COMPLETE line

Solutions for the Control Cabinet

Quick reference guide

PHŒNIX CONTACT

COMPLETE line

Time for the New Standard

COMPLETE **line** is a system comprising of technologically leading and coordinated hardware and software products, consulting services and system solutions that help you optimize your processes in control cabinet manufacturing. Engineering, purchasing, installation and operation become significantly easier for you.
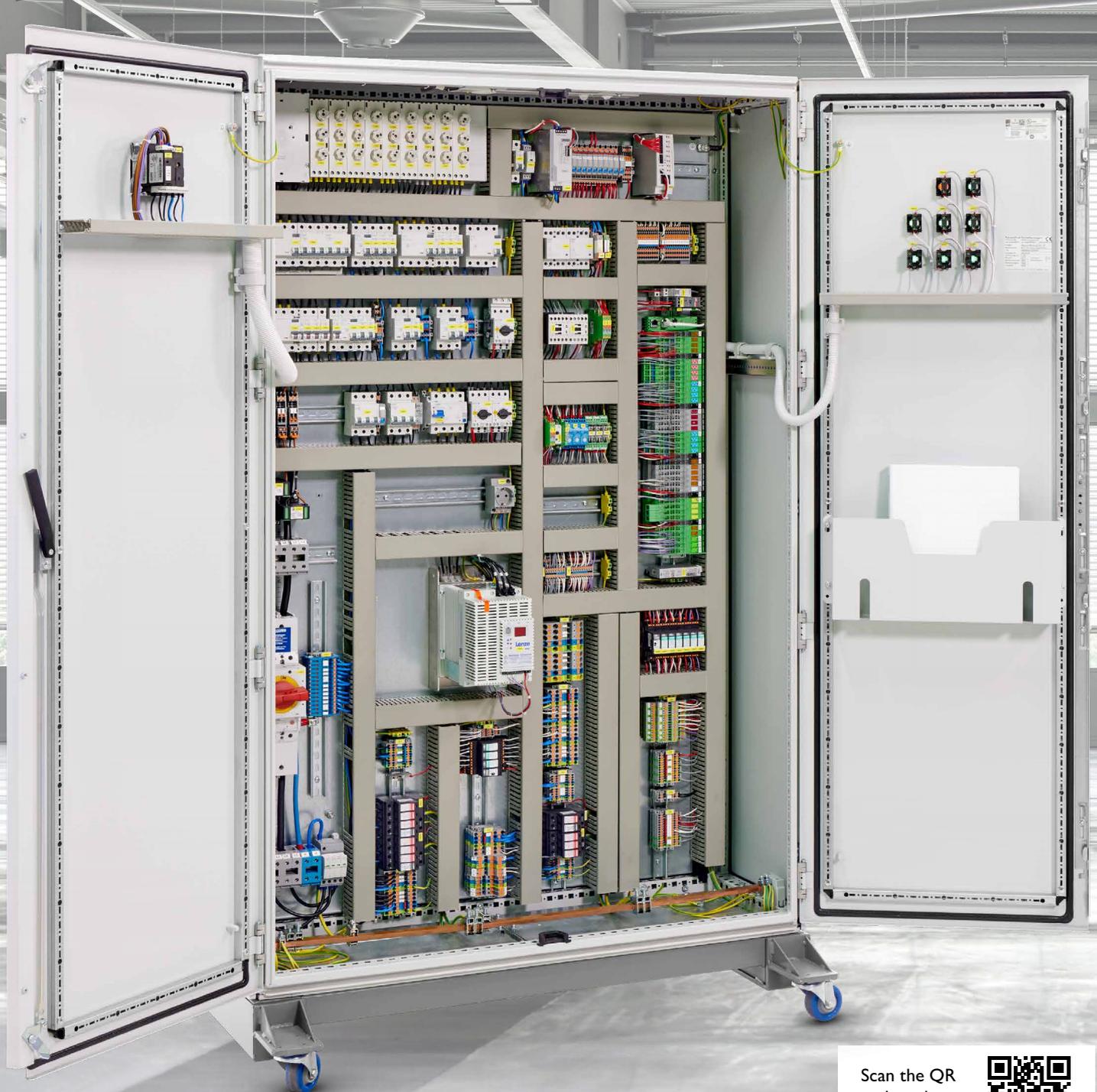
Scan the QR code to learn more online

Choose Phoenix Contact with Confidence

Customers have trusted Phoenix Contact and our products for over 100 years. We are now elevating our commitment to that trust with our new Limited Lifetime Warranty (LLW).

It's our promise to you that the components you install in your control cabinets are free from defects and built to last. Our goal is to be your most trusted partner by improving the long term reliability of your machines, equipment, and systems.

Phoenix Contact is a world leader in industrial connection and automation technologies, electronic interface systems, and low-voltage power products. This Limited Lifetime Warranty commitment is an extension of the trust customers have come to rely on.

LIMITED LIFETIME WARRANTY

BUILD WITH CONFIDENCE

Standard 1 year warranty

✓ Covered under the Phoenix Contact LLW

How to Register

● Submit your registration online:

● Select and install Phoenix Contact products in accordance with our recommendations.

● Make sure all electronics are powered and protected with appropriate Phoenix Contact power supplies and surge protection.

Contents

⏻ Power Reliability

Endless power for your application: With true power reliability, we provide you with coordinated solutions consisting of surge protection, power supply, and device protection. Tailored to your system for maximum Power Reliability for many of todays industry sectors.

POWER RELIABILITY

- Power Supplies
- Surge Protection
- Circuit Breakers

Scan the QR code to learn more online

Power Supplies — DIN Mount

Power supply model	Output voltage	Output current	Noted attribute	Description	Order no.
QUINT POWER High availability for critical systems	**SINGLE PHASE**				
	5 V DC	5 A	—	QUINT-4-PS/1AC/5DC/5/PT	2904595
	12 V DC	2.5 A	—	QUINT-4-PS/1AC/12DC/2.5/PT	2904605
	12 V DC	7.5 A	—	QUINT-4-PS/1AC/12DC/7.5/PT	2904607
	12 V DC	15 A	—	QUINT-4-PS/1AC/12DC/15	2904608
	12 V DC	20 A	—	QUINT-PS/1AC/12DC/20	2866721
	24 V DC	1.3 A	NEC Class 2	QUINT4-PS/1AC/24 DC/1.3/PT	2909575
	24 V DC	1.3 A	NEC Class 2	QUINT4-PS/1AC/24 DC/1.3/SC	2904597
	24 V DC	2.5 A	NEC Class 2	QUINT4-PS/1AC/24DC/2.5/PT	2909576
	24 V DC	2.5 A	NEC Class 2	QUINT4-PS/1AC/24DC/2.5/SC	2904598
	24 V DC	2.5 A	T-BUS, integrated MOSFET	QUINT4-SYS-PS/1AC/24DC/2.5/SC	2904614
	24 V DC	3.5 A	—	QUINT-PS/1AC/24DC/3.5	2866747
	24 V DC	3.8 A	NEC Class 2	QUINT4-PS/1 AC/24 DC/3.8/SC	2904599
	24 V DC	3.8 A	NEC Class 2	QUINT4-PS/1AC/24DC/3.8/PT	2909577
	24 V DC	5 A	—	QUINT4-PS/1AC/24DC/5	2904600
	24 V DC	10 A	—	QUINT4-PS/1AC/24DC/10	2904601
	24 V DC	10 A	Coated, integrated MOSFET	QUINT4-PS/1AC/24DC/10/+	2904616
	24 V DC	10 A	Conformal coated	QUINT4-PS/1AC/24DC/10/CO	2904625
	24 V DC	20 A	—	QUINT4-PS/1AC/24DC/20	2904602
	24 V DC	20 A	Coated, integrated MOSFET	QUINT4-PS/1AC/24DC/20/+	2904617
	24 V DC	40 A	—	QUINT4-PS/1AC/24DC/40	2904603
	24 V DC	40 A	Coated, integrated MOSFET	QUINT4-PS/1AC/24DC/40/+	2904618
	48 V DC	5 A	—	QUINT4-PS/1AC/48DC/5	2904610
	48 V DC	10 A	—	QUINT4-PS/1AC/48DC/10	2904611
	48 V DC	10 A	Conformal coated	QUINT4-PS/1AC/48DC/10/CO	2904626
	48 V DC	20 A	—	QUINT4-PS/1AC/48DC/20	2904612
	THREE PHASE				
	24 V DC	5 A	—	QUINT4-PS/3AC/24DC/5	2904620
	24 V DC	10 A	—	QUINT4-PS/3AC/24 DC/10	2904621
	24 V DC	20 A	—	QUINT4-PS/3AC/24DC/20	2904622
	24 V DC	20 A	IO-Link	QUINT4-PS/3AC/24DC/20/IOL	1151048
	24 V DC	40 A	—	QUINT4-PS/3AC/24DC/40	2904623
	24 V DC	40 A	IO-Link	QUINT4-PS/3AC/24DC/40/IOL	1151047
	48 V DC	20 A	—	QUINT4-PS/3AC/48DC/20	2904627
TRIO POWER Premium standard for machine control cabinets	**SINGLE PHASE**				
	12 V DC	5 A	NEC Class 2	TRIO3-PS/1AC/12DC/5/C2LPS	1362789
	12 V DC	10 A	—	TRIO-PS-2G/1AC/12DC/10	2903158
	24 V DC	3 A	NEC Class 2	TRIO3-PS/1AC/24DC/3/C2LPS	1362785
	24 V DC	5 A	—	TRIO3-PS/1AC/24DC/5	1159037
	24 V DC	10 A	—	TRIO3-PS/1AC/24DC/10	1159038
	24 V DC	10 A	4 ch circuit breaker, IO-Link	TRIO3-PS/1AC/24DC/10/4C/IOL	1252696
	24 V DC	20 A	—	TRIO3-PS/1AC/24DC/20	1159039
	24 V DC	20 A	8 ch circuit breaker, IO-Link	TRIO3-PS/1AC/24DC/20/8C/IOL	1252697
	48 V DC	5 A	—	TRIO-PS-2G/1AC/48DC/5	2903159
	48 V DC	10 A	—	TRIO3-PS/1AC/48DC/10	1362786
	THREE PHASE				
	24 V DC	5 A	—	TRIO3-PS/3AC/24DC/5	1362783
	24 V DC	10 A	—	TRIO3-PS/3AC/24DC/10	1159042
	24 V DC	20 A	—	TRIO3-PS/3AC/24DC/20	1159044
	24 V DC	40 A	—	TRIO3-PS/3AC/24DC/40	1159045
	24 V DC	20 A	8 ch circuit breaker, IO-Link	TRIO3-PS/3AC/24DC/20/8C/IOL	1362791
	24 V DC	40 A	8 ch circuit breaker, IO-Link	TRIO3-PS/3AC/24DC/40/8C/IOL	1362792
	48 V DC	20 A	—	TRIO3-PS/3AC/48DC/20	1362784

