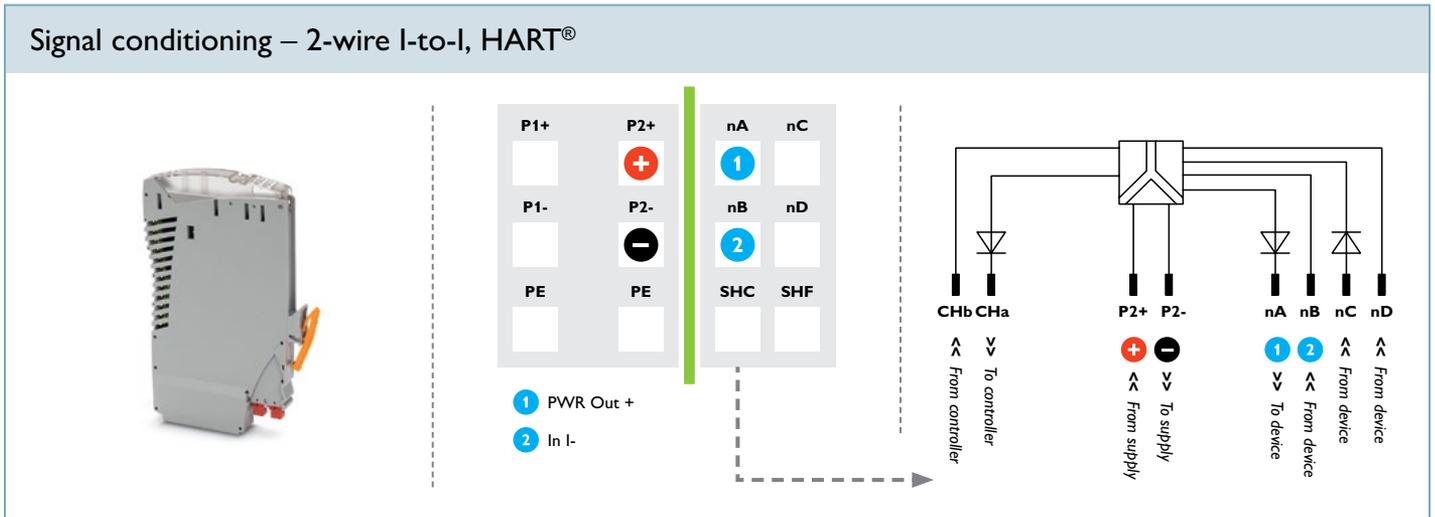
Powering a field device

IOA – 230 V AC digital input

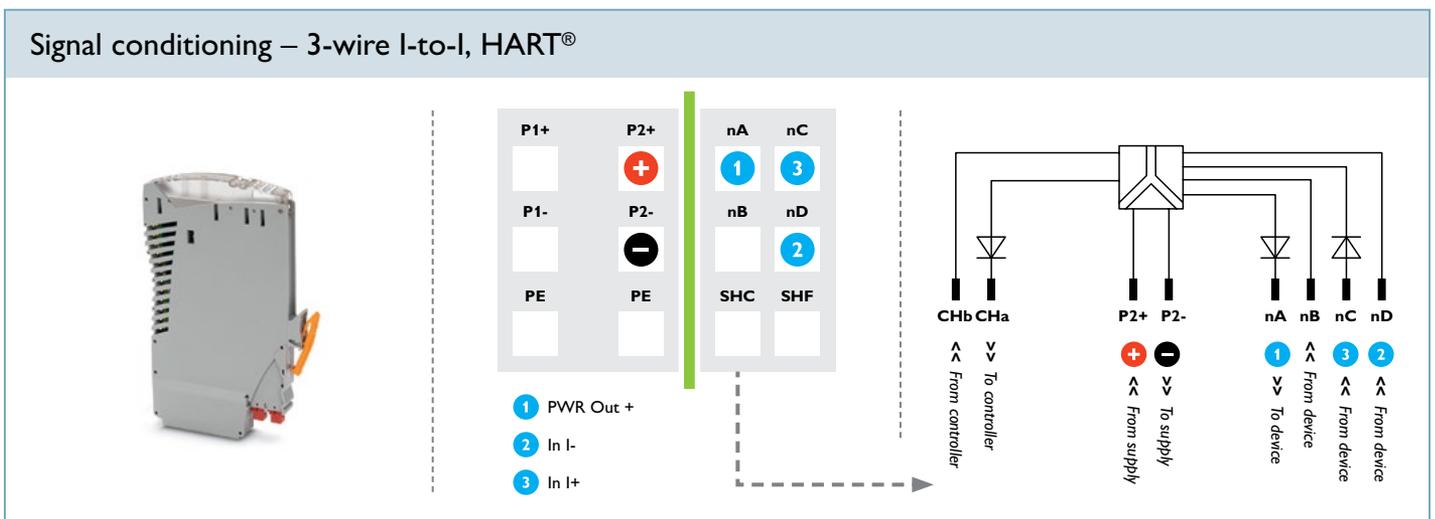


Application examples

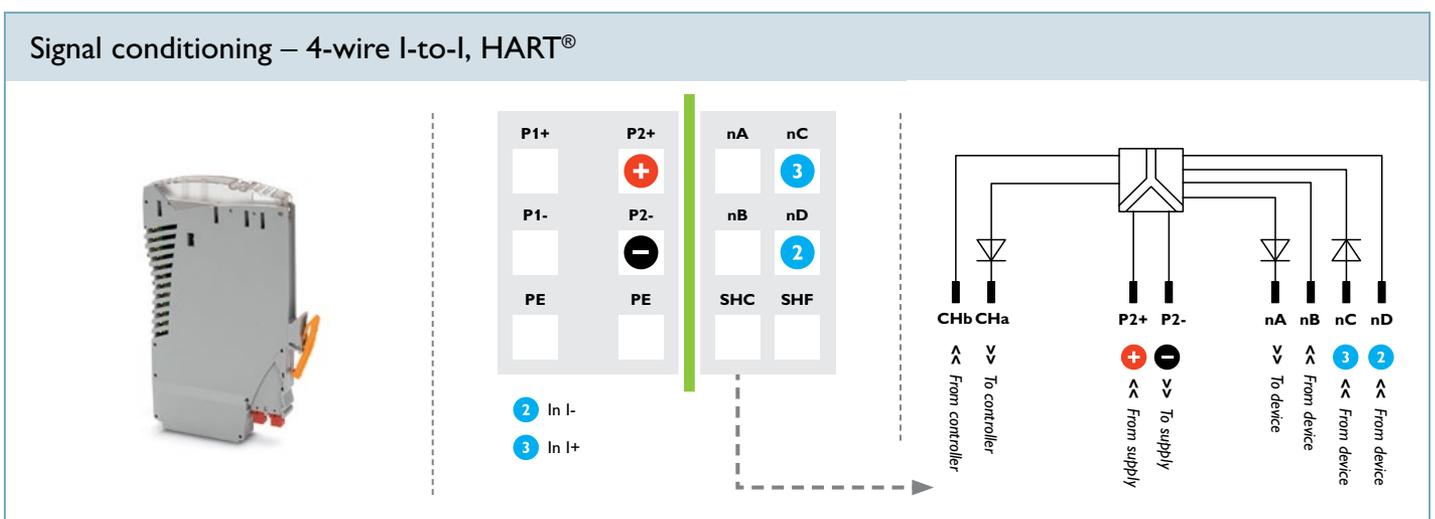
