



COMPLETE line

# Connectivity

From the cabinet to the field

# Cabinet Confidence

## Your trusted partner for the control cabinet

From connectivity to control, Phoenix Contact gives you the confidence you need in your production systems. Our longstanding commitment to quality and innovation will give you the peace of mind and competitive edge to succeed in today's highly complex manufacturing world.




- NETWORKING 
- AUTOMATION AND CONTROL 
- SIGNAL SWITCHING AND CONDITIONING 
- POWER RELIABILITY 
- SAFETY 
- SHOP FLOOR PRODUCTIVITY 

 **LIMITED LIFETIME WARRANTY**  
BUILD WITH CONFIDENCE

# Connectivity

Never take a good connection for granted. Every wire in your control cabinet is there for a reason. The connections of those wires – via spring, screw, IDC, or crimp – are only as reliable as the integrity of the terminations. For nearly a century, Phoenix Contact has been the trusted partner for reliable connections.



## CONNECTIVITY

- Cabinet
- Through-panel
- Field

## Contents

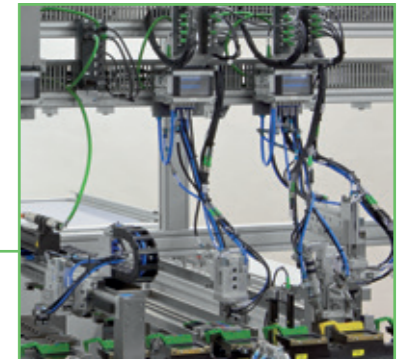
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Cabinet connections



Through the cabinet wall



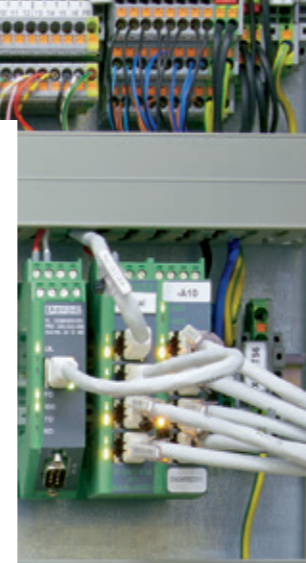
Field connections



# Cabinet connections

## The heart of reliability

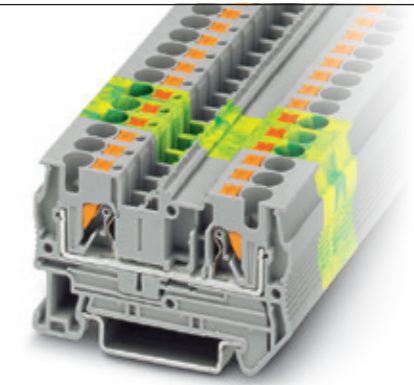
The control cabinet is the operating headquarters for any sophisticated control system. Without an efficient and dependable control cabinet, the performance of circuits and devices powered outside the cabinet may be compromised, and low-quality connections will degrade the performance of the entire network. A robust and reliable system begins in the control cabinet, and requires robust and reliable connections.



With a comprehensive product portfolio that includes five connection technologies, billions of installations, and millions of satisfied customers worldwide, Phoenix Contact is the most trusted brand for terminal blocks.

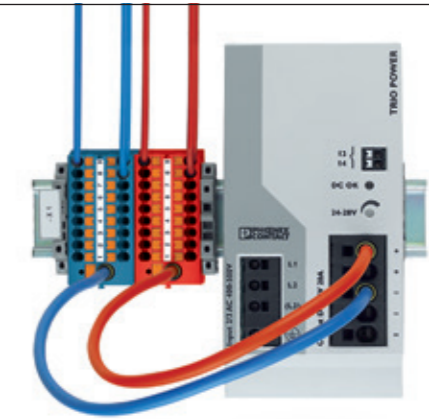
## Feed-through terminal blocks

In a control system, many wires are routed in numerous areas and directions to support various applications. Keeping wires clean, organized, and properly connected is vital for the system to operate smoothly. High quality and reliable feed-through terminal blocks allow these connections to perform as intended.



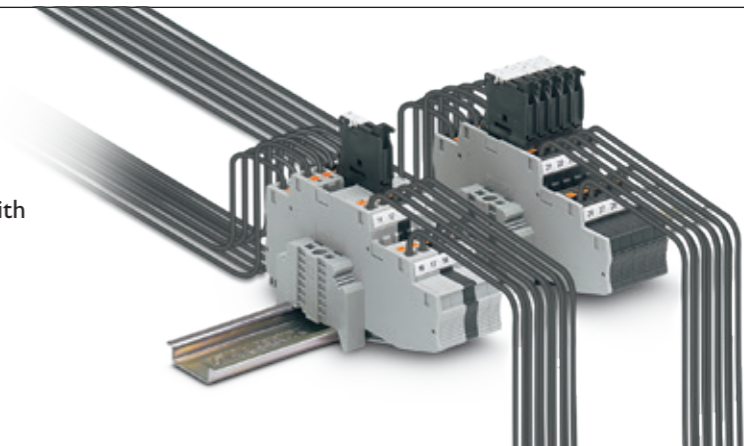
## Power distribution with terminal blocks

Distributing power effectively within a control system can improve efficiency and preserve valuable resources. A reliable power source is crucial, and that power must reach every component it is responsible for powering without fault. Power distribution with terminal blocks adds versatility to the scheme, and becomes a trusted element in the control system.



## Function terminal blocks

In many wiring schemes, circuits require various functions beyond the basics of carrying current. Functions such as protecting the circuit with fusing, status indication with LEDs, maintenance capability with disconnects, and flow management with diodes and resistors add value. Function terminal blocks improve efficiency and bring functionality to the circuit.



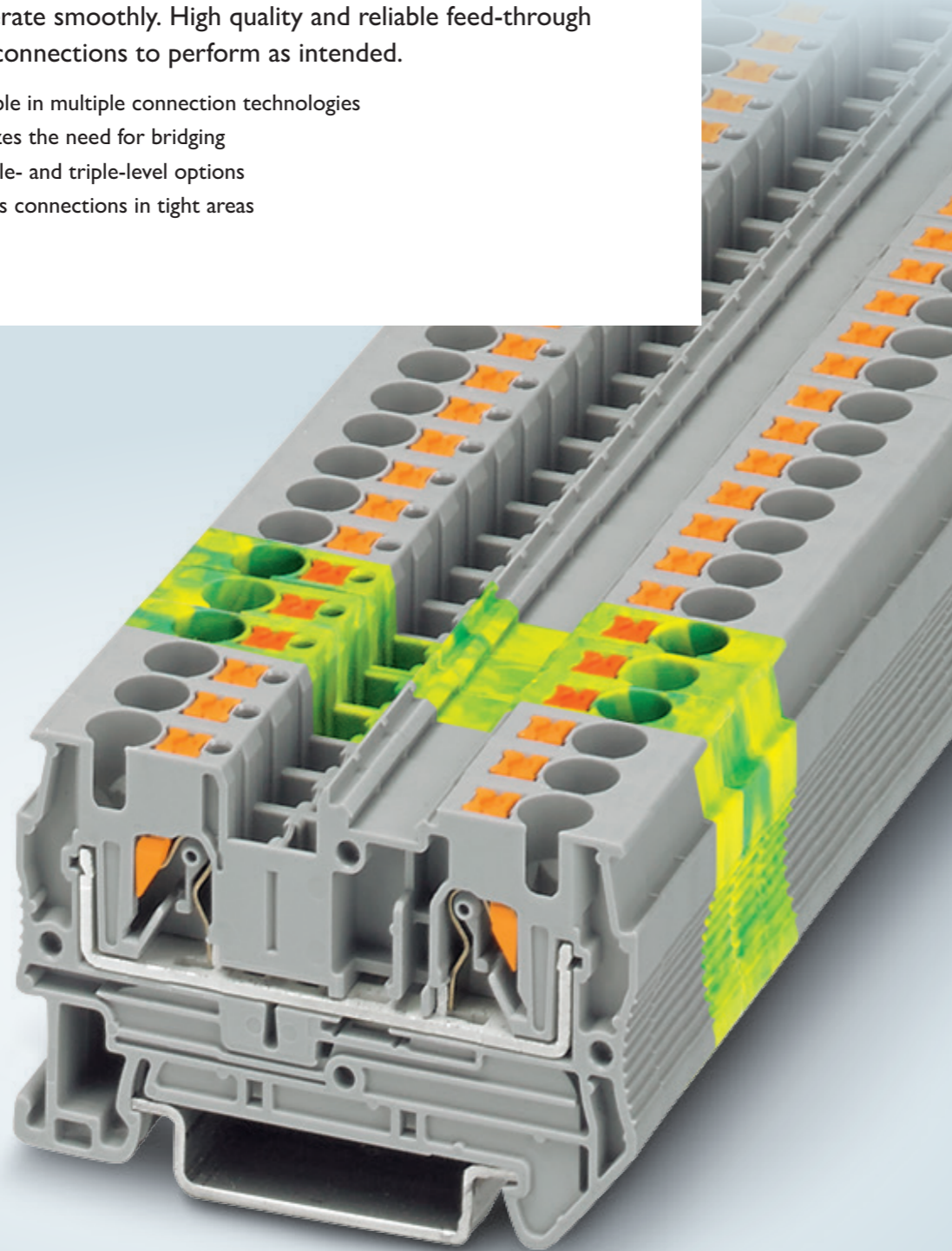


## Cabinet connections

# Feed-through terminal blocks

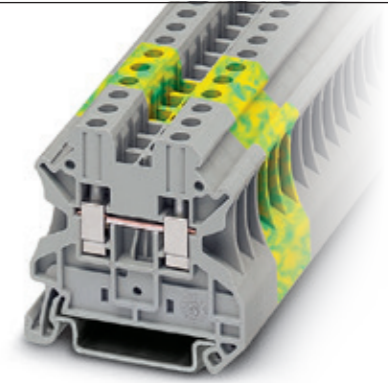
In a control system, many wires are routed in numerous areas and directions to support various applications. Keeping wires clean, organized, and properly connected is vital for the system to operate smoothly. High quality and reliable feed-through terminal blocks allow these connections to perform as intended.