Power Supplies — DIN Mount

Power supply model	Output voltage	Output current	Noted attribute	Description	Order no.
UNO POWER Standard power supply for a variety of applications	**SINGLE PHASE**				
	5 V DC	5 A	NEC Class 2	UNO-PS/1AC/5DC/25 W	2904374
	5 V DC	8 A	—	UNO-PS/1AC/5DC/40 W	2904375
	12 V DC	2.5 A	—	UNO-PS/1AC/12DC/30 W	2902998
	12 V DC	2.5 A	—	UNO2-PS/1AC/12DC/30W/PT	1399935
	12 V DC	4.6 A	—	UNO-PS/1AC/12DC/55 W	2902999
	12 V DC	8.3 A	—	UNO-PS/1AC/12DC/100 W	2902997
	12 V DC	10 A	—	UNO2-PS/1AC/12DC/120W/SC	1399940
	15 V DC	2 A	NEC Class 2	UNO-PS/1AC/15DC/30W	2903000
	15 V DC	3.67 A	—	UNO-PS/1AC/15DC/55W	2903001
	15 V DC	6.67 A	—	UNO-PS/1AC/15DC/100W	2903002
	24 V DC	1.3 A	NEC Class 2	UNO-PS/1AC/24 DC/30W	2902991
	24 V DC	1.3 A	NEC Class 2	UNO2-PS/1AC/24DC/30W/PT	1399932
	24 V DC	2.5 A	NEC Class 2	UNO-PS/1AC/24 DC/60W	2902992
	24 V DC	2.5 A	NEC Class 2	UNO2-PS/1AC/24DC/60W/PT	1399933
	24 V DC	3.75 A	NEC Class 2	UNO-PS/1AC/24 DC/90W/C2LPS	2902994
	24 V DC	3.75 A	NEC Class 2	UNO2-PS/1AC/24DC/90W/PT	1399934
	24 V DC	4.2 A	—	UNO-PS/1AC/24 DC/100W	2902993
	24 V DC	5 A	—	UNO2-PS/1AC/24DC/120W	1110466
	24 V DC	10 A	—	UNO2-PS/1AC/24DC/240W	1096432
	24 V DC	20 A	—	UNO2-PS/1AC/24DC/480W	2910105
	24 V DC	40 A	—	UNO2-PS/1AC/24DC/960W	1110043
	48 V DC	1.25 A	NEC Class 2	UNO-PS/1AC/48DC/60W	2902995
	48 V DC	2.08 A	—	UNO-PS/1AC/48DC/100W	2902996
	48 V DC	10 A	—	UNO2-PS/1AC/48DC/240W	1110155
ESSENTIAL POWER Basic power supplies for low demand & cost sensitive applications	**SINGLE PHASE**				
	12 V DC	6.25 A	—	PS-EE-2G/1AC/12DC/75W/SC	1585280
	12 V DC	10 A	—	PS-EE-2G/1AC/12DC/120W/SC	1585283
	12 V DC	20 A	—	PS-EE-2G/1AC/12DC/240W/SC	1585284
	24 V DC	2.5 A	—	PS-EE-2G/1AC/24DC/60W/SC	1394764
	24 V DC	3 A	—	PS-EE-2G/1AC/24DC/75W/SC	1234301
	24 V DC	5 A	—	PS-EE-2G/1AC/24DC/120W/SC	1234302
	24 V DC	10 A	—	PS-EE-2G/1AC/24DC/240W/SC	1234304
	24 V DC	20 A	—	PS-EE-2G/1AC/24DC/480W/SC	1234308
	48 V DC	2.5 A	—	PS-EE-2G/1AC/48DC/120W/SC	1585285
	48 V DC	5 A	—	PS-EE-2G/1AC/48DC/240W/SC	1585286
	48 V DC	10 A	—	PS-EE-2G/1AC/48DC/480W/SC	1585287
	THREE PHASE				
	24 V DC	10 A	—	ESSENTIAL-PS-3AC/10A	1018291
	24 V DC	20 A	—	ESSENTIAL-PS-3AC/20A	1018299
	24 V DC	40 A	—	ESSENTIAL-PS-3AC/40A	1018294

Recommended surge protection/power supply input

PLT-SEC-T3... VAL-US-SPP...	Phase	Voltage	Output current	Description	Order no.
	Single phase	120 V AC	26 A	PLT-SEC-T3-120-FM-UT	2907918
		240 V AC	26 A	PLT-SEC-T3-230-FM-UT	2907919
		120 V AC	26 A	PLT-SEC-T3-120-FM-PT	2907927
		240 V AC	26 A	PLT-SEC-T3-230-FM-PT	2907928
	Three phase	120/208 V AC	—	VAL-US-120/40/3+1-FM	2910354
		277/480 V AC	—	VAL-US-277/40/3+1-FM	2910374

Uninterruptible Power Supplies (UPS)

DC UPS

For critical applications, Uninterruptible Power Supplies (UPS) can provide a lifeline to keep your system up and running.

Comms	Input / Output / Amps	Description	Order no.
—	24 DC / 24 DC / 5 A	QUINT4-UPS/24DC/24DC/5	2906990
—	24 DC / 24 V DC / 10 A	QUINT4-UPS/24DC/24DC/10	2907066
—	24 DC / 24 V DC / 20 A	QUINT4-UPS/24DC/24DC/20	2907071
—	24 DC / 24 V DC / 40 A	QUINT4-UPS/24DC/24DC/40	2907077
USB	24 DC / 24 DC / 5 A	QUINT4-UPS/24DC/24DC/5/USB	2906991
USB	24 DC / 24 V DC / 10 A	QUINT4-UPS/24DC/24DC/10/USB	2907067
USB	24 DC / 24 V DC / 20 A	QUINT4-UPS/24DC/24DC/20/USB	2907072
USB	24 DC / 24 V DC / 40 A	QUINT4-UPS/24DC/24DC/40/USB	2907078
EIP/ModbusTCP	24 DC / 24 V DC / 5 A	QUINT4-UPS/24DC/24DC/5/EIP	2906994
EIP/ModbusTCP	24 DC / 24 DC / 10 A	QUINT4-UPS/24DC/24DC/10/EIP	2907069
EIP/ModbusTCP	24 DC / 24 V DC / 20 A	QUINT4-UPS/24DC/24DC/20/EIP	2907074
EIP/ModbusTCP	24 DC / 24 V DC / 40 A	QUINT4-UPS/24DC/24DC/40/EIP	2907080
PROFINET	24 DC / 24 DC / 5 A	QUINT4-UPS/24DC/24DC/5/PN	2906993
PROFINET	24 DC / 24 V DC / 10 A	QUINT4-UPS/24DC/24DC/10/PN	2907068
PROFINET	24 DC / 24 V DC / 20 A	QUINT4-UPS/24DC/24DC/20/PN	2907073
PROFINET	24 DC / 24 V DC / 40 A	QUINT4-UPS/24DC/24DC/40/PN	2907079
ETHERCAT	24 DC / 24 DC / 5 A	QUINT4-UPS/24DC/24DC/5/EC	2906996
ETHERCAT	24 DC / 24 V DC / 10 A	QUINT4-UPS/24DC/24DC/10/EC	2907070
ETHERCAT	24 DC / 24 V DC / 20 A	QUINT4-UPS/24DC/24DC/20/EC	2907076
ETHERCAT	24 DC / 24 V DC / 40 A	QUINT4-UPS/24DC/24DC/40/EC	2907081

Power supply
AC-to-DC, DC-to-DC power supplies

UPS module
Selected based on output requirements

Energy-storage device
Select the appropriate energy storage for your modular system

Lead acid batteries

Buffertime — Minutes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 45, 50; Hours: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 50, 100

Load Current	Min 1	2	3	4	5	6	7	8	9	10	20	30	40	45	50	Hr 1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	50	100
1 A																																2x
2 A																															2x	
3 A																												2x	2x	2x		
5 A																							2x	2x	2x	2x	2x					
7 A																			2x	2x	2x	2x	2x	2x								
10 A																		2x	2x	2x	2x											
15 A																	2x	2x	2x													
20 A																	2x	2x														
25 A																	2x															
30 A																2x																
35 A														2x	2x	2x																
40 A													2x	2x	2x																	

2x: In this case, two battery modules of the same capacity are required. The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

Order no.	Part	Dimensions	Capacity
1274520	UPS-BAT/PB/24DC/1.2AH	54 x 157 x 113	1.2 Ah
1274117	UPS-BAT/PB/24DC/4AH	85 x 191 x 110	4 Ah
1274118	UPS-BAT/PB/24DC/7AH	135 x 202 x 110	7 Ah
1274119	UPS-BAT/PB/24DC/12AH	202 x 202 x 110	12 Ah
1348516	UPS-BAT/PB/24DC/20AH	181 x 76 x 166	20 Ah
1354641	UPS-BAT/PB/24DC/40AH	197 x 165 x 171	40 Ah
1474660	UPS-BAT/PB/24DC/110AH	350 x 214 x 332	110 Ah

Lithium batteries

Buffertime — Minutes: 1, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 35, 40, 45, 55; Hours: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Load Current	Min 1	5	6	7	8	9	10	15	20	25	30	35	40	45	55	Hr 1	2	3	4	5	6	7	8	9	10
1 A																									
2 A																									
3 A																									
5 A																									
7 A																									
10 A																									
15 A																									
20 A																									
25 A																									
30 A																									
35 A																									
40 A																									

The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

Order no.	Part	Dimensions	Capacity
1460921	UPS-BAT/LI/24DC/64WH	87 x 197 x 119	128 Wh
1396415	UPS-LI-ION/24DC/128WH	54 x 157 x 113	128 Wh
1460922	UPS-BAT/LI/24DC/189WH	133 x 197 x 119	128 Wh
1460923	UPS-BAT/LI/24DC/284WH	179 x 197 x 119	128 Wh

Wide temperature lead acid batteries

Load Current	Buffertime																										
	Minutes											Hours														
	10	12	15	20	25	30	35	40	45	50	55	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20
1 A																										
2 A																										
3 A																										
5 A																										
7 A																										
10 A																										
15 A																										
20 A																										
25 A																										
30 A																										
35 A																										
40 A																										

The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

2320416	2320429
UPS-BAT/VRLA-WTR/24DC/13AH	UPS-BAT/VRLA-WTR/24DC/26AH
172 x 177 x 178	358 x 174 x 169
13 Ah	26 Ah

IQ Technology[P]
Designed by Phoenix Contact

The intelligent battery management with IQ Technology detects the connected energy storage, collects all relevant information, and alerts you about it.

SOC — State of charge
The current charging state and remaining runtime of the energy storage are constantly measured and displayed.

SOH — State of health
Remaining battery service life is displayed and a failure alert is sent in time, before there is a failure.

Learn more

AC UPS — 500 VA offline

	Input voltage	Output	Description	Order no.
	120 V AC/ 230 V AC	120 V AC/230 V AC/ 500 VA	QUINT4-UPS/1AC/ 1AC/500VA/USB	1067327

Lead acid batteries

Load Current	Buffertime																		
	Minutes										Hours								
	1	2	3	5	10	20	30	40	45	50	1	2	3	5	8	10	15	24	40	60
15 W																			
35 W																			
55 W																			
90 W																			
125 W																			
180 W																			
275 W																			
400 W																			

The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

1274117	1274118	1274119
UPS-BAT/PB/24DC/4AH	UPS-BAT/PB/24DC/7AH	UPS-BAT/PB/24DC/12AH
85 x 191 x 110	135 x 202 x 110	202 x 202 x 110
4 Ah	7 Ah	12 Ah
1348516	1354641	1474660
UPS-BAT/PB/24DC/20AH	UPS-BAT/PB/24DC/40AH	UPS-BAT/PB/24DC/110AH
181 x 76 x 166	197 x 165 x 171	350 x 214 x 332
20 Ah	40 Ah	110 Ah

Lithium batteries

Load Current	Buffertime													
	Minutes										Hours			
	1	2	3	5	7	8	9	10	20	30	40	45	50	1	2	3	5
15 W														
35 W														
55 W														
90 W														
125 W														
180 W														
275 W														
400 W														

Energy storage

1460921	1396415
UPS-BAT/LI/24DC/64WH	UPS-LI-ION/24DC/128WH
87 x 197 x 119	54 x 157 x 113
128 Wh	128 Wh
1460922	1460923
UPS-BAT/LI/24DC/189WH	UPS-BAT/LI/24DC/284WH
133 x 197 x 119	179 x 197 x 119
128 Wh	128 Wh

Wide temperature lead acid batteries

Load Current	Buffertime																
	Minutes										Hours						
	1	2	3	5	10	20	30	40	45	50	1	2	3	5	8	10	15
15 W																	
35 W																2x	
55 W															2x		
90 W														2x			
125 W													2x	2x			
180 W													2x				
275 W												2x					
400 W											2x						

2x: In this case, two battery modules of the same capacity are required. The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

2320416	2320429
UPS-BAT/VRLA-WTR/24DC/13AH	UPS-BAT/VRLA-WTR/24DC/26AH
172 x 177 x 178	358 x 174 x 169
13 Ah	26 Ah

AC UPS — 1 kVA double-conversion

	Input voltage	Output	Description	Order no.
	120 V AC/230 V AC	120 V AC/230 V AC - 1 kVA	QUINT4-UPS/1AC/1AC/1kVA	2320283