Provides 3-way isolation and calibrated measuring range



Provides 3-way isolation and calibrated measuring range



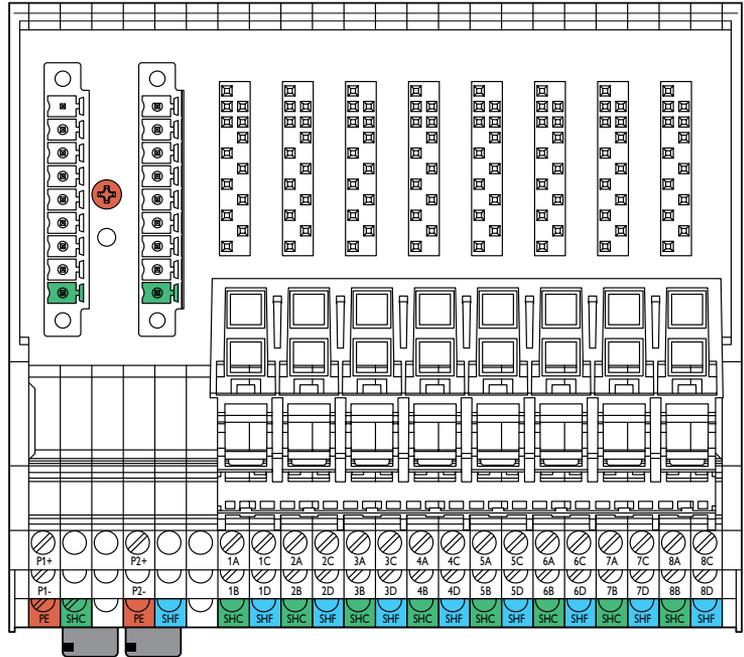
Provides 3-way isolation and calibrated measuring range