- Standard feed-through – available in multiple connection technologies
- Multiple connections – minimizes the need for bridging
- Multi-level connections – double- and triple-level options
- Space optimization – maximizes connections in tight areas



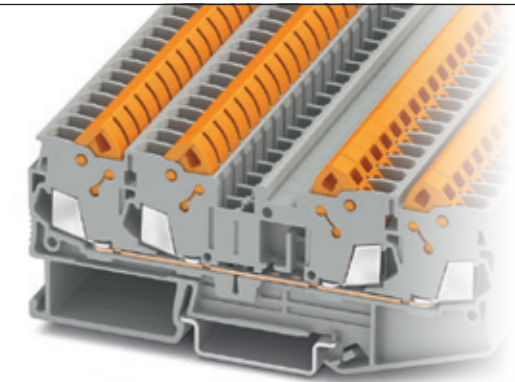
### Standard feed-through

- ✓ Available in five connection technologies:
  - Screw clamp, push-in, spring-cage, insulation displacement, ring lug (bolt)
- ✓ Sizes range from 1.5-185 mm<sup>2</sup>
- ✓ Full range of terminal block accessories
- ✓ Wide variety of marking products for effective identification



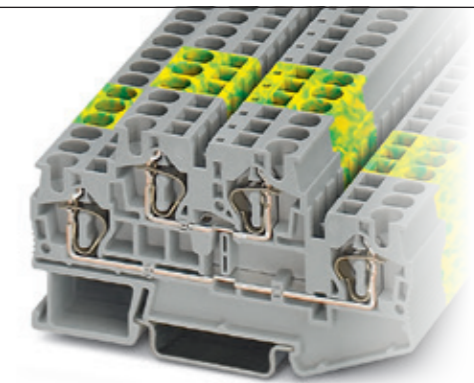
### Multiple connections

- ✓ Three or four connections beyond basic feed-through
- ✓ Clear, differentiated termination points
- ✓ Eliminate the need for multiple wires in one connection
- ✓ Twin ferrules not needed



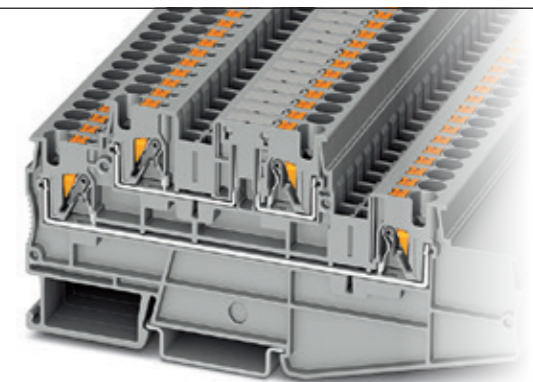
### Multi-level connections

- ✓ Double- and triple-level options available
- ✓ Angled or straight configurations
- ✓ The same or mixed electrical potentials
- ✓ Both horizontal and vertical bridging available



### Space optimization

- ✓ Smaller, more compact versions of standard terminal blocks
- ✓ Angled options available for smaller footprint
- ✓ Remove unwanted bridging channels to save space
- ✓ Feed-through blocks available in the same footprint as function blocks for clean, consistent appearance



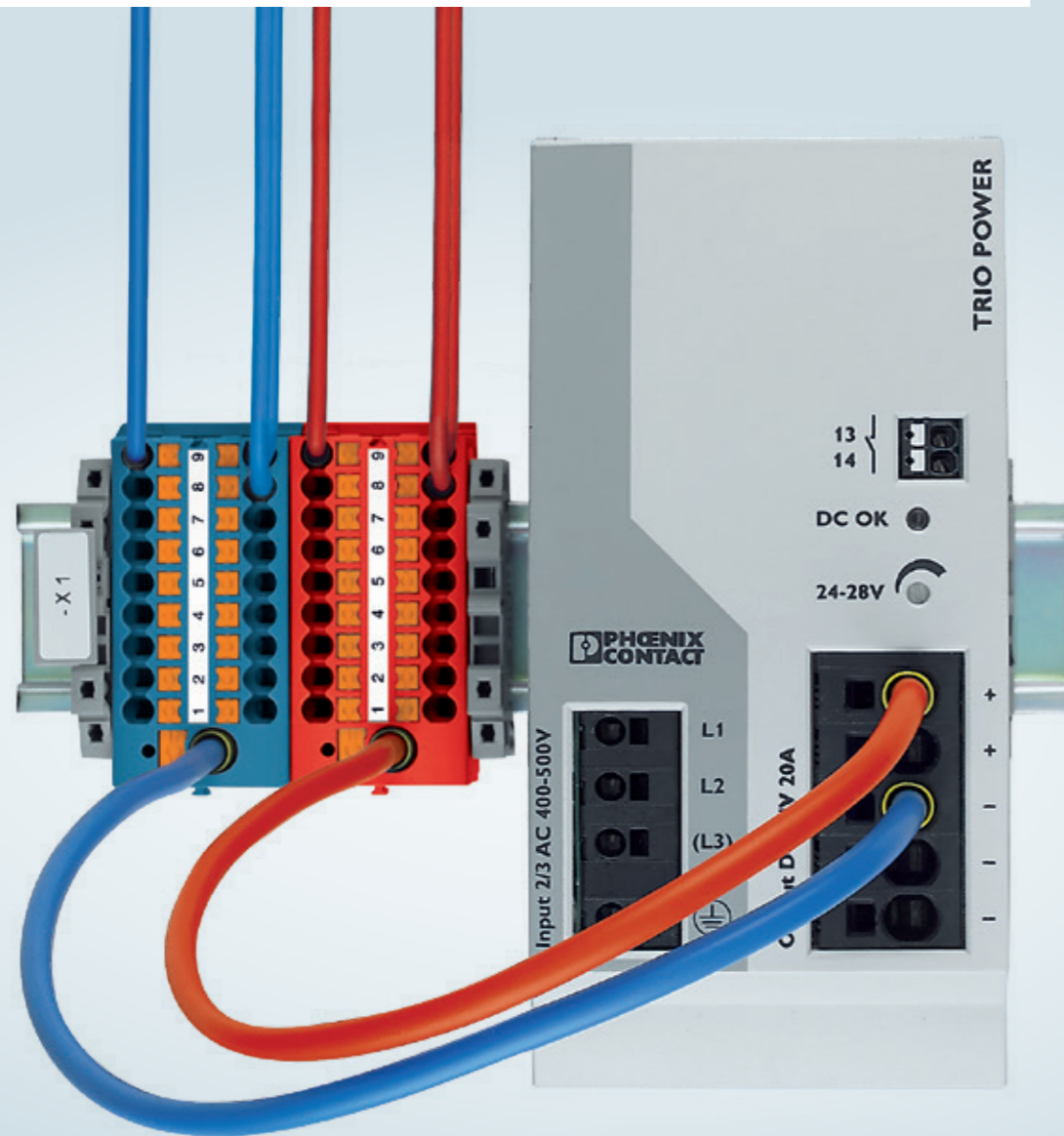


## Cabinet connections

### Power distribution with terminal blocks

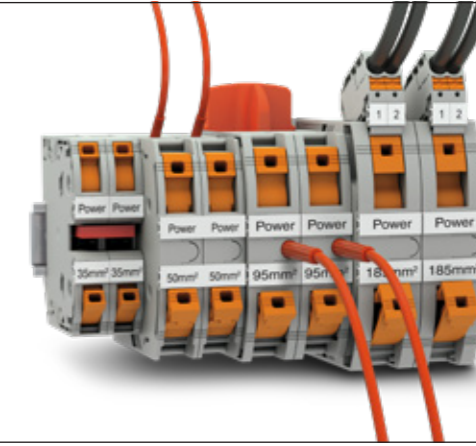
Distributing power effectively within a control system can improve efficiency and preserve valuable resources. A reliable power source is crucial, and that power must reach every component it is responsible for powering without fault. Power distribution with terminal blocks adds versatility to the scheme, and becomes a trusted element in the control system.

- High current power – simple late gauge connection
- Distribution – flexible and modular configurations
- Fused terminal blocks – protects crucial circuits
- FBS insertion bridges – allows completely flexible distribution



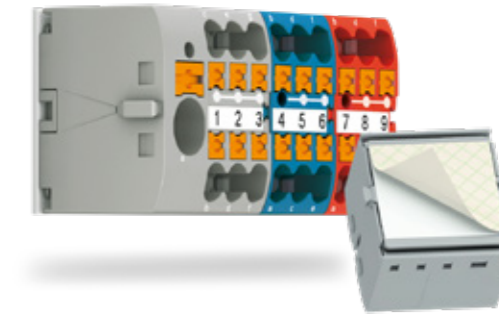
### High current power

- ✓ Quick and easy POWER-TURN connection technology
- ✓ Connect up to 1/0 AWG wire
- ✓ Expand as necessary with robust bridging
- ✓ 10 mm<sup>2</sup> pick-off terminals available
- ✓ Compatible with or without a ferrule



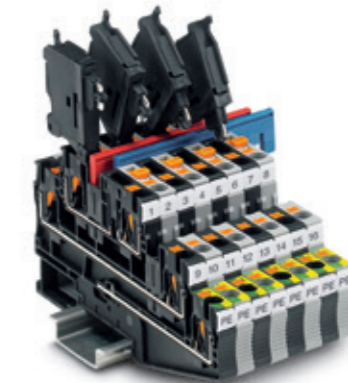
### Distribution

- ✓ Push-in connection technology
- ✓ Multiple cross-sections available
- ✓ Numerous terminal point configurations
- ✓ Larger feed-in contact options for potential distribution
- ✓ Six mounting options for every situation



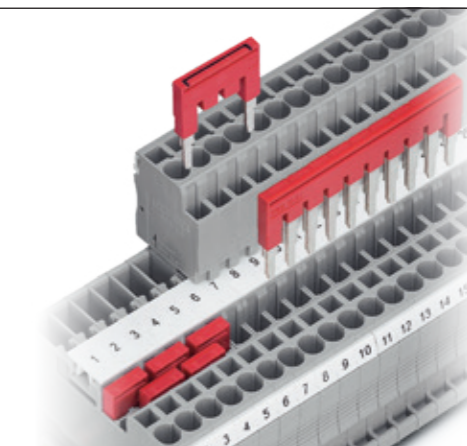
### Fused terminal blocks

- ✓ Multiple connection technologies to choose from
- ✓ Pluggable or hinged fuse holders
- ✓ Compatible with different types of fuses, including "auto-style"
- ✓ LED blown fuse indication available
- ✓ Multiple level options with or without ground foot



### FBS insertion bridges

- ✓ Simple direct insertion without the need for tools
- ✓ Robust patented scissor leg design for shock/vibration reliability
- ✓ Available in numerous position configurations
- ✓ Compatible with all CLIPLINE complete connection technologies
- ✓ Ability to step up/down to larger/smaller cross-sections