Lead acid batteries

Load Current	Buffertime																								
	Minutes													Hours										
	1	2	3	4	5	8	10	15	20	25	30	40	50	1	1.5	2	3	4	6	9	10	15	20	24	40
100 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x
200 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	
300 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x			
400 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x				
500 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x							
600 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x								
700 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x									
800 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x										
900 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x											

2x: There are always two battery modules of the same capacity are required . The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

1274117	1274118	1274119
UPS-BAT/PB/24DC/4AH	UPS-BAT/PB/24DC/7AH	UPS-BAT/PB/24DC/12AH
85 x 191 x 110	135 x 202 x 110	202 x 202 x 110
4 Ah	7 Ah	12 Ah
1348516	1354641	1474660
UPS-BAT/PB/24DC/20AH	UPS-BAT/PB/24DC/40AH	UPS-BAT/PB/24DC/110AH
181 x 76 x 166	197 x 165 x 171	350 x 214 x 332
20 Ah	40 Ah	110 Ah

Lithium batteries

Load Current	Buffertime																
	Minutes													Hours			
	1	2	3	4	5	8	10	15	20	25	30	40	50	1	1.5	2	3
100 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x
200 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x		
300 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x			
400 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x				
500 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x					
600 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						
700 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						
800 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x							
900 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x							

Energy storage

1460921	1396415
UPS-BAT/LI/24DC/64WH	UPS-LI-ION/24DC/128WH
87 x 197 x 119	54 x 157 x 113
128 Wh	128 Wh
1460922	1460923
UPS-BAT/LI/24DC/189WH	UPS-BAT/LI/24DC/284WH
133 x 197 x 119	179 x 197 x 119
128 Wh	128 Wh

Wide temperature lead acid batteries

Load Current	Buffertime																			
	Minutes													Hours						
	1	2	3	4	5	8	10	15	20	25	30	40	50	1	1.5	2	3	4	6	9
100 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x
200 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x				
300 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x					
400 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						
500 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x					
600 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						
700 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						
800 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						
900 W	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x	2x						

2x: There are always two battery modules of the same capacity are required . The data is based on an ambient temperature of +25 °C at the start of use.

Energy storage

| 2320416	2320429
UPS-BAT/VRLA-WTR/24DC/13AH	UPS-BAT/VRLA-WTR/24DC/26AH
172 x 177 x 178	358 x 174 x 169
13 Ah	26 Ah

QUINT AC UPS and Battery Module

QUINT HP-UPS			QUINT HP-BAT					
W x H x D in mm	150 x 240 x 143	150 x 240 x 143	156.5 x 354 x 143					
	120 AC / 1.5 kVA	230 AC / 1.5 kVA	7 Ah					
No. of battery modules				1x	2x	3x	4x	5x
Type	QUINT-HP-UPS/120AC/1.5KVA/PT	QUINT-HP-UPS/230AC/1.5KVA/PT	QUINT-HP-BAT/PB/48DC/7.0AH/PT					
Order no.	1136804	1136811	1133819					

Buffer times for QUINT HP UPS/1.5 kVA with Pb battery module

Select the battery module for your QUINT HP UPS/1.5 kVA (120/230 V application) here.

Example: 1000 W is to be buffered for 15 minutes.

➛ ▣

➛ QUINT-HP-UPS/230AC/1.5KVA/PT

➛ 2x QUINT-HP-BAT/PB/48DC/7.0AH/PT
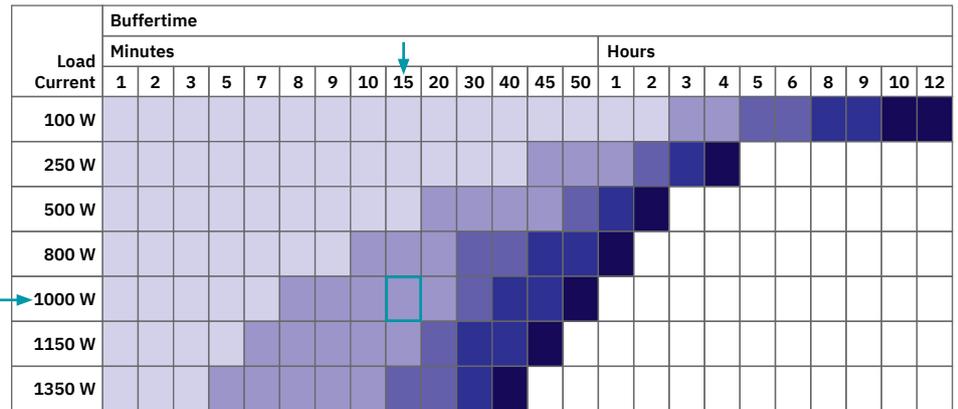
The data is based on an ambient temperature of +25°C at start of use.

QUINT HP-UPS			QUINT HP-BAT					
W x H x D in mm	188 x 240 x 143	188 x 240 x 143	156.5 x 354 x 143					
	120 AC / 2.5 kVA	230 AC / 2.5 kVA	7 Ah					
No. of battery modules				2x	4x	6x	8x	10x
Type	QUINT-HP-UPS/120AC/2.5KVA/PT	QUINT-HP-UPS/230AC/2.5KVA/PT	QUINT-HP-BAT/PB/48DC/7.0AH/PT					
Order no.	1136813	1136815	1133819					

Buffer times for QUINT HP UPS/2.5 kVA with Pb battery module

Select the battery module for your QUINT HP UPS/2.5 kVA (120/230 V application) here.

Example: 1750 W is to be buffered for 45 minutes.

➛ ▣

➛ QUINT-HP-UPS/230AC/2.5KVA/PT

➛ 8x QUINT-HP-BAT/PB/48DC/7.0AH/PT
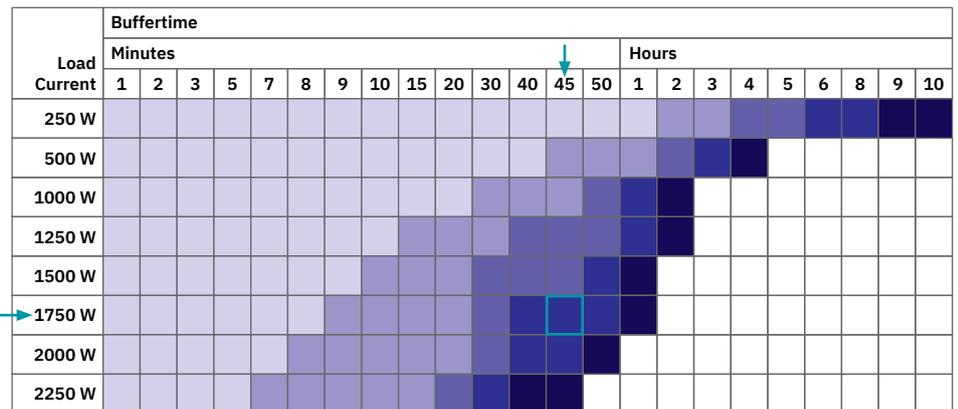
The data is based on an ambient temperature of +25°C at start of use.

Surge Protection Power

VAL-US-SPP series

The VAL-US-SPP series (Safe Protection Plus) is a UL Listed series of pluggable surge protection devices that utilize high-capacity varistors to provide high-quality protection. These devices offer status indication contacts for remote monitoring, as well as hot-swappable plugs with integrated visual status indication for easy maintenance and replacement. Phoenix Contact is already setting the surge protection standards of the future, today. The VAL-US-SPP devices combine forward-thinking installation and safety features that ensure the high availability of your system.

VAL-US-SPP series

IEC/UL

3-phase/Three phase wye

TN-S (3+1) — L1, L2, L3, N, PE

TN-C (3+0) — L1, L2, L3, PEN

2-phase/Single split phase

TN-S (2+1) — L1, L2, N, PE

TN-C (2+0) — L1, L2, PEN

1-phase/Single phase

TN-S (1+1) — L1, N, PE

TN-C (1+0) — L1, PEN

Delta

Corner grounded — L1, L3, L2, PE

Delta

High leg — L1, L3, N, L2, PE

	Configuration	System type	U_N	I_{MAX}	Description	Order no.
1-pole	1+0	Split phase / Wye	120 V	50 kA	VAL-US-SPP-120/50/1+0-R	1790744
		Split phase / Wye	120 V	65 kA	VAL-US-SPP-120/65/1+0-R	1790752
		Split phase / Wye	240 V	50 kA	VAL-US-SPP-240/50/1+0-R	1790763
		Split phase / Wye	277 V	50 kA	VAL-US-SPP-277/50/1+0-R	1790770
2-pole	1+1	Split phase / Wye	120 V	50 kA	VAL-US-SPP-120/50/1+1-R	1790745
		Split phase / Wye	120 V	65 kA	VAL-US-SPP-120/65/1+1-R	1790753
		Split phase / Wye	240 V	50 kA	VAL-US-SPP-240/50/1+1-R	1790764
		Split phase / Wye	277 V	50 kA	VAL-US-SPP-277/50/1+1-R	1790772
	2+0	Split phase / Wye	120 V	50 kA	VAL-US-SPP-120/50/2+0-R	1790747
		Split phase / Wye	120 V	65 kA	VAL-US-SPP-120/65/2+0-R	1790754
		Split phase / Wye	240 V	50 kA	VAL-US-SPP-240/50/2+0-R	1790765
		Delta	240 V	50 kA	VAL-US-SPP-240D/50/2+0-R	1790786
3-pole	2+1	Split phase / Wye	120 V	50 kA	VAL-US-SPP-120/50/2+1-R	1790748
		Split phase / Wye	120 V	65 kA	VAL-US-SPP-120/65/2+1-R	1790756
	3+0	Split phase / Wye	120 V	50 kA	VAL-US-SPP-120/50/3+0-R	1790749
		Split phase / Wye	120 V	65 kA	VAL-US-SPP-120/65/3+0-R	1790758
		Split phase / Wye	240 V	50 kA	VAL-US-SPP-240/50/3+0-R	1790766
		Split phase / Wye	277 V	50 kA	VAL-US-SPP-277/50/3+0-R	1790773
		Split phase / Wye	277 V	65 kA	VAL-US-SPP-277/65/3+0-R	1790778
		Split phase / Wye	400 V	40 kA	VAL-US-SPP-400/40/3+0-R	1790783
		Delta	240 V	50 kA	VAL-US-SPP-240D/50/3+0-R	1790787
		Delta	480 V	40 kA	VAL-US-SPP-480D/40/3+0-R	1790790
		Delta	600 V	40 kA	VAL-US-SPP-600D/40/3+0-R	1790793
4-pole	3+1	Split phase / Wye	120 V	50 kA	VAL-US-SPP-120/50/3+1-R	1790750
		Split phase / Wye	120 V	65 kA	VAL-US-SPP-120/65/3+1-R	1790760
		Split phase / Wye	240 V	50 kA	VAL-US-SPP-240/50/3+1-R	1790767
		Split phase / Wye	277 V	50 kA	VAL-US-SPP-277/50/3+1-R	1790774
		Split phase / Wye	277 V	65 kA	VAL-US-SPP-277/65/3+1-R	1790779
		Split phase / Wye	400 V	40 kA	VAL-US-SPP-400/40/3+1-R	1790785
		High leg delta	240 V	50 kA	VAL-US-SPP-240HLD/50/3+1-R	1790794
		High leg delta	480 V	40 kA	VAL-US-SPP-480HLD/40/3+1-R	1790795
	4+0	Split phase / Wye	277 V	50 kA	VAL-US-SPP-277/50/4+0-R	1790776

Signal Surge Protection

PLUGTRAB PT-IQ

Scan the QR code to learn more online

Always know what is going on
PLUGTRAB PT-IQ is a system comprising a controller and surge protection. The controller supplies the protective devices and provides the group remote signaling for up to 28 protective modules.

A particularly interesting feature is the multi-stage signaling and remote signaling of the protective devices. Each voltage-limiting component of the protective circuit is intelligently monitored.

A yellow status signal indicates that as a result of frequent surge voltages, the performance limit has been reached. The arresters continue to function and your system is still protected. A replacement is, however, recommended in order to avoid unnecessary service operations.

Green: protective device O.K.
Yellow: performance limit reached, replacement recommended.
Red: overloaded, replacement required.

PLUGTRAB PT-IQ is the forward-looking surge protection system from Phoenix Contact. Your advantage: multi-stage monitoring of protective devices. This means that a failure can be foreseen.