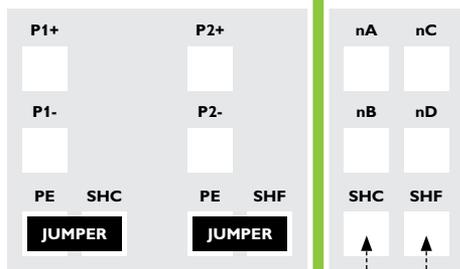
Available shielding options

Three shielding bus options

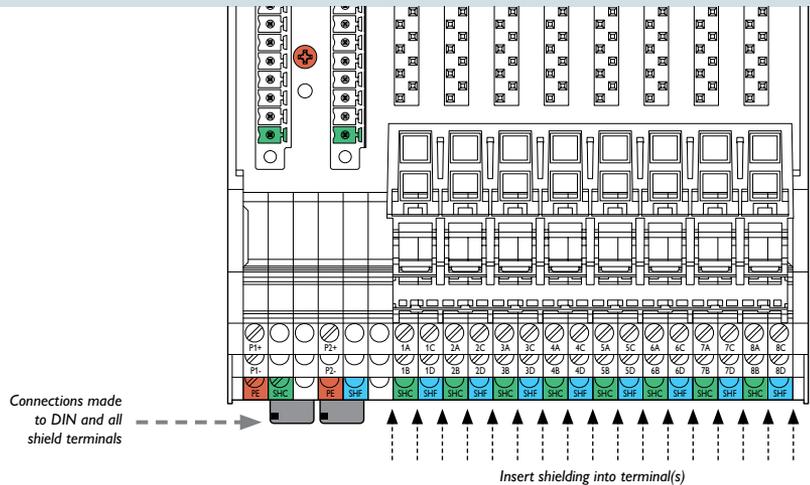
- = Protection earth bus
- = Shield cable bus
- = Shield field bus



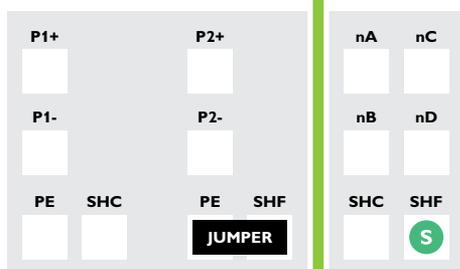
All shields tied to PE ground (DIN rail)