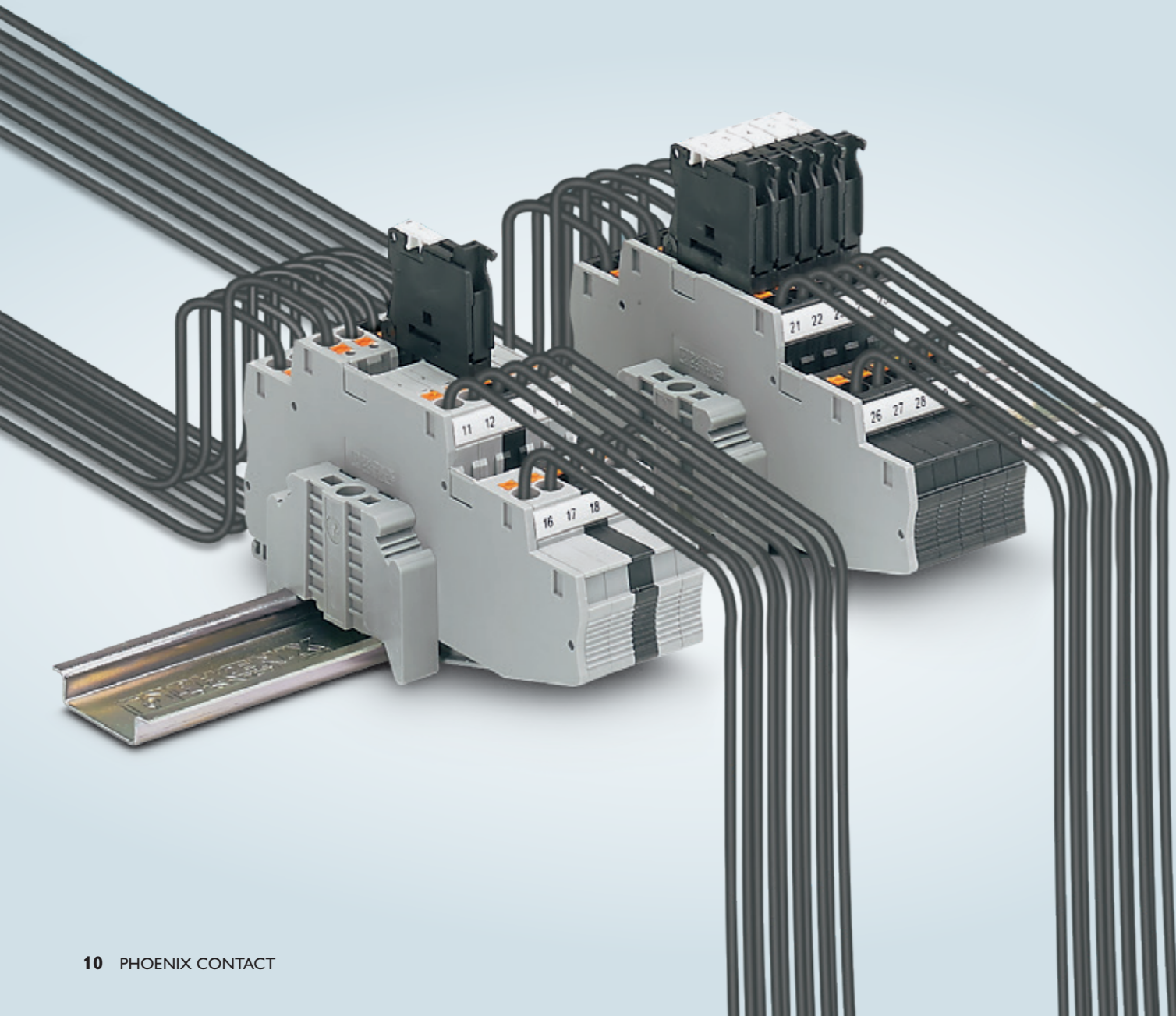


## Cabinet connections

### Function terminal blocks

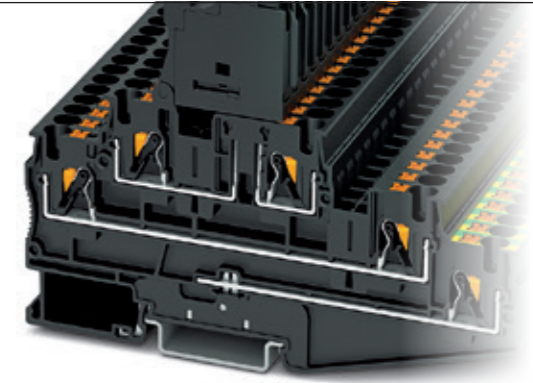
In many wiring schemes, circuits require various functions beyond the basics of carrying current. Functions such as protecting the circuit with fusing, status indication with LEDs, maintenance capability with disconnects, and flow management with diodes and resistors add value. Function terminal blocks improve efficiency and bring functionality to the circuit.

- Process terminal blocks – combine multiple parts into one
- Sensor/actuator blocks – effective signal management
- Disconnect terminal blocks – fast and simple maintenance
- Component holders – create functional terminal blocks



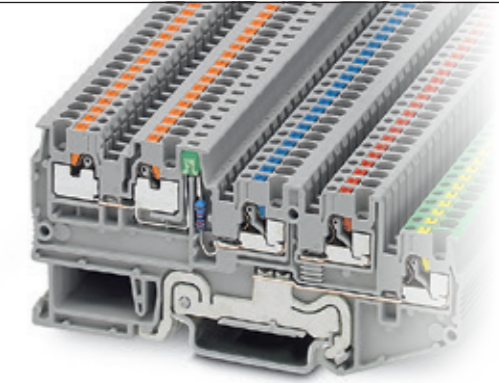
### Process terminal blocks

- ✓ Fuse holder, feed-through, and ground all in one block
- ✓ LED indication options
- ✓ Both push-in and screw connection
- ✓ Hinged HESI fuse holder
- ✓ Disconnect version available in the same form factor



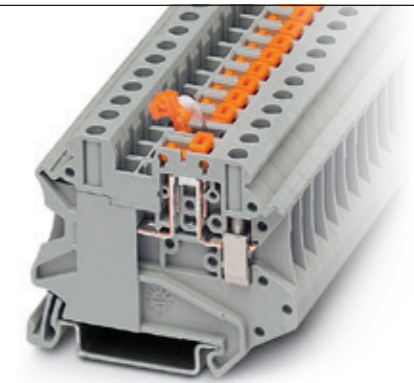
### Sensor/actuator blocks

- ✓ Push-in, spring cage, or screw connection
- ✓ Numerous configurations available
- ✓ LED, component, and grounding options
- ✓ Color-coding for ease of identification
- ✓ Retains push-in bridging channel



### Disconnect terminal blocks

- ✓ Allows simple, quick maintenance
- ✓ Single and double disconnects
- ✓ Disconnect lock-out accessories
- ✓ Different methods of actuation, including tool-less or screwdriver



### Component holders

- ✓ Easy and robust pluggable seating
- ✓ Numerous components/component holders available
- ✓ All components use the same insertion point
- ✓ Quick and simple component swapping process
- ✓ Functional with all CLIPLINE complete connection technologies



# Common parts for cabinet connections

High current power								
A. What wire size(s) and ratings are needed?								
B. What mounting is preferred?								
C. Resulting Phoenix Contact part number								
A. Cross-section	A. UL Rating	B. Mounting	C. Part no.	C. Description	D. Bridging	E. Position	F. Part no.	F. Description
(14-2 AWG) 35 mm <sup>2</sup>	1000 V/115 A	NS 35 DIN rail	3212064	PTPOWER 35	35 mm	2	-3005963	FBS 2-16
(14-2 AWG) 35 mm <sup>2</sup>	/	Flange/panel	3212078	PTPOWER 35-F	/	/	N/A	
(8-1/0 AWG) 50 mm <sup>2</sup>	1000 V/140 A	NS 35 DIN rail	3260050	PTPOWER 50	50 mm	2	-3260067	EB 2-20/PT
(8-1/0 AWG) 50 mm <sup>2</sup>	/	Flange/panel	3260061	PTPOWER 50-F	/	3	-3260068	EB 3-20/PT
(4-4/0 AWG) 95 mm <sup>2</sup>	1000 V/230 A	NS 35 DIN rail	3260100	PTPOWER 95	95 mm	2	-3260157	EB 2-25/PT
(4-4/0 AWG) 95 mm <sup>2</sup>	/	Flange/panel	3260133	PTPOWER 95-F	/	3	-3260160	EB 3-25/PT
(1/0-300 kcmil) 185 mm <sup>2</sup>	1000 V/270 A	NS 35 DIN rail	1054722	PTPOWER 185	185 mm	2	-3215057	EB 2-31/PT
(1/0-300 kcmil) 185 mm <sup>2</sup>	/	Flange/panel	1054732	PTPOWER 185-F	/	3	-3215058	EB 3-31/PT

Distribution					
A. What mounting method is preferred?					
B. What wire size(s) and ratings are needed?					
C. How many connection points?					
D. Resulting in Phoenix Contact part number					
A. Mounting method	B. Wire range of terminals	B. UL ratings	C. Number of terminal points	Description	D. Part no.
35mm DIN rail	26-12 AWG (Taps)	- (Feed-in)	20 A/300 V	PTFIX 12X2.5-NS35A GY	3273154
35mm DIN rail	26-12 AWG	-	20 A/300 V	PTFIX 18X2.5-NS35A GY	3273176
35mm DIN rail, vertical	26-12 AWG	-	20 A/300 V	PTFIX 12X2.5-NS35 GY	3273022
35mm DIN rail, vertical	26-12 AWG	-	20 A/300 V	PTFIX 18X2.5-NS35 GY	3273044
35mm DIN rail	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	PTFIX 6/12X2.5-NS35A GY	3273220
35mm DIN rail	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	PTFIX 6/18X2.5-NS35A GY	3273242
35mm DIN rail, vertical	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	PTFIX 6/12X2.5-NS35 GY	3273088
35mm DIN rail, vertical	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	PTFIX 6/18X2.5-NS35 GY	3273110

Fused terminal blocks				
A. Preferred connection technology?				
B. Fuse holder style?				
C. Resulting Phoenix Contact part number				
A. Connection technology	B. Fuse holder style	C. Part no.	C. Description	
PT (Push-in connection)	Hinged	3211861	PT 4-HESI (5X20)	
PT	"Auto-style"	3208943	PT 4-FSI/F	
UT (Screw connection)	Hinged	3046032	UT 4-HESI (5X20)	
UK	"Auto-style"	3118203	UK 6-FSI/C	

Process terminal blocks				
A. Preferred connection technology?				
B. Is grounding needed?				
C. Is LED indication preferred?				
D. Resulting Phoenix Contact part number				
A. Connection technology	B. Grounding	C. LED indication	D. Part no.	D. Description
PT (Push-in connection)	Yes	Yes	3002603	PT 4-PE/L/HESILED 24 (5X20)
PT	Yes	No	3002602	PT 4-PE/L/HESI (5X20)
PT	No	Yes	3002609	PT 4-L/HESILED 24 (5X20)
PT	No	No	3002608	PT 4-L/HESI (5X20)
UT (Screw connection)	Yes	Yes	3214321	UT 4-PE/L/HESILED 24 (5X20)
UT	Yes	No	3214320	UT 4-PE/L/HESI (5X20)
UT	No	Yes	3214366	UT 4-L/HESILED 24 (5X20)
UT	No	No	3214325	UT 4-L/HESI (5X20)

Sensor/Actuator terminal blocks				
A. Push-in connection technology				
B. Is grounding needed?				
C. Is LED indication preferred?				
D. Resulting Phoenix Contact part number				
A. Connection technology	B. Grounding	C. LED indication	D. Part no.	D. Description
PT (Push-in connection)	Yes	Yes	3244466	PTIO 1,5/S/4-PE-LED 24 GN
PT	No	Yes	3244520	PTIO 1,5/S/4-LED 24 GN
PT	Yes	No	3244465	PTIO 1,5/S/4-PE-LED
PT	No	No	3244452	PTIO 1,5/S/4

A. What connection style best fits your application?				E. Will you be bridging terminals?			
B. What wire size are you using? What is your current (amps) requirement?				F. Resulting Phoenix Contact part number			
C. How many connection points?				What accessories are needed?			
D. How many endcovers are needed?							