Your advantages

☑ Predictive monitoring with 3-stage LED display

☑ Integration of the status message into the system controller via group remote signaling

☑ Install quickly and error-free with DIN rail connectors

☑ Maximum ease of maintenance, thanks to the 2-piece design

☑ Maximum protection for MCR applications with high discharge capacity

PLUGTRAB PT-IQ

	Signal	Connection	Voltage	Grounding	Pluggable	Monitoring	Description	Order no.
	Analog	Screw	5 V DC	Direct			PT-IQ-5-HF+F-5DC-UT	2800798
			24 V DC	—			PT-IQ-PTB-UT	2800768
				Direct			PT-IQ-2X2-24DC-UT	2800980
				Indirect			PT-IQ-2X2+F-24DC-UT	2801264
			48 V DC	Indirect			PT-IQ-2X2+F-48DC-UT	2800987
		Push-in	5 V DC	Indirect			PT-IQ-2X2+F-5DC-PT	2801260
			24 V DC	—			PT-IQ-PTB-PT	2801296
				Direct			PT-IQ-2X2-24DC-PT	2801263
				Indirect			PT-IQ-2X2+F-24DC-PT	2800981
			48 V DC	Direct	✓	✓	PT-IQ-2X2+F-48DC-PT	2801266
	Digital	Screw	5 V DC	Indirect			PT-IQ-4X1+F-24DC-UT	2800983
			24 V DC	—			PT-IQ-PTB-UT	2800768
				Direct			PT-IQ-4X1-24DC-UT	2800982
			48 V DC	Direct			PT-IQ-5-HF+F-5DC-UT	2800798
		Push-in	5 V DC	Direct			PT-IQ-5-HF+F-5DC-PT	2801292
			24 V DC	—			PT-IQ-PTB-PT	2801296
				Direct			PT-IQ-4X1-24DC-PT	2801271
				Direct			PT-IQ-4X1+F-24DC-PT	2801272
			48 V DC	Indirect			PT-IQ-5-HF-5DC-PT	2801291

Surge Protection

TERMITRAB Complete

World's thinnest surge protection for measurement and control signals
TERMITRAB complete is the world's narrowest surge protection for MCR technology. Our product range includes a complete system kit, covering everything from simple, single-stage surge protection to multi-stage, pluggable versions with knife disconnection, signaling, and the option of remote signaling.

With a world-leading, narrow width of just 3.5 mm, TERMITRAB complete gives you a space savings of up to 50 percent, when compared with 7-mm installations.

The protective devices in the TERMITRAB complete range provide mechanical signaling that displays device status with no need for additional auxiliary power.

TERMITRAB Complete (TTC)

Signal	Connection	Voltage	Grounding	Pluggable	Monitoring	Description	Order no.
Analog	Screw	12 V DC	Indirect	✓	✓	TTC-6P-1X2-F-12DC-UT-I	2908196
		24 V DC	Indirect			TTC-6P-1X2-F-M-24DC-UT-I	2906781
		24 V DC	Direct			TTC-6P-1X2-24DC-UT-I	2906809
		24 V DC	Direct	✗		TTC-6-1X2-24DC-UT	2906798
		48 V DC	Direct			TTC-6P-1X2-48DC-UT-I	2908194
	Push-in	12 V DC	Direct	✓		TTC-6P-1X2-12DC-PT-I	2908193
		24 V DC	Indirect			TTC-6P-1X2-F-M-24DC-PT-I	2906790
		24 V DC	Direct			TTC-6P-1X2-24DC-PT-I	2906815
		24 V DC	Direct	✗		TTC-6-1X2-24DC-PT	2906804
		24 V DC	Direct		✗	TTC-3-1x2-24DC-PT	2907325
		48 V DC	Direct			TTC-6P-1X2-48DC-PT-I	2908195
Digital	Screw	12 V DC	Direct	✓	✓	TTC-6P-2X1-12DC-UT-I	2908201
		24 V DC	Indirect			TTC-6P-2X1-F-M-24DC-UT-I	2906784
		24 V DC	Direct			TTC-6P-2X1-24DC-UT-I	2906810
		24 V DC	Direct	✗		TTC-6-2X1-24DC-UT	2906799
		48 V DC	Indirect			TTC-6P-2X1-F-48DC-UT-I	2908208
	Push-in	12 V DC	Indirect	✓		TTC-6P-2X1-F-12DC-PT-I	2908206
		24 V DC	Indirect			TTC-6P-2X1-F-M-24DC-PT-I	2906794
		24 V DC	Direct			TTC-6P-2X1-24DC-PT-I	2906816
		24 V DC	Direct	✗		TTC-6-2X1-24DC-PT	2906805
		24 V DC	Direct		✗	TTC-3-2x1-24DC-PT	2907326
		48 V DC	Direct	✓	✓	TTC-6P-2X1-48DC-PT-I	2908204

Coaxial surge protection (CN)

Signal	Connection	Voltage	Grounding	Pluggable	Monitoring	Description	Order no.
Digital	N connector	<55 Vp Core-ground	Direct	✗	✗	CN-LAMBDA/4-0.47-BB	2800021
		<18 Vp Core-ground				CN-LAMBDA/4-2.25-BB	2801057
		<11 Vp Core-ground				CN-LAMBDA/4-5.9-BB	2838490
		280 DC				CN-UB-280DC-3-BB	2801050

Ethernet surge protection (DT)

Signal	Connection	Voltage	Grounding	Pluggable	Monitoring	Description	Order no.
Digital	RJ45	<3.3 V DC	Direct	✗	✗	DT-LAN-CAT.6+	2881007
		12 V DC				DT-UFB-485/BS	2920612
		185 V DC/130 V AC				DT-TELE-SHDSL	2801593
		185 V DC/130 V AC				DT-TELE-RJ45	2882925
	D-SUB	15 V DC/10 V AC				DT-UFB-V24/S-9-SB	2803069
		5.8 V DC				DT-UFB-IB-RB0	2800056

Thermomagnetic Device Circuit Breakers

Function and design

Thermomagnetic device circuit breakers are tripped both thermally and magnetically. The two systems, bimetal and solenoid, operate independently of one another.

This means that in the event of a short circuit, the thermomagnetic device circuit breakers trip more quickly than thermal device circuit breakers.

As a rule, in the event of a short circuit, the tripping mechanism is actuated within 3 to 5 ms.

TMC 8 series circuit breakers
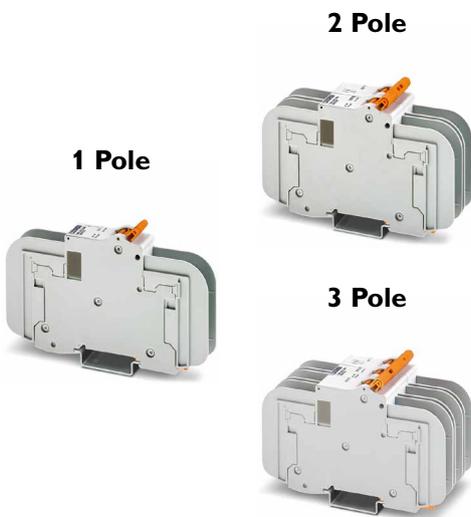
2 Pole

1 Pole

3 Pole

Ampere rating (A)	B Curve					
	1 Pole		2 Pole		3 Pole	
1	TMC 81B 01A	2907478	TMC 82B 01A	2907502	TMC 83B 01A	2907539
2	TMC 81B 02A	2907479	TMC 82B 02A	2907503	TMC 83B 02A	2907540
3	TMC 81B 03A	2907480	TMC 82B 03A	2907504	TMC 83B 03A	2907542
4	TMC 81B 04A	2907481	TMC 82B 04A	2907505	TMC 83B 04A	2907543
5	TMC 81B 05A	2907482	TMC 82B 05A	2907506	TMC 83B 05A	2907544
6	TMC 81B 06A	2907483	TMC 82B 06A	2907507	TMC 83B 06A	2907545
7	TMC 81B 07A	2907484	TMC 82B 07A	2907508	TMC 83B 07A	2907546
8	TMC 81B 08A	2907485	TMC 82B 08A	2907510	TMC 83B 08A	2907547
10	TMC 81B 10A	2907487	TMC 82B 10A	2907511	TMC 83B 10A	2907548
12	TMC 81B 12A	2907488	TMC 82B 12A	2907512	TMC 83B 12A	2907549
13	TMC 81B 13A	2907489	TMC 82B 13A	2907513	TMC 83B 13A	2907550
15	TMC 81B 15A	2907490	TMC 82B 15A	2907514	TMC 83B 15A	2907551
16	TMC 81B 16A	2907491	TMC 82B 16A	2907515	TMC 83B 16A	2907552
20	TMC 81B 20A	2907492	TMC 82B 20A	2907516	TMC 83B 20A	2907553
25	TMC 81B 25A	2907493	TMC 82B 25A	2907530	TMC 83B 25A	2907555
30	TMC 81B 30A	2907494	TMC 82B 30A	2907531	TMC 83B 30A	2907556
32	TMC 81B 32A	2907495	TMC 82B 32A	2907532	TMC 83B 32A	2907557
35	TMC 81B 35A	2907496	TMC 82B 35A	2907533	TMC 83B 35A	1010309
40	TMC 81B 40A	2907497	TMC 82B 40A	2907534	TMC 83B 40A	1010308
50	TMC 81B 50A	2907498	TMC 82B 50A	2907535	TMC 83B 50A	1010307
60	TMC 81B 60A	2907500	TMC 82B 60A	2907536	TMC 83B 60A	1010306
63	TMC 81B 63A	2907501	TMC 82B 63A	2907537	TMC 83B 63A	1010286
1	TMC 71B 01A	1011962	TMC 72B 01A	1019930	TMC 73B 01A	1019951
2	TMC 71B 02A	1019909	TMC 72B 02A	1019931	TMC 73B 02A	1019952
3	TMC 71B 03A	1019910	TMC 72B 03A	1019932	TMC 73B 03A	1019953
4	TMC 71B 04A	1019911	TMC 72B 04A	1019933	TMC 73B 04A	1019954
5	TMC 71B 05A	1019912	TMC 72B 05A	1019934	TMC 73B 05A	1019955
6	TMC 71B 06A	1019913	TMC 72B 06A	1019935	TMC 73B 06A	1019956
7	TMC 71B 07A	1019914	TMC 72B 07A	1019936	TMC 73B 07A	1019957
8	TMC 71B 08A	1019915	TMC 72B 08A	1019937	TMC 73B 08A	1019958
10	TMC 71B 10A	1019916	TMC 72B 10A	1019938	TMC 73B 10A	1019959
12	TMC 71B 12A	1019917	TMC 72B 12A	1019939	TMC 73B 12A	1019960
13	TMC 71B 13A	1019918	TMC 72B 13A	1019940	TMC 73B 13A	1019961
15	TMC 71B 15A	1019919	TMC 72B 15A	1019941	TMC 73B 15A	1019962
16	TMC 71B 16A	1019920	TMC 72B 16A	1019942	TMC 73B 16A	1019963
20	TMC 71B 20A	1019921	TMC 72B 20A	1019943	TMC 73B 20A	1019964
25	TMC 71B 25A	1019922	TMC 72B 25A	1019944	TMC 73B 25A	1019965
30	TMC 71B 30A	1019923	TMC 72B 30A	1019945	TMC 73B 30A	1019966
32	TMC 71B 32A	1019924	TMC 72B 32A	1019946	TMC 73B 32A	1019967
40	TMC 71B 40A	1019925	TMC 72B 40A	1019947	TMC 73B 40A	1019968
50	TMC 71B 50A	1019926	TMC 72B 50A	1019948	TMC 73B 50A	1019969
60	TMC 71B 60A	1019927	TMC 72B 60A	1019949	TMC 73B 60A	1019970
63	TMC 71B 63A	1019928	TMC 72B 63A	1019950	TMC 73B 63A	1019971

TMC 7 series supplementary protectors

2 Pole

1 Pole

3 Pole

Thermomagnetic Device Circuit Breakers

Trip characteristics

The TMC 7 and TMC 8 series includes a range of trip characteristics for a variety of applications: B-, C-, and D-curves.