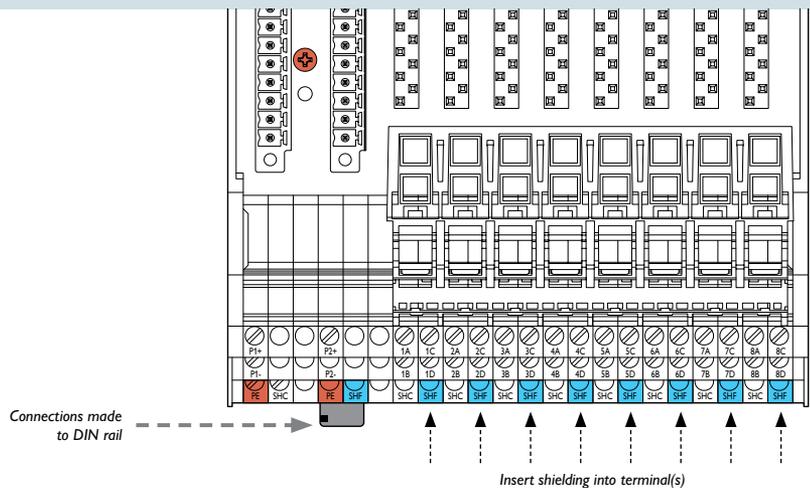
Field wiring



Field shield to DIN rail

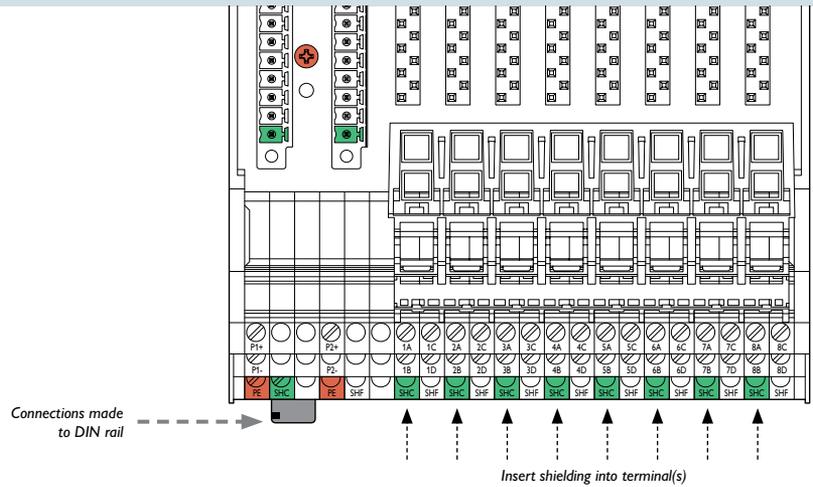
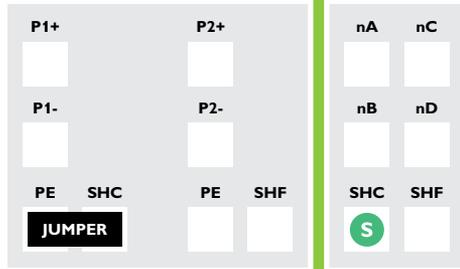


Field wiring

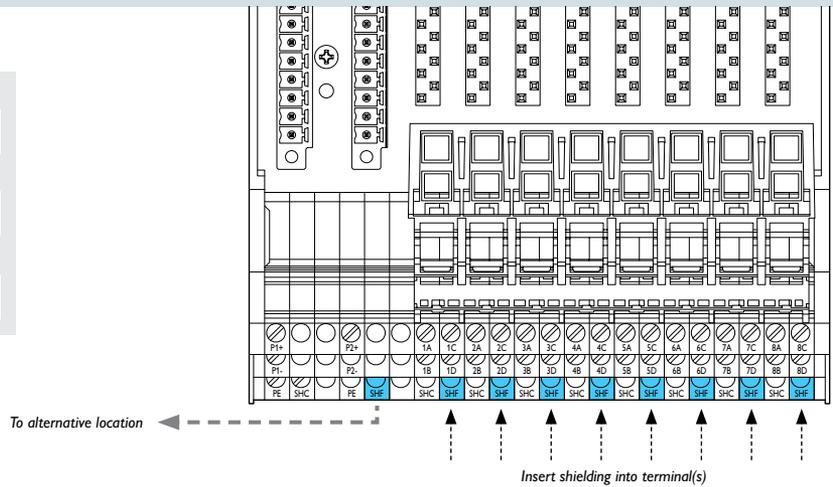
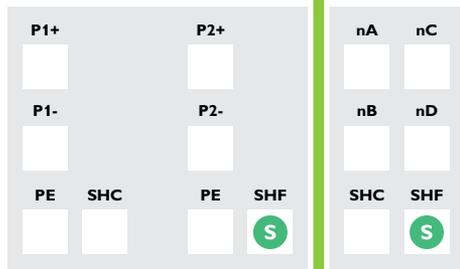


Available shielding options

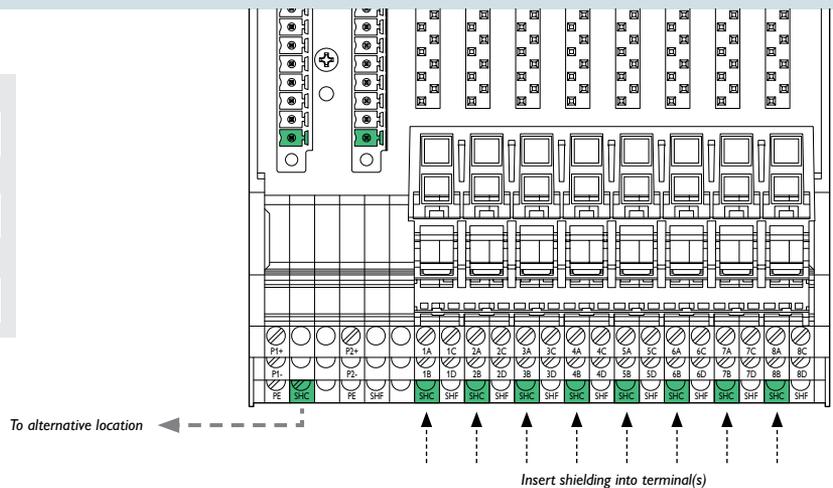
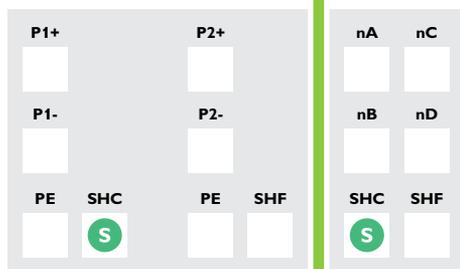
Cable shield to DIN rail



Field shield to alternative location



Cable shield to alternative location



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.

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