A. Push-in (PT)									
B. AWG	B. I <sub>max</sub>	C. Connections	Description	D. Cover	E. Bridge (2-position)	F. Part no.	Screwdriver	Marking	
							Terminal	Wire	
26-14	15	2	PT 1.5/S*	3208142	3213014	3208100	1204504	0829486	
	-		PT 1.5/S-PE*			3208139			
	15	3	PT 1.5/S-TWIN*	3208184					
	15	4	PT 1.5/S-QUATTRO*	3208375					
26-12	20	2	PT 2.5	3030417	3030161	3209510	1204517	0828744	See Marking Guide
	-		PT 2.5-PE	3209536					
	20	3	PT 2.5-TWIN	3030488					
	20		PT 2.5-QUATTRO	3030514					
	20	4	PTTB 2.5	3211634					
	-		PTTB 2.5-PE	3210567					
24-10	30	2	PT 4	3030420	3030336	3211757	1204517	0828746	
	-		PT 4-PE	3211766					
	30	3	PT 4-TWIN	3208977					
	30		PT 4-QUATTRO	3208979					
	28	4	PTTB 4	3030462					
	-		PTTB 4-PE	3211786					
				3211854					

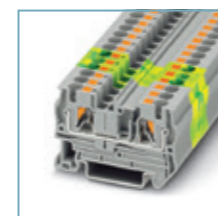
\* 18 AWG max, using plastic, insulated ferrule. See UL file for Use Group Rating

A. Screw clamp (UT)									
B. AWG	B. I <sub>max</sub>	C. Connections	Description	D. Cover	E. Bridge (2-position)	F. Part no.	Screwdriver	Marking	
							Terminal	Wire	
26-12	20	2	UT 2.5	3047028	3030161	3044076	1212587	0828734	See Marking Guide
	-		UT 2.5-PE	3044092					
	20	3	UT 2.5-TWIN	3047141					
	20		UT 2.5-QUATTRO	3047170					
	20	4	UTTB 2.5	3047293					
	-		UTTB 2.5-PE	3044665					
	20	6	UT 2.5-3L	3214314					
	-		UT 2.5-3PE	3214275					
26-10	30	2	UT 4	3047028	3030336	3044102	1212587	0828736	
	-		UT 4-PE	3044128					
	30	3	UT 4-TWIN	3047141					
	30		UT 4-QUATTRO	3047170					
	30	4	UTTB 4	3047293					
	-		UTTB4-PE	3044814					
26-8	50	2	UT6	3047028	3030284	3044131	1205066	0828740	
	-		UT6-PE	3044157					

A. Spring cage (ST)									
B. AWG	B. I <sub>max</sub>	C. Connections	Description	D. Cover	E. Bridge (2-position)	F. Part no.	Screwdriver	Marking	
							Terminal	Wire	
28-12	20	2	ST 2.5	3030417	3030161	3031212	1204517	0828744	See Marking Guide
	20	4	ST 2.5-QUATTRO	3030514		3031306			
28-10	30	2	ST 4	3030420	3030336	3031364	1204517	0828746	

A. Insulation displacement (IDC)									
B. AWG	B. I <sub>max</sub>	C. Connections	Description	D. Cover	E. Bridge (2-position)	F. Part no.	Screwdriver	Marking	
							Terminal	Wire	
24-16	10	2	QTC 1.5	3205161	3030161	3205019	1204517	0828744	See Marking Guide
	10	4	QTC 1.5-QUATTRO	3205174		3205077			
20-14	15	2	QTC 2.5	3206568	3030336	3206416	1204517	0828746	
	15	4	QTC 2.5-QUATTRO	3206449		3206446			

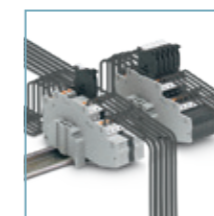
A. Bolt connection (RT)									
B. AWG	B. I <sub>max</sub>	C. Connections	Description	D. Cover	E. Bridge (2-position)	F. Part no.	Screwdriver	Marking	
							Terminal	Wire	
26-14	24	2	RT-3	3049097	3030336	3049013	1205053	0828740	See Marking Guide
26-10	41	2	RT-5		3030284	3049026	1205079	0829144	
14-2	125	2	RT-8	3049194	3005947	3049042	1205066	-	



Feed-through terminal blocks



Power distribution terminal blocks



Functional terminal blocks



# Panel feed-through systems

## Making connections through a panel

Products on DIN rail inside an enclosure need to either collect data from, communicate with, or control devices outside of the cabinet. While there are wireless solutions available for some of these transmissions, it's generally not practical or possible to make all connections wireless.

When it comes to making wired connections for power, signal, or data transmissions, there are a seemingly infinite number of solutions available. Fortunately, you can count on Phoenix Contact to provide recommendations on secure, water-tight, and vibration-proof methods to bring cabling from the field into the cabinet.



Phoenix Contact gets you through the cabinet wall with over 3.5 trillion different product configurations!

## Fixed

Looking for a more permanent solution to pass cables through a panel? Choose from cable glands or a membrane gland to direct-wire your incoming cables to products mounted inside the cabinet. If the cabling is pre-fabricated with a connector already installed, use a split-grommet cable entry system or programming port to secure your fixed connection.



## Pluggable

When several disconnects will be required over the lifetime of a system, having a disconnect point on the cabinet wall can be a huge time-saver and convenience. Whether you're looking at connecting a small number of devices independently using circular connectors, or a single combined disconnect through industrial rectangular connectors, you'll find there are plenty of choices for any scenario.





## Panel feed-through systems

### Fixed

When the wiring between your cabinet and a field device does not require a disconnect, or very few disconnects throughout the lifetime of the system, fixed terminations are the most economical solution. However, the wires still need to be managed as they pass through the panel. Phoenix Contact offers a variety of solutions to assist with this.

- Cable glands – sealing and strain relief for single unterminated cables
- Modular cable entry system (CES) – multiple connectorized cable capture
- Fixed cable entry system (CES MULTIGATE) – multiple unterminated cable capture
- HEAVYPORT – programming access from outside the cabinet



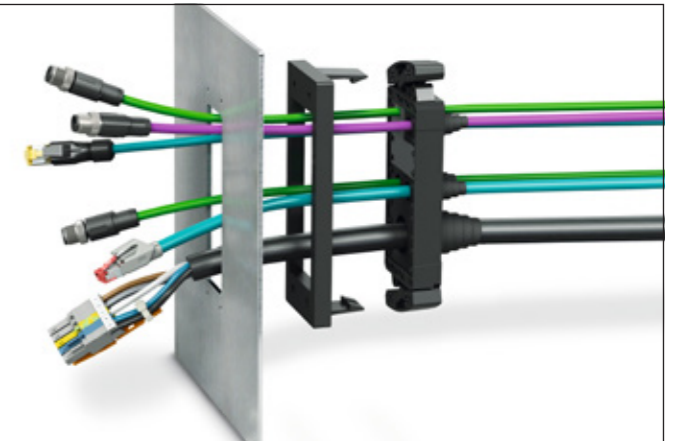
### Cable glands

- ✓ Standard metric, Pg, and NPT
- ✓ UV-resistant plastic, nickel-plated brass, stainless steel
- ✓ Pressure-compensating variations
- ✓ Strain relief and bend protection options
- ✓ Reducing and enlarging adapters available



### Modular cable entry system

- ✓ Fits standard knock-outs for rectangular connectors
- ✓ Mix-and-match split grommet sleeves and cone sleeves
- ✓ Easy assembly with locking latch frame
- ✓ Simple mounting with snap-on panel frame
- ✓ Provides up to IP65 protection



### Fixed cable entry system

- ✓ Quickly protect up to 37 cables through a single knock-out
- ✓ Seals wires from 2 mm to 60 mm diameters
- ✓ Offered in sizes that fit rectangular connector knock-outs
- ✓ Cost-effective, starting at under \$20
- ✓ Up to IP67 protection with secondary gland seal



### HEAVYPORT programming ports

- ✓ Safe and easy access to cabinet data and programming
- ✓ Local manufacturing in US for quick turn-around
- ✓ Fits standard rectangular connector panel knock-outs
- ✓ Stainless-steel faceplate for durability
- ✓ Customizable or preconfigured interfaces



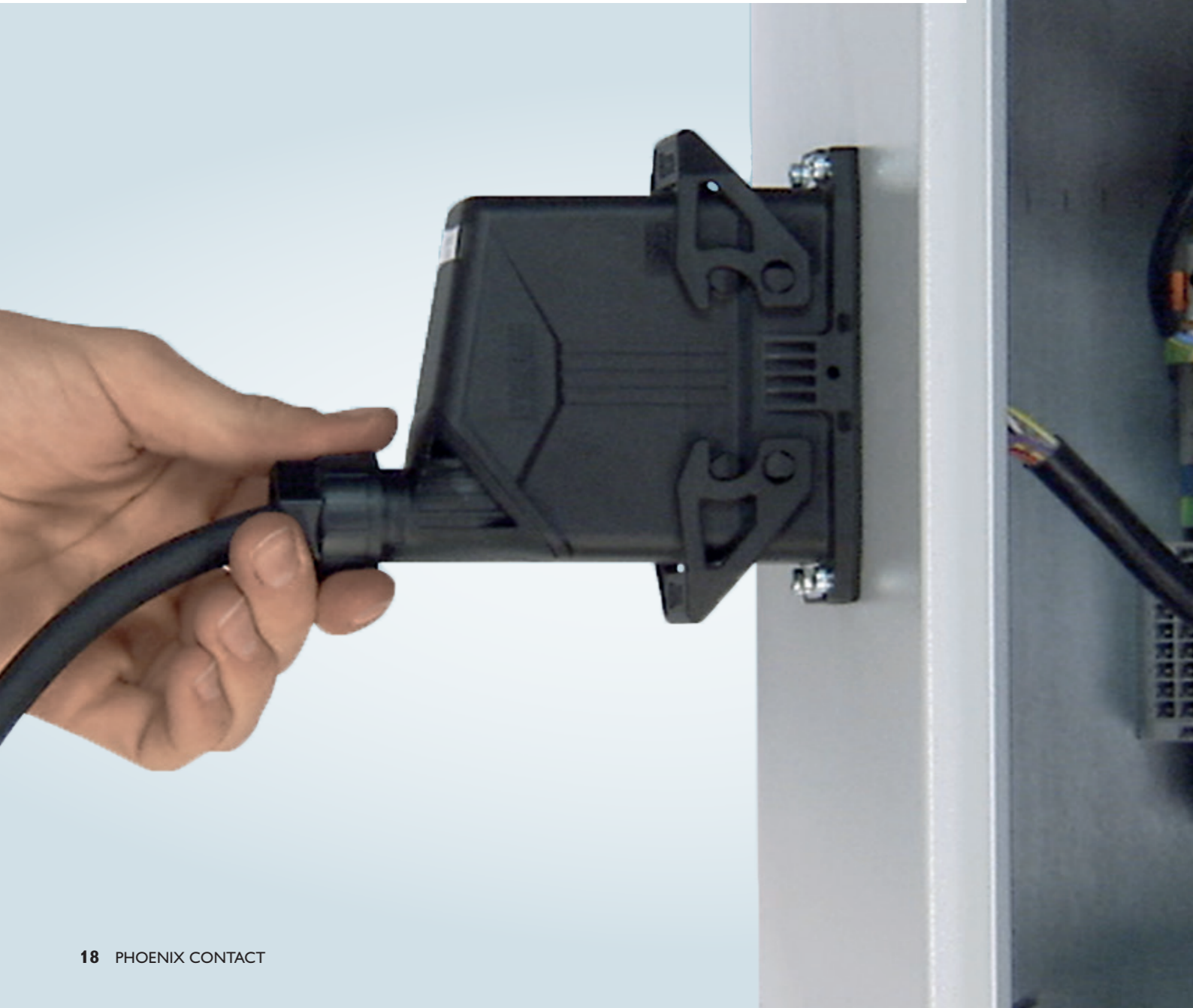


## Panel feed-through systems

### Pluggable

Sometimes it's much more convenient, if not necessary, to include a disconnect point on the outside of a cabinet wall. This allows permanent wiring to be installed at the cabinet builder, while giving the end user options for cabinet installation, upgrades, and maintenance within the system they're creating. Furthermore, pluggable connectors allow an OEM to reliably break down a machine after final testing, further reducing commissioning time once shipped to the end user location.