Curve	Application		
B	• Heaters • Sensitive equipment		
C	• Small transformers • Lighting	• Pilot devices • Control circuits and coils	
D	• Motors • Generators		

C Curve						D Curve					
1 Pole		**2 Pole**		**3 Pole**		**1 Pole**		**2 Pole**		**3 Pole**	
TMC 81C 01A	2907558	TMC 82C 01A	2907582	TMC 83C 01A	2907607	TMC 81D 01A	2907626	TMC 82D 01A	2907650	TMC 83D 01A	2907674
TMC 81C 02A	2907559	TMC 82C 02A	2907584	TMC 83C 02A	2907608	TMC 81D 02A	2907627	TMC 82D 02A	2907652	TMC 83D 02A	2907675
TMC 81C 03A	2907560	TMC 82C 03A	2907585	TMC 83C 03A	2907609	TMC 81D 03A	2907628	TMC 82D 03A	2907653	TMC 83D 03A	2907676
TMC 81C 04A	2907561	TMC 82C 04A	2907586	TMC 83C 04A	2907610	TMC 81D 04A	2907629	TMC 82D 04A	2907654	TMC 83D 04A	2907678
TMC 81C 05A	2907562	TMC 82C 05A	2907587	TMC 83C 05A	2907611	TMC 81D 05A	2907630	TMC 82D 05A	2907655	TMC 83D 05A	2907679
TMC 81C 06A	2907563	TMC 82C 06A	2907588	TMC 83C 06A	2907612	TMC 81D 06A	2907631	TMC 82D 06A	2907656	TMC 83D 06A	2907681
TMC 81C 07A	2907564	TMC 82C 07A	2907589	TMC 83C 07A	2907613	TMC 81D 07A	2907632	TMC 82D 07A	2907657	TMC 83D 07A	2907682
TMC 81C 08A	2907565	TMC 82C 08A	2907590	TMC 83C 08A	2907614	TMC 81D 08A	2907633	TMC 82D 08A	2907658	TMC 83D 08A	2907683
TMC 81C 10A	2907566	TMC 82C 10A	2907591	TMC 83C 10A	2907615	TMC 81D 10A	2907634	TMC 82D 10A	2907659	TMC 83D 10A	2907684
TMC 81C 12A	2907568	TMC 82C 12A	2907592	TMC 83C 12A	2907616	TMC 81D 12A	2907636	TMC 82D 12A	2907660	TMC 83D 12A	2907685
TMC 81C 13A	2907569	TMC 82C 13A	2907593	TMC 83C 13A	2907617	TMC 81D 13A	2907637	TMC 82D 13A	2907661	TMC 83D 13A	2907686
TMC 81C 15A	2907571	TMC 82C 15A	2907594	TMC 83C 15A	2907618	TMC 81D 15A	2907638	TMC 82D 15A	2907662	TMC 83D 15A	2907687
TMC 81C 16A	2907572	TMC 82C 16A	2907595	TMC 83C 16A	2907620	TMC 81D 16A	2907639	TMC 82D 16A	2907663	TMC 83D 16A	2907688
TMC 81C 20A	2907573	TMC 82C 20A	2907597	TMC 83C 20A	2907621	TMC 81D 20A	2907640	TMC 82D 20A	2907665	TMC 83D 20A	2907689
TMC 81C 25A	2907574	TMC 82C 25A	2907598	TMC 83C 25A	2907623	TMC 81D 25A	2907641	TMC 82D 25A	2907666	TMC 83D 25A	2907690
TMC 81C 30A	2907575	TMC 82C 30A	2907599	TMC 83C 30A	2907624	TMC 81D 30A	2907642	TMC 82D 30A	2907667	TMC 83D 30A	2907691
TMC 81C 32A	2907576	TMC 82C 32A	2907600	TMC 83C 32A	2907625	TMC 81D 32A	2907643	TMC 82D 32A	2907668	TMC 83D 32A	2907692
TMC 81C 35A	2907577	TMC 82C 35A	2907601	TMC 83C 35A	1010303	TMC 81D 35A	2907644	TMC 82D 35A	2907669	TMC 83D 35A	1010290
TMC 81C 40A	2907578	TMC 82C 40A	2907602	TMC 83C 40A	1010305	TMC 81D 40A	2907645	TMC 82D 40A	2907670	TMC 83D 40A	1010289
TMC 81C 50A	2907579	TMC 82C 50A	2907603	TMC 83C 50A	1010302	TMC 81D 50A	2907646	TMC 82D 50A	2907671	TMC 83D 50A	1010284
TMC 81C 60A	2907580	TMC 82C 60A	2907604	TMC 83C 60A	1010301	TMC 81D 60A	2907647	TMC 82D 60A	2907672	TMC 83D 60A	1010288
TMC 81C 63A	2907581	TMC 82C 63A	2907605	TMC 83C 63A	1010291	TMC 81D 63A	2907649	TMC 82D 63A	2907673	TMC 83D 63A	1010287
TMC 71C 01A	1019972	TMC 72C 01A	1019994	TMC 73C 01A	1020015	TMC 71D 01A	1020037	TMC 72D 01A	1020060	TMC 73D 01A	1020082
TMC 71C 02A	1019973	TMC 72C 02A	1019995	TMC 73C 02A	1020016	TMC 71D 02A	1020038	TMC 72D 02A	1020061	TMC 73D 02A	1020083
TMC 71C 03A	1019974	TMC 72C 03A	1019996	TMC 73C 03A	1020017	TMC 71D 03A	1020039	TMC 72D 03A	1020062	TMC 73D 03A	1020084
TMC 71C 04A	1019975	TMC 72C 04A	1019997	TMC 73C 04A	1020018	TMC 71D 04A	1020040	TMC 72D 04A	1020064	TMC 73D 04A	1020085
TMC 71C 05A	1019976	TMC 72C 05A	1019998	TMC 73C 05A	1020019	TMC 71D 05A	1020041	TMC 72D 05A	1020065	TMC 73D 05A	1020086
TMC 71C 06A	1019977	TMC 72C 06A	1019999	TMC 73C 06A	1020020	TMC 71D 06A	1020042	TMC 72D 06A	1020066	TMC 73D 06A	1020087
TMC 71C 07A	1019978	TMC 72C 07A	1020000	TMC 73C 07A	1020021	TMC 71D 07A	1020043	TMC 72D 07A	1020067	TMC 73D 07A	1020088
TMC 71C 08A	1019979	TMC 72C 08A	1020001	TMC 73C 08A	1020022	TMC 71D 08A	1020044	TMC 72D 08A	1020068	TMC 73D 08A	1020090
TMC 71C 10A	1019980	TMC 72C 10A	1020002	TMC 73C 10A	1020023	TMC 71D 10A	1020045	TMC 72D 10A	1020069	TMC 73D 10A	1020091
TMC 71C 12A	1019981	TMC 72C 12A	1020003	TMC 73C 12A	1020024	TMC 71D 12A	1020046	TMC 72D 12A	1020070	TMC 73D 12A	1020093
TMC 71C 13A	1019982	TMC 72C 13A	1020004	TMC 73C 13A	1020025	TMC 71D 13A	1020048	TMC 72D 13A	1020071	TMC 73D 13A	1020094
TMC 71C 15A	1019983	TMC 72C 15A	1020005	TMC 73C 15A	1020026	TMC 71D 15A	1020049	TMC 72D 15A	1020072	TMC 73D 15A	1020095
TMC 71C 16A	1019984	TMC 72C 16A	1020006	TMC 73C 16A	1020027	TMC 71D 16A	1020051	TMC 72D 16A	1020073	TMC 73D 16A	1020096
TMC 71C 20A	1019985	TMC 72C 20A	1020007	TMC 73C 20A	1020028	TMC 71D 20A	1020052	TMC 72D 20A	1020074	TMC 73D 20A	1020097
TMC 71C 25A	1019986	TMC 72C 25A	1020008	TMC 73C 25A	1020029	TMC 71D 25A	1020053	TMC 72D 25A	1020075	TMC 73D 25A	1020098
TMC 71C 30A	1019987	TMC 72C 30A	1020009	TMC 73C 30A	1020030	TMC 71D 30A	1020054	TMC 72D 30A	1020076	TMC 73D 30A	1020099
TMC 71C 32A	1019988	TMC 72C 32A	1020010	TMC 73C 32A	1020031	TMC 71D 32A	1020055	TMC 72D 32A	1020077	TMC 73D 32A	1020100
TMC 71C 40A	1019989	TMC 72C 40A	1020011	TMC 73C 40A	1020032	TMC 71D 40A	1020056	TMC 72D 40A	1020078	TMC 73D 40A	1020101
TMC 71C 50A	1019990	TMC 72C 50A	1020012	TMC 73C 50A	1020033	TMC 71D 50A	1020057	TMC 72D 50A	1020079	TMC 73D 50A	1020103
TMC 71C 60A	1019991	TMC 72C 60A	1020013	TMC 73C 60A	1020035	TMC 71D 60A	1020058	TMC 72D 60A	1020080	TMC 73D 60A	1020104
TMC 71C 63A	1019992	TMC 72C 63A	1020014	TMC 73C 63A	1020036	TMC 71D 63A	1020059	TMC 72D 63A	1020081	TMC 73D 63A	1020105

Electronic Circuit Breakers

Single channel electronic circuit breakers — **NEC Class 2

Ampere rating	Description	Order no.
1-3 A	PTCB E1 24DC/1-3A NO**	2909909
1-4 A	PTCB E1 24DC/1-4A NO	2908261
1-4 A	PTCB E1 24DC/1-4A SI-R**	1135753
1-8 A	PTCB E1 24DC/1-8A NO	2908262
1-8 A	PTCB E1 24DC/1-8A SI-R	1135752
1 A	PTCB E1 24DC/1A NO**	2909902
1 A	PTCB E1 24DC/1A SI-R**	1135751
2 A	PTCB E1 24DC/2A NO**	2909903
2 A	PTCB E1 24DC/2A SI-R**	1135749
3 A	PTCB E1 24DC/3A NO**	2909904
4 A	PTCB E1 24DC/4A NO	2909906
4 A	PTCB E1 24DC/4A SI-R**	1135745
6 A	PTCB E1 24DC/6A NO	2909908
6 A	PTCB E1 24DC/6A SI-R	1135740
8 A	PTCB E1 24DC/8A NO	2909910
8 A	PTCB E1 24DC/8A SI-R	1135734

PTCB eFuse — **NEC Class 2

Ampere rating	Description	Order no.
0.1 - 0.63 A	PTCB E1 24DC/0.1-0.63A NO**	1441495
0.1 - 0.63 A	PTCB E1 24DC/0.1-0.63A SI-R**	1441496
0.1 A	PTCB E1 24DC/0.1A SI-R**	1464483
0.1 A	PTCB E1 24DC/0.1A NO**	1464484
0.2 A	PTCB E1 24DC/0.2A SI-R**	1361049
0.2 A	PTCB E1 24DC/0.2A NO**	1361055
0.5 A	PTCB E1 24DC/0.5A SI-R**	1361043
0.5 A	PTCB E1 24DC/0.5A NO**	1361051
0.63 A	PTCB E1 24DC/0.63A SI-R**	1464485
0.63 A	PTCB E1 24DC/0.63A NO**	1464486

Electronic circuit breakers module — Class I, Div 2

Function	Channels	Amp	Description	Order no.
Full feature/function model	4	0.5-10 A	CBM E4 24DC/0.5-10A NO-R	2905743
	8		CBM E8 24DC/0.5-10A NO-R	2905744

Electronic circuit breakers module compact — **NEC Class 2

Function	Channels	Amp	Description	Order no.
Remote reset version	4	1-4 A	CBMC E4 24DC/1-4A S-R**	1065727
		1-10 A	CBMC E4 24DC/1-10A S-R	1065729
Status output version		1-4 A	CBMC E4 24DC/1-4A NO**	2906031
		1-10 A	CBMC E4 24DC/1-10A NO	2906032
I/O link version		1-4 A	CBMC E4 24DC/1-4A+ IOL**	2910410
		1-10 A	CBMC E4 24DC/1-10A IOL	2910411
Galvanically isolated version		1-8 A	CBMC EG4 24DC/1-8A NO	1065730

Power Monitoring

Multifunctional energy measuring devices

The multifunctional EMpro energy measuring devices acquire your energy data and offer numerous options for communicating the data to higher-level control and management systems. Configure and integrate your energy measuring devices in just a few steps using the web-based, user-guided installation wizard. You can also benefit from the simple, direct connection of conventional Rogowski coils, and from the many practice-oriented web server and device functions.