- HEAVYCON EVO – versatile connector system reduces stock and cost
- HEAVYCON Standard – traditional die-cast housing design with pre-drilled gland holes
- HEAVYCON Advance – tool disconnect direct-to-panel mount reduces cost
- Circular receptacles – pre-wired leads simplify sensor cable pass-throughs



### HEAVYCON EVO rectangular connectors

- ✓ EVO bayonet cable entry provides multiple cable entries
- ✓ Bayonets yield fewer line items but more variations
- ✓ UL recognized for use on UL508A Type 4/4X/12 cabinets
- ✓ Plastic version still UL Type 12, but reduced cost
- ✓ Compatible with industry-standard heavy-duty connectors



### HEAVYCON Standard rectangular connectors

- ✓ High-grade aluminum; no unpredictable powder coating
- ✓ Compatible with industry-standard heavy-duty connectors
- ✓ Competitively priced
- ✓ UL recognized for use on UL508A Type 4/4X/12 cabinets
- ✓ Pre-drilled gland holes for metric or Pg threads



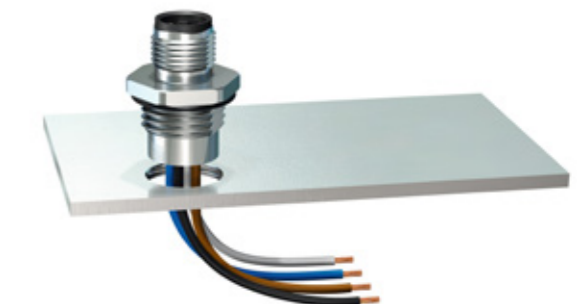
### HEAVYCON Advance rectangular connectors

- ✓ Great for use when tool disconnects are required
- ✓ Reduced material usage for reduced cost
- ✓ Compatible with industry-standard inserts
- ✓ UL recognized for use on UL508A Type 4/4X/12 cabinets
- ✓ Outdoor versions with UV-protected seals



### Circular receptacles

- ✓ Compatible with industry-standard M8, M12, and Mini 7/8"
- ✓ Front or rear mounting options in various panel thread sizes
- ✓ Color-coded wires simplify installation
- ✓ IEC codings (A-, B-, D-, etc.) prevent miss-mating cables
- ✓ IP65 and IP67 rated for spray or submersion





# Common parts for panel feed-through systems

Cable glands					
<b>A. Is shielding required?</b>					
<b>B. Do you prefer metal or plastic material?</b>					
<b>C. What size mounting thread is required?</b>					
<b>D. What is the cable's outside diameter (OD)?</b>					
<b>E. Type description</b>					
<b>F. Resulting Phoenix Contact part number</b>					
A. Shielding	B. Material	C. Mounting thread	D. Cable OD	E. Type description	F. Part no.
No	Plastic	20 mm (M20)	6-12 mm	G-INS-M20-S68N-PNES-BK	1411133
		25 mm (M25)	11-17 mm	G-INS-M25-M68N-PNES-BK	1411134
		32 mm (M32)	15-21 mm	G-INS-M32-M68N-PNES-BK	1411136
		40 mm (M40)	19-28 mm	G-INS-M40-M68N-PNES-BK	1411137
	Metal	20 mm (M20)	6-12 mm	G-INS-M20-S68N-NNES-S	1411163
		25 mm (M25)	11-17 mm	G-INS-M25-M68N-NNES-S	1411165
		32 mm (M32)	15-21 mm	G-INS-M32-M68N-NNES-S	1411166
		40 mm (M40)	19-28 mm	G-INS-M40-M68N-NNES-S	1411167
Yes	Metal	20 mm (M20)	7-13 mm	G-INSEC-M20-S68N-NCRS-S	1411189
		25 mm (M25)	11-16 mm	G-INSEC-M25-S68N-NCRS-S	1411190
		32 mm (M32)	14-21 mm	G-INSEC-M32-M68N-NCRS-S	1411191
		40 mm (M40)	19-27 mm	G-INSEC-M40-M68N-NCRS-S	1411192

Cable entry systems					
<b>A. How many cables do you need to pass through?</b>					
<b>B. What is the best fit for the combined cable's outside diameter (OD)?</b>					
<b>C. What mounting option is preferred?</b>					
<b>D. Type description</b>					
<b>E. Resulting Phoenix Contact part number</b>					
<b>F. Accessories</b>					
A. Number of cables	B. Cable OD options	C. Mounting option	D. Type description	E. Part no.	F. Snap-on Frame
8	8x 2-11 mm	Direct or snap-on	CES-B16-BXSRC-BK	1411073	0801651
10	10x 2-11 mm	Direct or snap-on	CES-B24-10XSRC-BK	1411074	0801647
25	3x 3-6 mm; 9x 3-7 mm; 8x 6-9 mm; 4x 6-12 mm; 1x 10-20 mm	Direct	MH-25-MULTI-65-PV-BK	1424582	
27	26x 3-6 mm; 1x 10-20 mm	Direct	MH-27-MULTI-65-PV-BK	1424583	

HEAVYPORT programming ports				
<b>A. What components are needed for port access?</b>				
<b>B. What gender is required for the external panel access?</b>				
<b>C. What gender is required for the internal cabinet connection?</b>				
<b>D. Type description</b>				
<b>E. Phoenix Contact part number</b>				
A. Components	B. External interface	C. Internal interface	D. Type description	E. Part no.
120VAC, 15A outlet	AC socket	Slip-on/solder tabs	H1X:AC	1415783
Cat5e RJ45	Female RJ45	Female RJ45	H1X:C5FF	1415760
9-Pin D-SUB	Male D-SUB	Female D-SUB	H1X:D1MF	1415765
2x Cat5e RJ45	Female RJ45	Female RJ45	H4X:2C5FF	1415764
2x USB type A; 120VAC, 15A outlet	Female USB / AC socket	10' USB cable with male plug	H4X:2UCFM:AC	1415779
2x USB type A; 15-Pin D-SUB	Female	Female USB	H4X:2U3FF:D3FF	1415780
Cat5e RJ45; 120VAC, 15A outlet	Female RJ45 / AC socket	Female RJ45	H4X:C5FF:AC	1415758
Cat5e RJ45; 120VAC, 15A outlet; 3A breaker	Female RJ45 / AC socket	Female RJ45	H4X:C5FF:AC3	1415781
Cat5e (shielded) RJ45; 120VAC 15A outlet; 3A breaker	Female shielded RJ45 / AC socket	Female RJ45	H4X:CSFF:AC3	1415759
9-Pin D-SUB; Cat5e RJ45; 120VAC, 15A outlet	Female D-SUB and RJ45 / AC socket	Male D-SUB / Female RJ45	H4X:D1FM:C5FF:AC	1415763
Cat5e RJ45; Duplex 120VAC 20A outlet, 3A breaker	Female RJ45	Female RJ45	H5Y:C5FF:GF3	1415761
USB type B; Cat5e RJ45; 120VAC, 15A outlet	Female USB and RJ45 / AC socket	Female USB and RJ45	H4X:U2FF:C5FF:AC	1415774



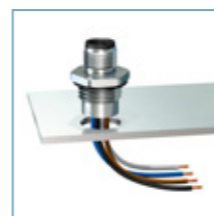
Glands and CES



Programming ports



Pluggable connector sets



Circular receptacles

Pluggable heavy-duty rectangular connector sets						
<b>A. What housing material is needed?</b>						
<b>B. Which direction does the cable need to enter the cable housing?</b>						
<b>C. What is the maximum number of pins needed (how many wires)?</b>						
<b>D. Do you prefer a single latch on the side, or dual latches on each end?</b>						
<b>E. Does the panel-mount base need to include a pre-installed cover?</b>						
<b>F. Type description</b>						
<b>G. Resulting Phoenix Contact part number</b>						
A. Material	B. Cable entry	C. Pin count	D. Latching	E. Cover	F. Type description	G. Part no.
Aluminum	Either	6	Single	With	HC-EVO-B06PT-BWSC-HL-M20ELC-AL	1411487
	Either	10	Dual	Without	HC-EVO-B10PT-BWD-HL-M25ELC-AL	1411488
	Either	10	Single	With	HC-EVO-B10PT-BWSC-HL-M25ELC-AL	1411491
	Either	16	Dual	Without	HC-EVO-B16PT-BWD-HH-M25ELC-AL	1411489
	Either	16	Single	With	HC-EVO-B16PT-BWSC-HH-M25ELC-AL	1411492
	Either	24	Dual	Without	HC-EVO-B24PT-BWD-HH-M32ELC-AL	1411490
	Either	24	Single	With	HC-EVO-B24PT-BWSC-HH-M32ELC-AL	1411493
	Either	6	Single	With	HC-EVO-B06PT-BWSC-HL-M20-PLRBK	1407710
	Either	10	Dual	Without	HC-EVO-B10PT-BWD-HL-M25-PLRBK	1407711
	Either	10	Single	With	HC-EVO-B10PT-BWSC-HL-M25-PLRBK	1408791
	Either	16	Dual	Without	HC-EVO-B16PT-BWD-HH-M25-PLRBK	1407712
	Either	16	Single	With	HC-EVO-B16PT-BWSC-HH-M25-PLRBK	1408793
Plastic	Either	24	Dual	Without	HC-EVO-B24PT-BWD-HH-M32-PLRBK	1407713
	Either	24	Single	With	HC-EVO-B24PT-BWSC-HH-M32-PLRBK	1408794
	Side	6	Single	With	HC-STA-B06PT-BWSC-LS-M20-ELCAL	1416353
	Side	10	Dual	Without	HC-STA-B10PT-BWD-LS-M25-ELCAL	1416355
	Side	10	Single	With	HC-STA-B10PT-BWSC-LS-M25-ELCAL	1416354
	Side	16	Dual	Without	HC-STA-B16PT-BWD-LS-M25-ELCAL	1416357
	Side	16	Single	With	HC-STA-B16PT-BWSC-LS-M25-ELCAL	1416356
	Side	24	Dual	Without	HC-STA-B24PT-BWD-LS-M32-ELCAL	1416359
	Side	24	Single	With	HC-STA-B24PT-BWSC-LS-M32-ELCAL	1416358
	Top	6	Single	With	HC-STA-B06PT-BWSC-LT-M20-ELCAL	1416344
	Top	10	Dual	Without	HC-STA-B10PT-BWD-LT-M25-ELCAL	1416346
	Top	10	Single	With	HC-STA-B10PT-BWSC-LT-M25-ELCAL	1416345
	Top	16	Dual	Without	HC-STA-B16PT-BWD-LT-M25-ELCAL	1416349
	Top	16	Single	With	HC-STA-B16PT-BWSC-LT-M25-ELCAL	1416348
	Top	24	Dual	Without	HC-STA-B24PT-BWD-LT-M32-ELCAL	1416352
	Top	24	Single	With	HC-STA-B24PT-BWSC-LT-M32-ELCAL	1416351

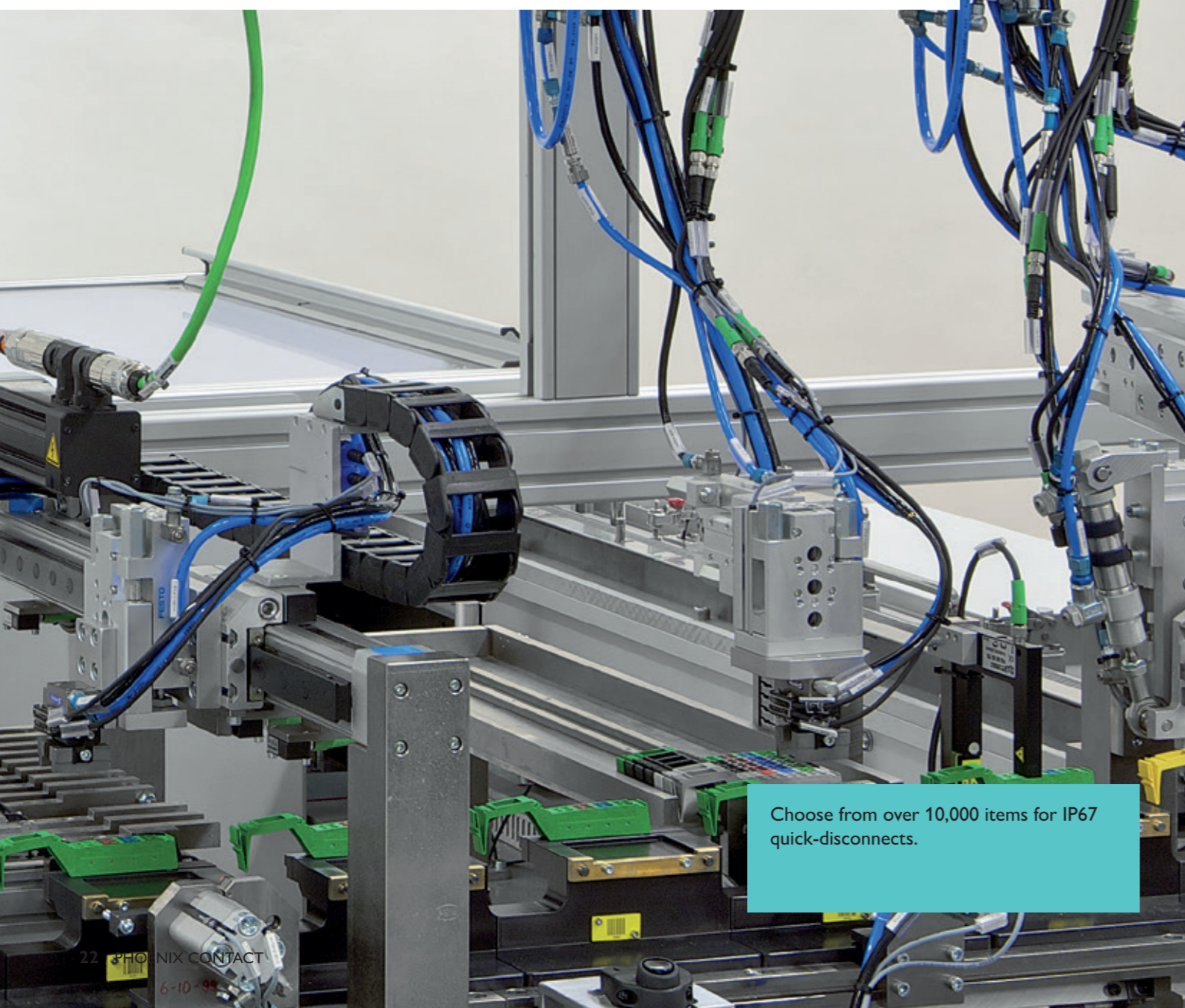
Circular receptacles						
<b>A. What connector thread size is required?</b>						
<b>B. What number of pins are needed (how many wires)?</b>						
<b>C. What is the desired receptacle gender?</b>						
<b>D. What mounting thread is required?</b>						
<b>E. Type description</b>						
<b>F. Resulting Phoenix Contact part number</b>						
<b>G. Accessories</b>						
A. Connector thread	B. Pin count	C. Gender	D. Mounting thread	E. Type description	F. Part no.	G. Locknut
M8	3	Male	8 mm	SACC-E-M 8MS-3CON-M8/0,5	1500334	1504071
	3	Female	8 mm	SACC-E-M 8FS-3CON-M8/0,5	1500350	1504071
	4	Male	8 mm	SACC-E-M 8MS-4CON-M8/0,5	1500347	1504071
	4	Female	8 mm	SACC-E-M 8FS-4CON-M8/0,5	1500363	1504071
	3	Male	1/2" NPT	SACC-E-M12MS-3CON-NPT12/1,0	1421079	Included
M12	3	Female	1/2" NPT	SACC-E-M12FS-3CON-NPT12/1,0	1421080	Included
	4	Male	1/2" NPT	SACC-E-M12MS-4CON-NPT12/1,0	1421081	Included
	4	Female	1/2" NPT	SACC-E-M12FS-4CON-NPT12/1,0	1421082	Included
	4	Male	16 mm	SACC-E-MS-4CON-M16/0,5 SCO	1523450	1504097
	4	Female	16 mm	SACC-E-FS-4CON-M16/0,5 SCO	1523434	1504097
	5	Male	1/2" NPT	SACC-E-M12MS-5CON-NPT12/1,0	1421083	Included
	5	Female	1/2" NPT	SACC-E-M12FS-5CON-NPT12/1,0	1421084	Included
	5	Male	16 mm	SACC-E-MS-5CON-M16/0,5 SCO	1520055	1504097
	5	Female	16 mm	SACC-E-FS-5CON-M16/0,5 SCO	1520039	1504097
	8	Male	16 mm	SACC-E-MS-8CON-M16/0,5 SCO	1523492	1504097
	8	Female	16 mm	SACC-E-FS-8CON-M16/0,5 SCO	1523476	1504097
	MINI 7/8"	2	Male	1/2" NPT	SACC-E-MINM-2CON-NPT12-547/1,0	1417763
2		Female	1/2" NPT	SACC-E-MINF-2CON-NPT12-547/1,0	1420947	1020362
3		Male	1/2" NPT	SACC-E-MINM-3CON-NPT12-547/1,0	1417764	1020362
3		Female	1/2" NPT	SACC-E-MINF-3CON-NPT12-547/1,0	1420948	1020362
4		Male	1/2" NPT	SACC-E-MINM-4CON-NPT12-547/1,0	1417765	1020362
4		Female	1/2" NPT	SACC-E-MINF-4CON-NPT12-547/1,0	1420949	1020362
5		Male	1/2" NPT	SACC-E-MINM-5CON-NPT12-547/1,0	1417766	1020362
5		Female	1/2" NPT	SACC-E-MINF-5CON-NPT12-547/1,0	1420950	1020362
6		Male	1/2" NPT	SACC-E-MINM-6CON-NPT12-547/1,0	1417767	1020362
6		Female	1/2" NPT	SACC-E-MINF-6CON-NPT12-547/1,0	1420951	1020362



# Field connections

## Robust cabling to the end device

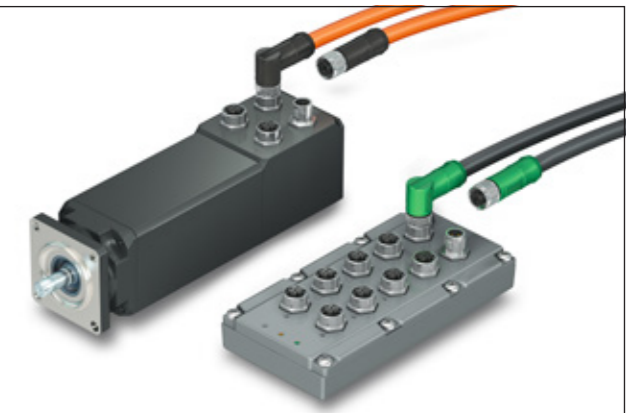
Every end device needs to be powered, as well as communicate its intended information. Device power can be either AC or DC and range from a few milliamps to hundreds of amps. Sensor connectivity collects field-level digital and analog signals and brings them back to the control level. Networks or industrial protocols are used to communicate with devices using the same language.



Choose from over 10,000 items for IP67 quick-disconnects.

## Power connectivity

Both AC and DC loads on the machine can be outfitted with quick disconnects for easier installation and reduced downtime during maintenance or repair. Typical loads are drives, motors, and servos that require more than 5 amps.



## Network connectivity

The physical layer interconnect solution must be matched to the industrial protocol determined by the controller. The cable design, wire and jacket color, and shielding and connector interface are all specifically designed to support the protocol of your choice.



## Sensor connectivity

The most common signal types within most industrial applications are the inputs and outputs of sensors and actuators. The largest breadth of interconnect products are found here to support the collection and transmission of these signals in order to communicate on/off functions within an application.