Fast wiring and configuration

The Rogowski measuring input saves you a great deal of time when it comes to wiring and configuration. Connect any conventional Rogowski coil directly: the products process the mV signal directly. The installation wizard starts up automatically when the device is switched on for the first time.

Smart web servers and device functions

Monitor the correct operation of the system and error analysis in the event of service and support actions. In addition to configuring the devices, you can use the web server to log data, assess grid quality, and display the energy flows in clear trend diagrams.

Increased data security

Protect your energy data from unauthorized access by shutting down operating elements at the device will prevent manipulative operations on site. Deactivating the interfaces, you avoid unwanted access to your energy data or unintentional changes of the configuration.

EMpro energy meters

Supply	Current Measurement	Network Interface	Mounting	Screen	Description	Order no.
120 V AC	Rogowski coil	Ethernet IP	Din rail	✗	EEM-MB371-EIP	2907976
120 V AC	Current transformer	Ethernet IP	Din rail	✗	EEM-MB370-EIP	2907971
120 V AC	Rogowski coil	Ethernet IP	Panel	✓	EEM-MA771-EIP	2908302
120 V AC	Current transformer	Ethernet IP	Panel	✓	EEM-MA770-EIP	2907953
120 V AC	Rogowski coil	Modbus/TCP	Din rail	✗	EEM-MB371	2907955
24 V DC	Current transformer	Modbus/TCP	Din rail	✗	EEM-MB371-24DC	1127055
120 V AC	Rogowski coil	Modbus/TCP	Din rail	✗	EEM-MB370	2907954
24 V DC	Current transformer	Modbus/TCP	Din rail	✗	EEM-MB370-24DC	1127061
120 V AC	Rogowski coil	Modbus/TCP	Din rail	✓	EEM-MA371	2908307
24 V DC	Rogowski coil	Modbus/TCP	Din rail	✓	EEM-MA371-24DC	1127055
120 V AC	Current transformer	Modbus/TCP	Din rail	✓	EEM-MA370	2907983
24 V DC	Current transformer	Modbus/TCP	Din rail	✓	EEM-MA370-24DC	1127059
120 V AC	Rogowski coil	Modbus/TCP	Panel	✓	EEM-MA771	2908286
24 V DC	Rogowski coil	Modbus/TCP	Panel	✓	EEM-MA771-24DC	1127060
120 V AC	Current transformer	Modbus/TCP	Panel	✓	EEM-MA770	2907945
24 V DC	Current transformer	Modbus/TCP	Panel	✓	EEM-MA770-24DC	1127052
120 V AC	Rogowski coil	Profinet	Din rail	✗	EEM-MB371-PN	2908308
120 V AC	Current transformer	Profinet	Din rail	✗	EEM-MB370-PN	2907984
120 V AC	Rogowski coil	Profinet	Panel	✓	EEM-MA771-PN	2908301
120 V AC	Current transformer	Profinet	Panel	✓	EEM-MA770-PN	2907946
120 V AC	Rogowski coil	Modbus RTU/TCP	Din rail	✗	EEM-MB371-R	2907985
120 V AC	Current transformer	Modbus RTU/TCP	Din rail	✗	EEM-MB370-R	2907980
120 V AC	Rogowski coil	Modbus RTU/TCP	Panel	✓	EEM-MA771-R	2908285
120 V AC	Current transformer	Modbus RTU/TCP	Panel	✓	EEM-MA770-R	2907944
120 V AC	Rogowski coil	Cloud	Din rail	✗	EEM-SB371-C	1158947
120 V AC	Current transformer	Cloud	Din rail	✗	EEM-SB370-C	1158951

⚙ Automation

The heart of your control cabinet is the logic platform. For OEMs and control engineers alike, it has never been easier to build smaller, smarter machines faster. This also enables builders to free themselves from use of controllers and equipment based solely on prior familiarity or specifications. Industrial PCs/HMIs and scalable controllers can streamline functionality, reduce equipment and costs, and usher in the next generation of intelligent machine automation.

AUTOMATION

- PLCnext Control
- Industrial PCs and HMIs
- Signal Switching
- Functional Safety
- Networking

Scan the QR code to learn more online

Automation

Programmable controllers

Programmable Logic Controllers (PLCs) from Phoenix Contact are scalable from a simple RTU or data-logger to bumpless, redundant, high-performance automation packages for the most demanding applications. Development is made easy by using either the PC WORX standard IEC 61131 environment or the software platform of your choice with high-level languages (C++, C#, MATLAB, etc.) by using PLCnext Technology. Test and simulation tools, integrated visualization software, and diagnostic tools give developers, users, and technicians an unprecedented level of insight into the running system, along with plenty of flexibility while developing the system.

Remote I/Os and gateways

Let Phoenix Contact help you monitor and control I/O via common industrial protocols like Modbus, PROFINET, PROFIBUS, EtherCAT, and EtherNet/IP. Whether in the cabinet (IP20) or in the field (IP67), Phoenix Contact offers several I/O and gateway variants to meet all your application requirements, including standard digital and analog I/O, as well as safety, intrinsically safe, IO-Link, and special-function applications.

Industrial PCs and HMIs

Industrial PCs from Phoenix Contact are available in a variety of performance classes, screen sizes, and form factors, such as blind-node configurations. Their powerful CPUs, fan-less design, and nonrotating, solid-state drive options make them rugged and reliable, even in the most demanding applications. A wide variety of HMI operator panels connect easily to third-party PLCs. A new generation of HTML5-based web panels connect securely to any web server by simply entering the IP address.

Switching and conditioning devices

Relays and optocouplers enable reliable switching, isolating, and monitoring in automation, offering options like solid-state relays, coupling relays, and logic modules. Signal conditioners and measuring transducers ensure safe, interference-free transmission, with SIL-certified options for explosion protection. For motor control, our starters and electronic switching devices provide fast, wear-free switching and reversing to maximize system availability and ease of use.

PLCnext Control

PLCnext Control devices are PLCs for the open PLCnext Technology ecosystem. They allow the implementation of automation projects without the limitations of proprietary systems. Take advantage of PROFICLOUD integration, or connect to your own third-party cloud provider (AWS, Azure, etc...). PLCnext Control allows for parallel programming and combination of familiar IEC 61131-3 programming languages, with high-level languages such as C/C++, C#, or MATLAB Simulink. PLCnext Control offers you a full suite of tools to take your application into the future.

Linux

- ☑ Fully open YOCTO Linux platform right out of the box
- ☑ Hardened Axioline I/O connection
- ☑ PLCnext Technology seamlessly integrates with Linux
- ☑ Develop in C++, Java, Python, etc... Ready for Docker containers
- ☑ Open-source and community-driven development

IIoT (Industrial Internet of Things) ready

- ☑ Ready with PROFICLOUD integrated into PLCnext Engineer
- ☑ Easily connect to third-party clouds (AWS, Azure, etc...)
- ☑ Edge device with Axioline I/O capability
- ☑ Pull tags from legacy protocols and controllers

Revolutionary

- ☑ Programmed with free PLCnext Engineer software
- ☑ Parallel programming with ladder, ST, FB, C++, and C#
- ☑ HTML5 embedded eHMI
- ☑ Install premade apps from the PLCnext Store

Programmable Controllers

Standard PLCnext Control
AXC F 2152
Order no. 2404267

Performance PLCnext Control
AXC F 3152
Order no. 1069208

PLCnext Control

Backplane	Processor	No. of control tasks	No. of PROFINET devices	Left-hand extensions	Protocols	Application	Desc.	Order no.
Axioline	Arm® Cortex®-A9 2x 800 MHz	32	64	Yes	PROFINET, MODBUS TCP, EtherNet/IP, OPCUA	Standard	AXC F 2152	2404267
	Intel® Atom™ x5-E3930 2x 1.3 GHz	32	128	Yes		Performance	AXC F 3152	1069208

Hardware extensions, accessories, and software

Type	Application description	Description	Order no.
Left-hand extension module*	Extension for an additional ethernet port	AXC F XT ETH 1TX	2403115
	Profisafe add on module	AXC F XT SPLC 1000	1159811
Memory expansion	2 GB expansion SD card	SD FLASH 2GB PLCNEXT MEMORY	1043501
	8 GB expansion SD card	SD FLASH 8GB PLCNEXT MEMORY	1061701
	32 GB expansion SD card	SD FLASH 32GB PLCNEXT MEMORY LIC	1151111
Software	Engineering software for IEC 61131-1 programming	PLCNEXT ENGINEER	1046008

*Please note: When adding a left hand extension module, additiaonal accessories are requried. Please consult our website for the required add on accessories

PLCnext Control for edge computing

The EPC 15xx controllers combine the robustness of a proven industrial PC platform with the open PLCnext Technology ecosystem, thus providing the ability to develop intelligent IoT Edge solutions. This closes the gap between the OT and IT worlds.

Your advantages

☑ Compact IPC design in an all-metal housing and passive cooling

☑ Easy integration into existing IT infrastructures and connectivity on the field level with PLCnext Technology

☑ Simple and secure management via an integrated web-based management tool

EPC 1502
Order no. 1185416

EPC 1522
Order no. 1185423

Type	Description	Order no.
Edge Controler	EPC 1502	1185416
Edge Controler	EPC 1522	1185423

Industrial PCs

Industrial PCs/HMIs

IPCs control, process, and visualize vital machine data and provide a rugged and reliable platform for industrial processes. Available in a wide array of performance classes and form factors. Our portfolio consists of ultra-compact box IPCs for IIoT edge applications and high-end multitouch panel PCs for larger manufacturing systems. All feature high-performance CPUs and a wide selection of connectivity options for the most demanding industrial applications.

Edge IPCs

- ☑ Ultra-compact form factor
- ☑ Rugged, fan-less, all metal design
- ☑ Options for TPM 2.0, Wi-Fi, Cellular, etc...
- ☑ DIN rail mounting

Box IPCs

- ☑ Compact dimensions
- ☑ Rugged, fan-less, all metal design
- ☑ Various performance classes
- ☑ Various mounting options

Panel PCs

- ☑ Capacitive touch screen
- ☑ 10" to 21.5" screen sizes
- ☑ Various performance classes
- ☑ Panel mounting
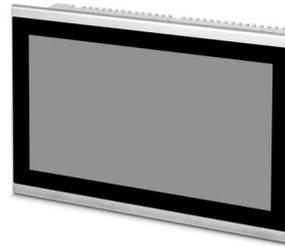
Direct machine-mount PCs

- ☑ BL2 PPC AIO65 and DL PPC series
- ☑ Various performance classes
- ☑ Capacitive multi-touch screen
- ☑ VESA or POLE mounting options
- ☑ Optional push-button box

Industrial Touch Monitors

- ☑ Capacitive touch monitors
- ☑ Sizes from 10.1 inches to 23.8 inches*
- ☑ Display port, HDMI or VGA connection

*Staggered release deployment throughout the year

HMIs

Robust, scalable, and reliable HMI panels

Efficient automation requires the right visualization. Our touch panels with integrated Visu+ runtime and web panels with open browser for HTML5 applications simplify the operation and monitoring of your automation solution. Benefit from intuitive user guidance and a high level of efficiency. We have the right HMI that will be the ideal user interface for your application.