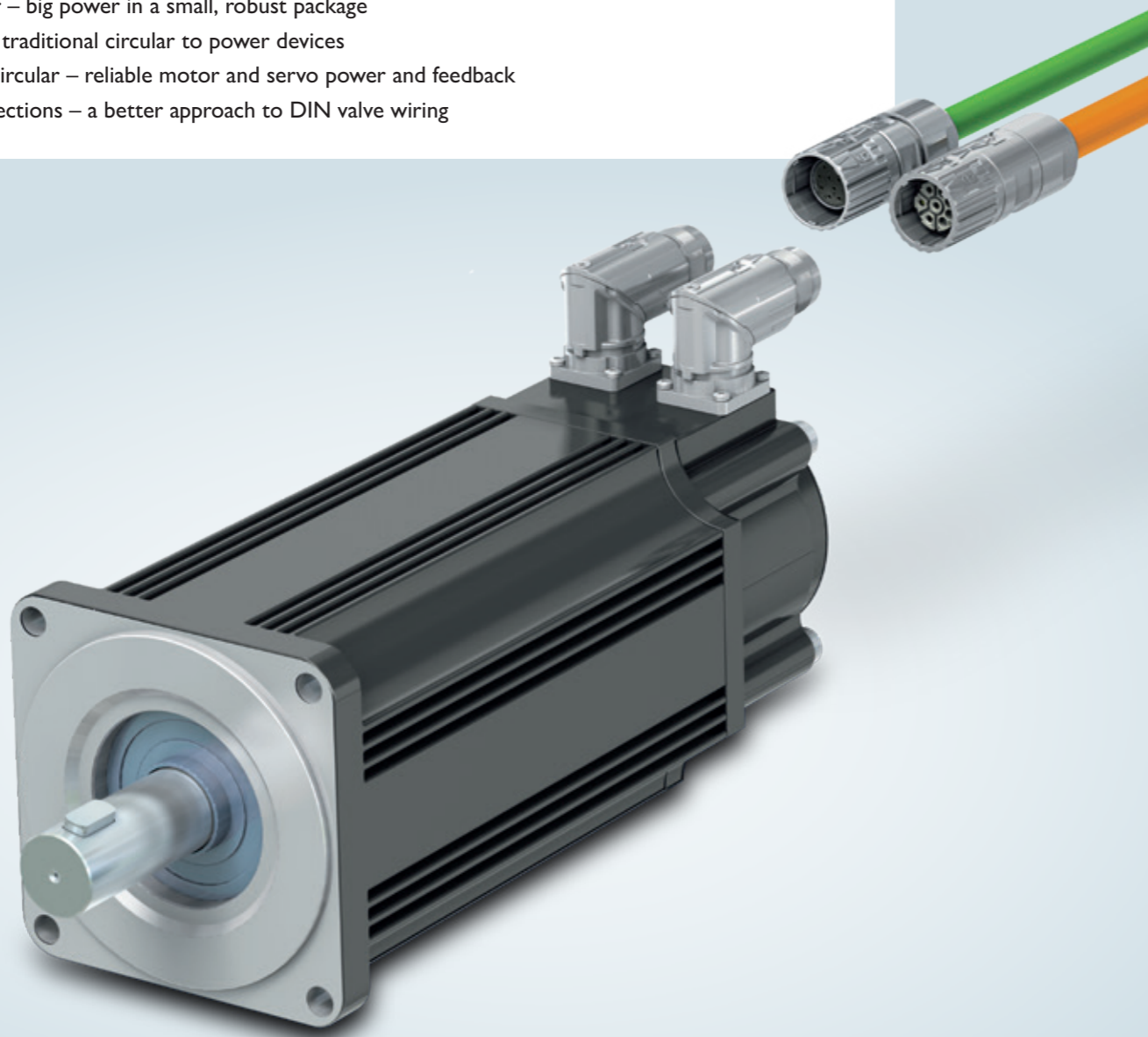


## Field connections

### Power

Power is the lifeblood of any system, but power can also do the most damage if improperly sized or isolated from sensitive electronics. In the field, the most common method for connecting loads is to utilize compact circular connectors. High power requirements are met with traditional M17-M58 connectors. More compact solutions can be implemented with the M12 Power line. Turning hydraulic or pneumatic valves on or off while protecting upstream devices from kickback is the sweet spot for pre-made molded valve connectors. Finding the right quick-disconnect solution for a load is simply a matter of defining one's requirement.

- M12 Power – big power in a small, robust package
- MINI 7/8 – traditional circular to power devices
- M17-M58 circular – reliable motor and servo power and feedback
- Valve connections – a better approach to DIN valve wiring



### M12 Power

- ✓ New industry-standard IEC 61076-2-111 now implemented
- ✓ UL Listed, tested under UL 2237
- ✓ T- and L-code up to 16 A 63 V DC circuits
- ✓ S-, K- and M-code up to 16 A 600 V for 3-phase AC circuits
- ✓ NFPA 70 and NFPA 79 compliant
- ✓ Market-leading EMI protection with new AST (Advanced Shielding Technology)



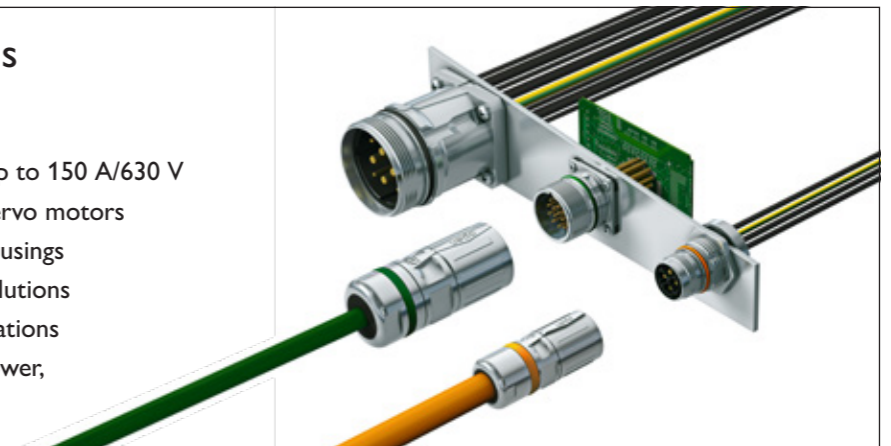
### MINI 7/8

- ✓ Traditional drop cable for conveyor trunk and drop power
- ✓ 2- through 6-pin versions with PVC cable jackets
- ✓ 18, 16, and 14 AWG deliver up to 15 A at 600 V
- ✓ Industry-standard compatible
- ✓ Color coding schemes for both IEC and US
- ✓ Receptacles with 1/2" NPT mounting threads allow easy integration into process instrumentation



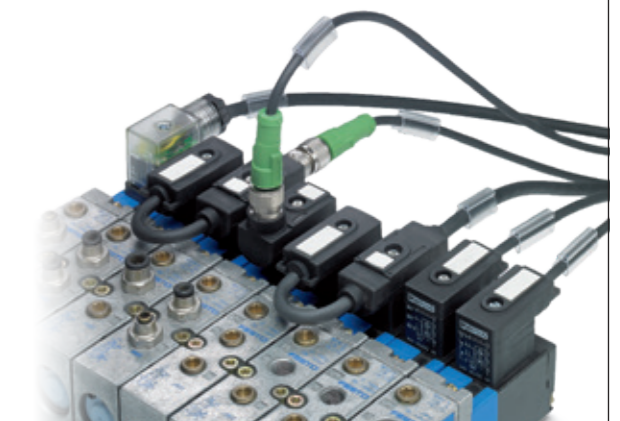
### Traditional motor connections M17-M58 circular

- ✓ Industry-standard circular connector for up to 150 A/630 V
- ✓ M17, M23, M40, and M58 for drives and servo motors
- ✓ Reliable transmission via shielded metal housings
- ✓ Time-saving with innovative connection solutions
- ✓ No risk of mismatching AC and DC applications
- ✓ All-in-one hybrid versions provide data, power, and signal in one circular interface



### Valve connections

- ✓ Pre-made cables replace the need to field-wire every valve
- ✓ Molded connector provides up to IP69K protection
- ✓ Convert DIN head to common M12 for easier cabling
- ✓ Visual indication at valve with embedded LED
- ✓ Protect upstream controller by selecting a version with built-in Zener diode, varistor, or free-wheeling diode





## Field connections

# Network

In automation technology, different industrial sectors place different requirements on data transmission. This has led to a variety of fieldbus and Ethernet-based systems. The relevant user organization creates a requirement profile for each fieldbus or network system that contains all key technical data, such as the maximum possible transmission speed or the longest permitted cabling path. The physical layer is supported by designated connector interfaces, shielding, cable materials, colors, and wire gauges.

- Ethernet – connects office and industrial networks
- PROFINET – automation through a powerful and flexible protocol
- DeviceNet – suited for clear automation tasks
- Industrial protocols – sealed physical layer connections for all automation levels



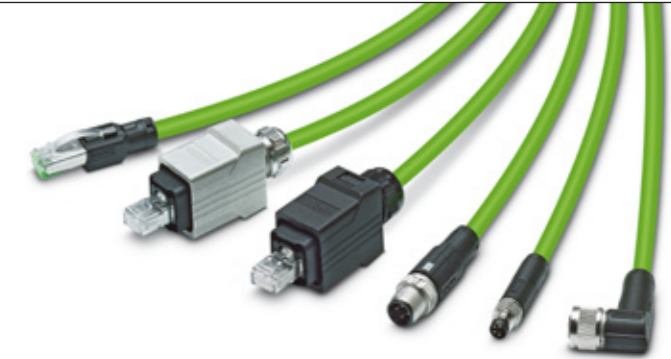
## Ethernet

- ✓ Broad range of water-tight Ethernet interfaces
- ✓ M8 D-code cables for CAT5
- ✓ M12 D-, A-code cables and connectors for CAT5
- ✓ M12 X-code cables and connectors for CAT6<sub>A</sub>
- ✓ Push-pull variants for sealed RJ45 up to CAT6<sub>A</sub>
- ✓ Easy field installation with QUICKON IDC, crimp, and push-in variants



## PROFINET

- ✓ Broadest range of water-tight PROFINET interfaces
- ✓ M8 D-code cables for CAT5
- ✓ M12 D-code cables and connectors for CAT5
- ✓ M12 X-code cables and connectors for CAT6<sub>A</sub>
- ✓ Push-pull variants for sealed RJ45
- ✓ Easy field installation with QUICKON IDC, crimp, and push-in variants



## DeviceNet

- ✓ Common trunk and drop system for power and data
- ✓ MINI 7/8" trunk with thick or thin cable
- ✓ M8 or M12 drops with thin cable
- ✓ PLTC-rated M12 mid cable with 2x2x22 AWG
- ✓ Various shield designs and cable jackets for outdoor use
- ✓ Commonly used network for conveyor and commercial/industrial vehicles



## Industrial protocols

- ✓ INTERBUS supported through M12 B-code
- ✓ PROFIBUS DP and PA supported through M12 B-code
- ✓ DeviceNet supported through M8, M12, and MINI 7/8"
- ✓ CC-Link supported through M12 A-code
- ✓ VARAN supported through M12 A-code
- ✓ AS-Interface supported through flat-ribbon conductor punch-down adapters to M12 A-code



## Field connections

### Sensor/actuator

Collecting signals from the field in a compact circular has never been easier. Overmolded cables and cordsets are delivered 100% factory-tested in either standard or custom lengths. Bulk cable and field-wired connectors deliver fast, error-free assembly on-site. Sensor boxes collect I/O on the machine itself, reducing cable runs back to the main control cabinet. A wide range of cable jackets and metal materials allows easy adaptation to the exact application requirements.

- Sensor cables – most versions made in America with fast lead times
- Sensor boxes – easily collect I/O and reduce long cable runs
- Field-wired connectors – fast connection technologies designed by Phoenix Contact
- High density – industry-leading pin density in M8 and M12



### Sensor cables

- ✓ M8, M12, and MINI 7/8" factory-tested cordsets
- ✓ 105°C PVC cable for non-flex and PLTC applications
- ✓ 80° PUR cable for abrasion and lateral flex
- ✓ 105° TPE cable for torsional and lateral robotic flex
- ✓ Shielded or unshielded cable jackets
- ✓ Configurable material program for custom lengths



### Sensor boxes

- ✓ M8 or M12 combiner boxes with or without LEDs
- ✓ Distributed power to each slot simplifies wiring
- ✓ Collect up to 16 points of field I/O with one box
- ✓ Integrated, field-wired, or quick-disconnect master cable
- ✓ General, heavy-duty, outdoor, and stainless options
- ✓ Configurable material program for custom lengths



### Field-wired connections

- ✓ Connection technologies suited for your application
- ✓ Push-in: Easy and reliable tool-free connection
- ✓ QUICKON: Fast and efficient insulation displacement
- ✓ Crimp: Compact and can be automated
- ✓ Piercecon: Designed for high-density pin positions
- ✓ Screw: Trusted classic termination



### High density

- ✓ Increased functionality within one small interconnect
- ✓ M8 high density in 5-, 6-, and 8-positions
- ✓ M12 high density in 8-, 12-, and 17-positions
- ✓ PUR or PVC cable jacket in most variants
- ✓ Shielded or unshielded cable jackets
- ✓ Shielded M12 versions come with twisted pairs





# Common parts for field connections

Power connectivity							
A. What connector type are you mating with?				E. Type of coding			
B. How many wires do you need?				F. Cable jacket			
C. What is your max current/voltage requirements?				G. Type description			
D. What type of voltage?				H. Resulting Phoenix Contact part number			
A. Connector	B. Number of wires	C. Electrical	D. Voltage	E. Coding	F. Cable	G. Type description	H. Part no.
M12 Power	4 (3+PE)	12 A / 600 V (UL)	AC	S-code	PUR Black	SAC-4P- 5,0-PUR/M12FSS PE	1408845
	4	12 A / 63 V (UL)	DC	T-code	PUR Black	SAC-4P- 5,0-PUR/M12FST	1408825
	5 (4+PE)	16 A / 600 V (UL)	AC	K-code	PUR Black	SAC-5P- 5,0-PUR/M12FSK PE	1414804
	5	16 A / 63 V (UL)	DC	L-code	PUR Gray	SAC-5P- 5,0-280/M12FSL FE	1414806
	6 (5+PE)	10 A / 63 V (UL)	AC	M-code	PUR Black	SAC-6P- 5,0-PUR/M12FSM PE	1414918
MINI 7/8"	2	13 A / 600 V (UL)	AC/DC	A-code	PVC Yellow	SAC-2P- 5,0-U20/MINFS	1416756
	3	13 A / 600 V (UL)	AC/DC	A-code	PVC Yellow	SAC-3P- 5,0-U20/MINFS	1416777
	4	10 A / 600 V (UL)	AC/DC	A-code	PVC Yellow	SAC-4P- 5,0-U20/MINFS	1416799
	5	8 A / 600 V (UL)	AC/DC	A-code	PVC Yellow	SAC-5P- 5,0-U20/MINFS	1416821
M17	4 (3+PE)	25 A / 630 V (IEC)	AC/DC	-	PUR Orange	K-3E - OE/5,0-B01/M17 F8	1619302
	6 (5+PE)	14 A / 630 V (IEC)	AC/DC	-	PUR Orange	K-5E - OE/5,0-C01/M17 F8	1619311
	8 (7+PE)	14 A / 630 V (IEC)	AC/DC	-	PUR Orange	K-7E - OE/5,0-D01/M17 F8	1619314
M23	4 (3+PE)	25 A / 600 V (UL)	AC/DC	-	PVC Gray	K-3E - OE/5,0-A00/M23 F8	1619622
	5 (4+PE)	20 A / 600 V (UL)	AC/DC	-	PVC Gray	K-4E - OE/5,0-A01/M23 F8	1625777
M40	6 (5+PE)	26 A / 630 V (IEC)	AC/DC	-	PUR Orange	K-5E - OE/5,0-C03/M23 F8	1620397
	6 (3+PE+2)	35 A / 600 V (UL)	AC/DC	-	PUR Orange	K-5E - OE/5,0-C06/M40 F8	1620320
DIN Valve Plug	3 (2+PE)	4 A / 24 V (IEC), Z-diode	AC/DC	Type A	PUR Black	SAC-3P- 5,0-PUR/A-1L-Z	1435001
	3 (2+PE)	4 A / 24 V (IEC), Z-diode	AC/DC	Type B	PUR Black	SAC-3P- 5,0-PUR/B-1L-Z	1435409
	3 (2+PE)	4 A / 24 V (IEC), Z-diode	AC/DC	Type BI	PUR Black	SAC-3P- 5,0-PUR/BI-1L-Z	1435250
	3 (2+PE)	4 A / 24 V (IEC), Z-diode	AC/DC	Type C	PUR Black	SAC-3P- 5,0-PUR/C-1L-Z	1435551
	3 (2+PE)	4 A / 24 V (IEC), Z-diode	AC/DC	Type CI	PUR Black	SAC-3P- 5,0-PUR/CI-1L-Z	1435700
	5 (4+PE)	4 A / 24 V (IEC)	AC/DC	Type AD	PUR Black	SAC-5P- 5,0-PUR/AD-2L	1435108

Network connectivity							
A. What industrial protocol are you using?				E. Type of coding			
B. What connector type are you mating with?				F. Cable jacket			
C. What transmission speed do you need?				G. Type description			
D. Number of wires				H. Resulting Phoenix Contact part number			
A. Protocol	B. Connector	C. Data rate	D. Number of wires	E. Coding	F. Cable	G. Type description	H. Part no.
Ethernet	M8	100 Mbps, CAT5	4	A-code	PVC Green	NBC-M 8MS/ 5,0-93B	1407346
	M12	100 Mbps, CAT5	4	D-code	PUR Teal	NBC-MSD/ 5,0-93E SCO US	1408727
	M12	1 Gbps, CAT5	8	A-code	PUR Teal	NBC-MS/ 5,0-94B SCO US	1408743
	M12	10 Gbps, CAT6 <sub>A</sub>	8	X-code	PUR Teal	NBC-MSX/ 5,0-94F SCO	1407469
EtherCAT®	M8	100 Mbps, CAT5	4	A-code	PVC Green	NBC-M 8MS/ 5,0-93B	1407346
	M8	100 Mbps, CAT5	4	D-code	PUR Green	NBC-M8MSD/ 5,0-93C	1423705
PROFINET	M8	100 Mbps, CAT5	4	A-code	PVC Green	NBC-M 8MS/ 5,0-93B	1407346
	M8	100 Mbps, CAT5	4	D-code	PUR Green	NBC-M8MSD/ 5,0-93C	1423705
	M12	100 Mbps, CAT5	4	D-code	PUR Green	NBC-MSD/ 5,0-93B SCO	1407497
DeviceNet	M8	120 Ω ±10 %	5	B-code	PUR Purple	SAC-5P-M 8MS/ 5,0-920	1575725
	M12	120 Ω ±10 %	5	A-code	PUR Purple	SAC-5P-M12MS/ 5,0-920	1507434
	M12	120 Ω ±12 %	5	A-code	PVC Gray, PLTC	SAC-5P-MS/ 5,0-924 SCO	1405980
CANopen	M12	120 Ω ±10 %	5	A-code	PUR Gray	SAC-5P-MS/ 5,0-923 CAN SCO	1419040
Interbus	M12	16 Mbps	6	B-code	PUR Green	SAC-5P-M12MSB/ 5,0-900	1507078
PROFIBUS DP	M12	12 Mbps	2	B-code	PUR Purple	SAC-2P-M12MSB/ 5,0-910	1507256
PROFIBUS PA	M12	31.25 kbps	3	A-code	PVC Blue	SAC-3P-M12MS/ 5,0-961 VA	1419093
FOUNDATION Fieldbus	M12	31.25 kbps	3	A-code	PVC Orange	SAC-4P-M12MS/ 5,0-960 VA	1431186
CC link	M12	10 Mbps	4	A-code	PVC Red	SAC-4P-M12MS/ 5,0-990	1558331
VARAN	M12	100 Mbps	6	A-code	TPE Black	SAC-6P-MS/ 5,0-970 SCO	1428500

Sensor connectivity							
A. What type of product do you need?				E. What connection if preferred?			
B. What connector type are you mating with?				F. Cable jacket			
C. Number of wires				G. Type description			
D. What type of shielding, if any?				H. Resulting Phoenix Contact part number			
A. Product	B. Connector	C. Number of wires	D. Shielding	E. Connection	F. Cable	G. Type description	H. Part no.
Sensor cable	M8	3	Unshielded		Yellow PVC	SAC-3P- 5,0-542/M8 FS BK	1406317
		3	Foil + rain		Gray PVC	SAC-3P- 5,0-680/M8FS FDN	1096041
		3	Braided shield		Yellow PVC	SAC-3P- 5,0-542/M8 FS SH BK	1406062
		4	Unshielded		Yellow PVC	SAC-4P- 5,0-542/M8 FS BK	1406239
		4	Foil + strain		Gray PVC	SAC-4P- 5,0-680/M8FS FDN	1095979
		4	Braided shield		Yellow PVC	SAC-4P- 5,0-542/M8 FS SH BK	1406017
		5	Unshielded		Black PUR	SAC-5P- 5,0-115/M 8FSB	1404473
		6	Unshielded		Black PUR	SAC-6P- 5,0-PUR/M 8FS	1522215
		6	Braided shield		Black PUR	SAC-6P- 5,0-PUR/M 8FS SH	1522419
		8	Unshielded		Black PUR	SAC-8P- 5,0-PUR/M 8FS	1404189
		8	Braided shield		Black PUR	SAC-8P- 5,0-PUR/M 8FS SH	1404149
		3	Unshielded		Yellow PVC	SAC-3P- 5,0-542/ FS SCO BK	1522323
		3	Foil + drain		Gray PVC	SAC-3P- 5,0-680/M12FS FDN	1096033
		3	Braided shield		Yellow PVC	SAC-3P- 5,0-542/ FS SH SCO BK	1406266
		4	Unshielded		Yellow PVC	SAC-4P- 5,0-542/ FS SCO BK	1406245
		4	Foil + drain		Gray PVC	SAC-4P- 5,0-542/ FS SH SCO BK	1095892
		4	Braided shield		Yellow PVC	SAC-4P- 5,0-542/ FS SH SCO BK	1406188
5	Unshielded		Yellow PVC	SAC-5P- 5,0-542/ FS SCO BK	1406168		
5	Foil + drain		Gray PVC	SAC-5P- 5,0-680/M12FS FDN	1095848		
5	Braided shield		Yellow PVC	SAC-5P- 5,0-542/ FS SH SCO BK	1406148		
8	Unshielded		Yellow PVC	SAC-8P- 5,0-542/ FS SCO BK	1406104		
8	Foil + drain		Gray PVC	SAC-8P- 5,0-680/M12FS FDN	1095801		
8	Braided shield		Yellow PVC	SAC-8P- 5,0-542/ FS SH SCO BK	1406082		
12	Unshielded		Black PVC	SAC-12P- 5,0-PVC/FS SCO	1554872		
12	Braided shield		Black PUR/PVC	SAC-12P- 5,0-35T/FS SH SCO	1430145		
17	Unshielded		Black PVC	SAC-17P- 5,0-PVC/FS SCO	1555363		
17	Braided shield		Black PUR/PVC	SAC-17P- 5,0-35T/FS SH SCO	1430307		
Sensor box	M8	3	Unshielded	8 slot, single	Black PUR	SACB- 8/3-L- 5,0PUR-M8	1516056
		4	Unshielded	8 slot, double	Black PUR	SACB- 8/4-L- 5,0PUR-M8	1516111
	M12	4	Unshielded	8 slot, single	Black PUR	SACB-8/ 8-L- 5,0PUR SCO	1517165
		5	Unshielded	8 slot, double	Black PUR	SACB-8/16-L- 5,0PUR SCO	1517181
		3	Unshielded	IDC QUICKON		SACC-M 8FS-3QO-0,25-M	1441040
Field-wireable	M12	4	Unshielded	IDC QUICKON		SACC-M 8FS-4QO-0,25-M	1441053
		4	Unshielded	IDC QUICKON		SACC-M12FS-4QO-0,75-M	1641772
		4	Unshielded	Push-in		SACC-M12FS-4PL M	1424655
		4	Shielded	Push-in		SACC-M12FS-4PL SH	1424668
		5	Unshielded	Push-in		SACC-M12FS-5PL M	1424652
		5	Shielded	Push-in		SACC-M12FS-5PL SH	1424660
		8	Unshielded	Screw		SACC-M12FS-8CON-PG9-M	1513347
		12	Unshielded	Piercecon		SACC-FS-12PCON SCO	1559631



Power connectivity



Network connectivity



Sensor connectivity





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