Scan the QR code to learn more online
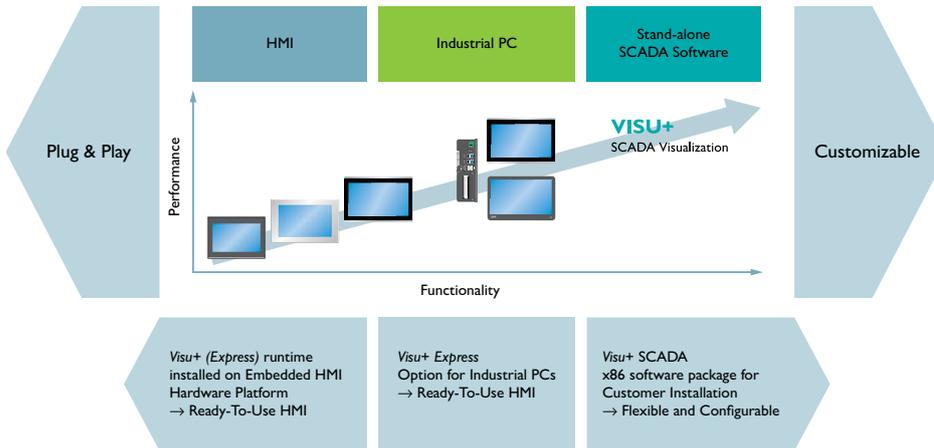
Features

Visu+ Express
Free visualization software for connection to all well-known controller manufacturers with a comprehensive range of visualization tools.

Visu+
Powerful visualization software for complex visualization tasks and comprehensive SCADA functions for connection to all well-known controller manufacturers.

HTML5
HMI panels with integrated embedded browser in kiosk/full-screen mode with optimum HTML5 support enable operation and monitoring options for the high-performance display of web-based content.

HTML5 web panels

- ☑ BWP 2000 and WP 6000 series
- ☑ 4.3" to 21.5" screen sizes*
- ☑ Resistive or capacitive touch
- ☑ Simple connection to any web server

HTML5 web panels

	Series	Screen size (in)	Resolution	Touch	Brightness	Backlight MTBF	Operation temp.	Class I Div 2	Description	Order no.
	Basic HTML5 panel	4.3	480x272	Resistive	400	20,000	0° to +50°C	✓	BWP 2043W	1060549
		7	800x480		350	25,000			BWP 2070W	1060632
		10.2	1240x600						BWP 2102W	1060630
	Premium HTML5 panel	7	800x480	PCAP	500	50,000	-20° to +50°C	✗	WP 6070-WVPS	1290800
		10.1	1280x800						WP 6101-WXPS	1290801
		12.1							WP 6121-WXPS	1290802

*More screen sizes can be found online at www.phoenixcontact.ca

Traditional HMIs

- ☑ BTP 2000 and TP 6000 series
- ☑ 4.3" to 21.5" screen sizes*
- ☑ Resistive or capacitive touch
- ☑ Free VISU+ EXPRESS design software

Traditional HMIs

	Series	Screen size (in)	Resolution	Touch	Brightness	Backlight MTBF	Operation temp.	Class I Div 2	Description	Order no.
	Basic touch panel	4.3	480x272	Resistive	400	20,000	0° to +50°C	✓	BTP 2043W	1050387
		7	800x480		300				BTP 2070W	1046666
		10.2							BTP 2102W	1046667
	Premium touch panel	7	800x480	PCAP	500	50,000	-20° to +50°C	✗	TP 6070-WVPS	1189629
		10.1	1280x800						TP 6101-WXPS	1190417
		12.1			400				TP 6121-WXPS	1190420

*More screen sizes can be found online at www.phoenixcontact.ca

Note: The flow diagram contains labels: HMI, Industrial PC, Stand-alone SCADA Software, Plug & Play, Customizable, Performance, Functionality, VISU+ SCADA Visualization, Visu+ (Express) runtime installed on Embedded HMI Hardware Platform → Ready-To-Use HMI, Visu+ Express Option for Industrial PCs → Ready-To-Use HMI, Visu+ SCADA x86 software package for Customer Installation → Flexible and Configurable

Axioline E

Axioline E is the remote I/O system with a block design for field installation with M12 connection technology. A key characteristic of these devices is their openness to all common Ethernet-based communication protocols as well as PROFIBUS with a T-coded power supply.

Power — M12 T coded
Page 62

Data — M12 D coded
Page 60-64

Signal — M12 A coded
Page 60-64

Scan the QR code to learn more online

Axioline E

Network	Details	Description	Order no.
EtherNet/IP	16 channel configurable DI/DO	AXL E EIP DIO16 M12 6P	2701494
EtherNet/IP	8 IO-Link, 4DI	AXL E EIP IOL8 DI4 M12 6P	2701496
EtherNet/IP	8 DI and 8 DO	AXL E EIP DI8 DO8 M12 6P	2701492
EtherCAT	16 channel configurable DI/DO	AXL E EC DIO16 M12 6P	2701522
EtherCAT	8 IO-Link, 4DI	AXL E EC IOL8 DI4 M12 6P	2701524
EtherCAT	8 DI and 8 DO	AXL E EC DI8 DO8 M12 6P	2701520
Modbus	16 channel configurable DI/DO	AXL E ETH DIO16 M12 6P	2701534
Modbus	8 IO-Link, 4DI	AXL E ETH IOL8 DI4 M12 6P	2701536
Modbus	8 DI and 8 DO	AXL E ETH DI8 DO8 M12 6P	2701532

Axioline E — New Generation

The new generation of Axioline E devices are highly robust with their IP65/IP67 degree of protections and a fully-cast zinc die-cast housing. Because of their outstanding resistance to EMI and the robust mechanics, you can minimize downtimes in your system with these devices. Due to their extended temperature range and their strong resistance to environmental influences, common cooling and greasing agents, and welding beads, they can be used in many different applications.

Power — M12 L coded
Page 62

Data — M12 D coded
Page 60-64

Signal — M12 A coded
Page 60-64

Scan the QR code to learn more online

Axioline E — New Generation

Network	Details	Description	Order no.
PROFINET	16 channel DI	AXL E PN DI16 M12 6M-L	1300834
PROFINET	16 channel configurable DI/DO	AXL E PN DIO16 M12 6M-L	1300915
PROFINET	8 DI and 8 DO (2A)	AXL E PN DI8 DO8 EF M12 6M-L	1300921
PROFINET	4 IO-Link, 4 DI 8 DO	AXL E PN IOL4/0 DIO8 M12 6M-L	1300923
PROFINET	8 IO-Link, 4DI	AXL E PN IOL 4/4 EF M12 6M-L	1300926

IO-Link

What is IO-Link?

IO-Link is the first globally standardized I/O interface. The technology has established itself as the communication standard in machine building and systems manufacturing. The number of products with IO-Link interface used is growing rapidly. The communication standard offers you many advantages, creates new application opportunities, and constitutes an investment in important matters such as the Industrial Internet of Things (IIoT). By definition, IO-Link is an open, serial point-to-point communication protocol for connecting sensors and actuators to an automation system.

Productivity

IO-Link devices provide the controller with detailed condition data. This data aids maintenance planning because you can identify problems quickly. If you, as a user, receive a warning message from dirty sensors every six months, for example, you can arrange for them to be cleaned twice a year at a convenient time. Furthermore, real-time fault detection of devices enables you to reduce operating costs by minimizing unplanned downtimes.
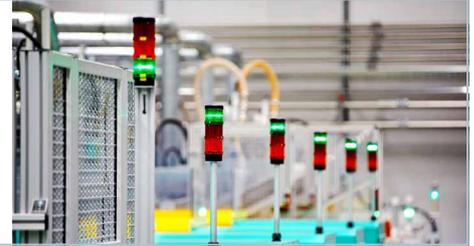
Simplicity

Everything in IO-Link is easy. Installation is simple with standard cables and connectors, and maintenance is effortless with system monitoring and adjustable settings. Using the error detection feature of IO-Link devices, you can determine the cause of a problem quickly and easily. Device replacement is seamless since stored parameters automatically transfer from the controller, getting your system back up and running fast.

Increased data availability and accuracy

Analog sensors without IO-Link often pass through multiple A/D conversions before data reaches the controller, which may result in errors. In IO-Link devices, there is only one A/D conversion. This increases measuring accuracy and thus the accuracy of the entire process.

Remote configuration

You can modify the parameters of the IO-Link device from your desk by responding to status messages. You therefore no longer have to shut down the production line and physically access the devices in order to rectify faults.

IO-Link devices

Details	Description	Order no.
16 channel configurable DI/DO	AXL E IOL DIO8/8 M12 6M	1480997
8 DI and 8 DO	AXL E IOL DI8 DO4/4 M12 6M	1293246
16 channel DI	AXL E IOL DI16 M12 6M	1480998
4 channel RTD input	AXL E IOL RTD4 M12 3M	1293247
8 channel DI, plastic housing	AXL E IOL DI8 M12 6P	2702658
16 channel DI, plastic housing	AXL E IOL DI16 M12 6P	2702660
8 channel DO, plastic housing	AXL E IOL DO8 M12 6P	2702659

The I/O Modular System

Smart Elements (SE)	Axioline F	Axioline P
• Compact • No configuration	• Robust and fast • XC versions available (-40°C … +70°C) • Variety of approvals	• Hot swappable and redundant • Modular block design

Bus Couplers

Network connection

	Function description	Type	Description	Order no.
	Bus coupler for Modbus TCP	Modbus	AXL F BK ETH	2688459
	Bus coupler for EtherCAT®	EtherCAT®	AXL F BK EC	2688899
	Bus coupler for EtherNet/IP™	EtherNet/IP	AXL F BK EIP EF	2702782
	Bus coupler for PROFINET®	PROFINET	AXL F BK PN TPS	2403869
	Axioline PLC conforming to IEC 61131, programmed with PC WORX	PC WORX PLC Programming	AXC 1050 AXC 1050 XC	2700988 2701295

Axioline Smart Elements

Smart Elements

	Function description	Type	Description	Order no.
	Analog input, 4 channels, 4-20 mA, single ended	AI	AXL SE AI4 I 4-20	1088062
	Analog input, 4 channels, 0-10 V, single ended	AI	AXL SE AI4 U 0-10	1088104
	Analog input, 4 channels for temperature measurement with PT100	AI	AXL SE RTD4 PT100	1088106
	Analog output, 4 channels, 4-20 mA, single ended	AO	AXL SE AO4 I 4-20	1088123
	Analog output, 4 channels, 0-10 V, single ended	AO	AXL SE AO4 U 0-10	1088126
	Digital input, 16 channels, one-wire connection	DI	AXL SE DI16/1	1088127
	Digital output, 16 channels, one-wire connection	DO	AXL SE DO16/1	1088129
	IO-Link master with 4 channels	Function	AXL SE IOL4	1088132
	Function element with a counter input for 24 V DC sensors	Function	AXL SE CNT1	1088131
	Function element for symmetrical incremental encoders	Function	AXL SE INC1 SYM	1088130

Axioline Smart Elements

	Function description	Type	Description	Order no.
	Function element with a serial interface RS 485	Function	AXL SE RS485	1088128
	Digital safe input, 8 channels (PROFIsafe)	Safety	AXL SE PSDI8/3	1079241
	Digital safe output, 4 channels (PROFIsafe)	Safety	AXL SE PSDO4/2 2A	1079231
	Axioline F backplane, 6 Smart Elements slots	System	AXL F BP SE6	1088136
	Axioline F backplane, 4 Smart Elements slots	System	AXL F BP SE4	1088135
	Backplane covering element for unused slots	System	AXL SE SC-A	1088134

Axioline F for the Control Cabinet

Acquiring digital data

	Type	Description	Order no.
DI Digital input • 16 to 64 channels • High-speed inputs • 54 mm and 35 mm design width	16 digital inputs, 1-wire	AXL F DI16/1 1H	2688310
	16 digital inputs, 1-wire, high speed	AXL F DI16/1 HS 1H	2701722
	16 digital inputs, 4-wire	AXL F DI16/4 2F	2688022
	32 digital inputs, 1-wire	AXL F DI32/1 1F	2688035
	64 digital inputs, 1-wire	AXL F DI64/1 2F	2701450
DO Digital output • 8 to 32 channels • 2 A outputs • 54 mm and 35 mm design width	8 digital outputs, 2-wire, 2 A	AXL F DO8/2 2A 1H	2688381
	16 digital outputs, 1-wire	AXL F DO16/1 1H	2688349
	16 digital outputs, 3-wire	AXL F DO16/3 2F	2688048
	32 digital outputs, 1-wire	AXL F DO32/1 1F	2688051
DI **DO** Digital input / output • 35 mm	8 digital inputs, 8 digital outputs, 1-wire	AXL F DI8/1 DO8/1 1H	2701916

Acquiring analog data

	Type	Description	Order no.
AI Analog input • 4 to 8 channels • 54 mm and 35 mm design width	4 analog inputs, current	AXL F AI4 I 1H	2688491
	4 analog inputs, voltage	AXL F AI4 U 1H	2688501
	8 analog inputs, current/voltage	AXL F AI8 1F	2688064
	4 temperature inputs, RTD	AXL F RTD4 1H	2688556
	4 temperature inputs, UTH	AXL F UTH4 1H	2688598
	8 temperature inputs, RTD	AXL F RTD8 1F	2688077
	8 temperature inputs, UTH	AXL F UTH8 1F	2688417
AO Analog output • 4 to 8 channels • 54 mm and 35 mm design width	4 analog outputs, current/voltage	AXL F AO4 1H	2688527
	8 analog outputs, current/voltage	AXL F AO8 1F	2688080

Special function modules

	Type	Description	Order no.
FKT Special function modules • 54 mm and 35 mm design width	1 interface can be configured as RS-485/RS-422 or RS-232	AXL F RS UNI 1H	2688666
	2 counter inputs, 2 incremental encoder inputs	AXL F CNT2 INC2 1F	2688093
	1 SSI interface, 1 analog output	AXL F SSI1 AO1 1H	2688433

Signal Conditioners

## Highly compact signal conditioners

The 6-mm signal conditioners from the MINI Analog range offer the full spectrum of analog signal conditioning. They are also extremely efficient with regard to saving costs, space, and energy. The comprehensive approval package means they can be used in a range of areas. You benefit from saving up to 65% of space when compared to other signal conditioners on the market.

Your advantages

- ☑ Space savings up to 65 % compared to other signal conditioners on the market with the 6.2 mm overall width

- ☑ High energy efficiency and long service life, thanks to low power consumption

- ☑ Flexible power bridging and convenient group error indication by means of DIN rail connector and the fault monitoring system function

- ☑ Convenient configuration and monitoring via DIP switches or software for extended function and monitoring


Easily accessible terminal points and FASTCON Pro plug-in connection terminal blocks

Measure signals during operation, without disconnecting the current loops

Rapid power bridging and group error messaging
In addition to rapid power bridging, the DIN rail connector also simplifies wiring, system extension or module replacement during operation. Group error messaging enables convenient diagnostics.
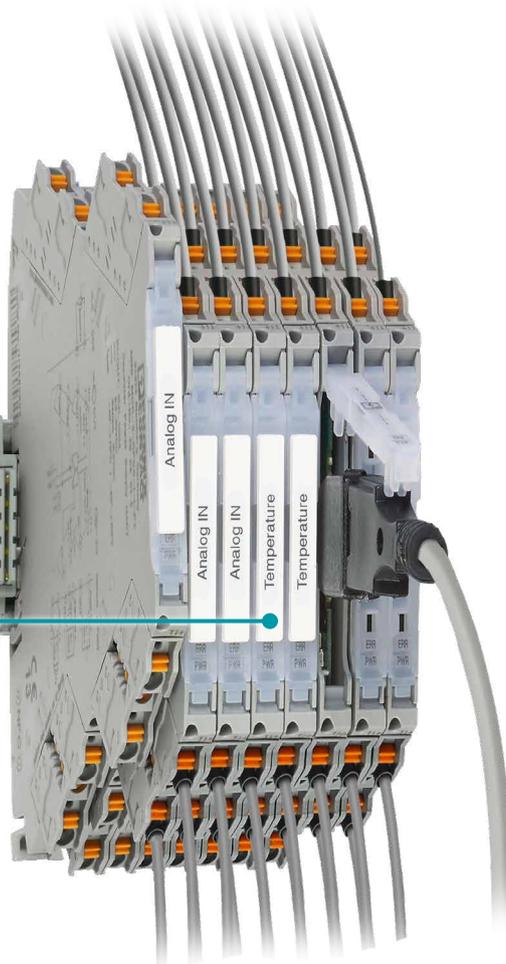
Service-friendly
Large-surface marking areas enable complete loop identification using standard marking material. All status and error indicators are always visible and provide you with an instant overview on site.

Smart parameterization and monitoring
Depending on the product type, you can access the devices wirelessly via NFC and Bluetooth. Benefit from the comprehensive functions of the MINI Analog Pro app and parameterize the modules directly on site, or read the current measured values during operation.
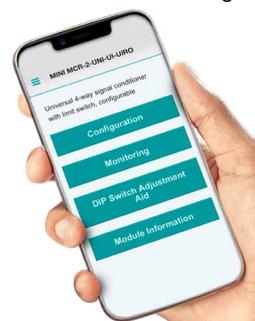
Signal Conditioners

Fixed signal conversion and isolation

	Input signal	Output signal	Description	Order no.
	0-10 V DC	0-10 V DC	MINI MCR-2-U-U	2902042
		Active 4-20 mA	MINI MCR-2-U-I4	2902029
	Active 4-20 mA	0-10 V DC	MINI MCR-2-I4-U	2902002
		Active 4-20 mA	MINI MCR-2-I-I	2901998

Universal and configurable analog signal conversion and isolation

	Input signal	Output signal	Description	Order no.
	Universal analog	Universal analog	MINI MCR-2-UI-UI	2902037
	Universal analog	Universal analog + Relay	MINI MCR-2-UNI-UI-UIRO	2902026

Temperature signal conversion and isolation

	Input signal	Output signal	Description	Order no.
	RTD	Universal analog	MINI MCR-2-RTD-UI	2902049
	Thermocouple	Universal analog	MINI MCR-2-TC-UI	2902055
	Universal temperature	N.O. relay set point	MINI MCR-2-T-REL	2905632

Low-power signal conversion and isolation

	Input signal	Output signal	Description	Order no.
	Active 4-20 mA	Passive 4-20 mA	MINI MCR-2-I-I-ILP	2901994
			MINI MCR-2-2I-2I-ILP	2901996
	Active universal analog	Active 4-20 mA	MINI MCR-2-UI-I-OLP	2902061
	Passive 4-20 mA	Active 4-20 mA	MINI MCR-2-RPS-I-I-OLP	2906446
			MINI MCR-2-RPS-2I-2I-OLP	2906448

Specialty signal conversion and isolation

	Input signal	Output signal	Description	Order no.
	4-20 mA/HART	2x 4-20mA/HART	MINI MCR-2-RPSS-I-2I	2905628
	Analog	Frequency and set point	MINI MCR-2-UI-FRO	2902031
	Frequency and PWM	Active 4-20 mA	MINI MCR-2-F-UI	2902056
	Load cell/strain gage	4-20 ma/0-10 V	MCR-SGA-4/6-DC	5604058
	Potentiometer	Active 4-20 mA	MINI MCR-2-POT-UI	2902016
	Universal analog	2x 4-20 mA	MINI MCR-2-UI-2I-NC	2905026
	Universal analog	Set point/relay out	MINI MCR-2-UI-REL	2902033

HART

	Input signal	Output signal	Description	Order no.
	4-20 mA/HART	4-20 mA/HART	MINI MCR-2-RPSS-I-I	2902014

Duplicator

	Input signal	Output signal	Description	Order no.
	Universal Analog	Universal analog	MINI MCR-2-UNI-UI-UI	2905026

Note: All signal conditioners are also available with Push-in connection

Slim Line Relays

PLC Relay System

Relay systems from Phoenix Contact form the powerful and reliable interface between control and system peripherals. The lead-frame technology of the PLC-INTERFACE relay series provides the solid foundation for reliably switching, isolating, and amplifying signals. In addition, electromechanical and solid-state relays are used – this combination proves itself day after day in millions of switching operations in a multitude of applications and in relay switching.

Quality is a priority at Phoenix Contact, so even small details are of great importance to us. With our own plastic and metal parts manufacturing facilities, we produce the parts that form the basis of the high-quality components. 100% of the products are tested during the process. To ensure that innovative product ideas are continuously implemented in design and development departments, expertise and in-house skills are being further extended.

Scan the QR code to learn more online

Electromechanical relays — PLC series

PLC relay assembly with electromechanical relay	Input-coil voltage	Output current	Sets of contacts	Termination style	Description	Order no.
	12 V DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-12DC/21	2966906
				Push-in	PLC-RPT-12DC/21	2900316
			DPDT - 14 mm	Screw	PLC-RSC-12DC/21-21	2967235
				Push-in	PLC-RPT-12DC/21-21	2900329
	24 V DC	50 mA	SPDT - 6.2 mm	Screw	PLC-RSC-24DC/21AU	2966265
				Push-in	PLC-RPT-24DC/21AU	2900306
		6 A	SPDT - 6.2 mm	Screw	PLC-RSC-24DC/21	2966171
				Push-in	PLC-RPT-24DC/21	2900299
			DPDT - 14 mm	Screw	PLC-RSC-24DC/21-21	2967060
				Push-in	PLC-RPT-24DC/21-21	2900330
		10 A	SPDT - 14 mm	Screw	PLC-RSC-24DC/21HC	2967620
				Push-in	PLC-RPT-24DC/21HC	2900291
	24 V AC or DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-24UC/21	2966184
				Push-in	PLC-RPT-24UC/21	2900300
			DPDT - 14 mm	Screw	PLC-RSC-24UC/21-21	2967073
				Push-in	PLC-RPT-24UC/21-21	2900332
	120 V AC or DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-120UC/21	2966197
				Push-in	PLC-RPT-120UC/21	2900304
			DPDT - 14 mm	Screw	PLC-RSC-120UC/21-21	2967086
				Push-in	PLC-RPT-120UC/21-21	2900335

Solid-state relays — PLC series

PLC relay assembly with solid-state relay	Input-coil voltage	Output current	Sets of contacts	Termination style	Description	Order no.
	5 V DC	3 A	NO ONLY - 6.2 mm	Screw	PLC-OSC-5DC/24 DC/2/ACT	2980144
				Push-in	PLC-OPT-5DC/24 DC/2/ACT	2900375
	24 V DC	100 mA	NO ONLY - 6.2 mm	Screw	PLC-OSC-24DC/ 48 DC/100	2966728
				Push-in	PLC-OPT-24DC/ 48 DC/100	2900352
		3 A	NO ONLY - 6.2 mm	Screw	PLC-OSC-24DC/ 24 DC/2	2966634
				Push-in	PLC-OPT-24DC/24 DC/2	2900364
	120 V AC or DC	3 A	NO ONLY - 6.2 mm	Screw	PLC-OSC-120UC/24 DC/2	2966650
				Push-in	PLC-OPT-120UC/24 DC/2	2900355
Please note: AC outputs are also available						

PLC Relay System

Triple-rated, hazardous-location relays

Input-coil voltage	Output current	Sets of contacts	Termination style	Description	Order no.
12 V DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-12DC/21/EX	2909522
			Screw	PLC-RSC-12DC/21-21/EX	2909517
	10 A	SPDT - 14 mm	Screw	PLC-RSC-12DC/21/HC/EX	2909518
24 V DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-24DC/21/EX	2909524
			Push-in	PLC-RPT-24DC/21/EX	2909528
		DPDT - 14 mm	Screw	PLC-RSC-24DC/21-21/EX	2909509
			Push-in	PLC-RPT-24DC/21-21/EX	2909514
	10 A	SPDT - 14 mm	Screw	PLC-RSC-24DC/21/HC/EX	2909519
			Push-in	PLC-RPT-24DC/21/HC/EX	2909532
120 V AC or DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-120UC/21/EX	2909525
		DPDT - 14 mm	Screw	PLC-RSC-120UC/21-21/EX	2909511
	10 A	SPDT - 14 mm	Screw	PLC-RSC-120UC/21/HC/EX	2909520

Please note: Additional coil voltages and connection technology options are available, please inquire

Open ended cables

Length	Description	Order no.
0.5 m	CABLE-FLK14/OE/0,14/ 50	2305761
1 m	CABLE-FLK14/OE/0,14/ 100	2305253
2 m	CABLE-FLK14/OE/0,14/ 200	2305279
3 m	CABLE-FLK14/OE/0,14/ 300	2305295

Note: Cables are available in various other lengths and in double ended versions

PLC relay bridging

Colour	Order no. 2-pos.	Order no. 500 mm
Red	2966236	2966786
Blue	2966812	2966692
Gray	2966825	2966838
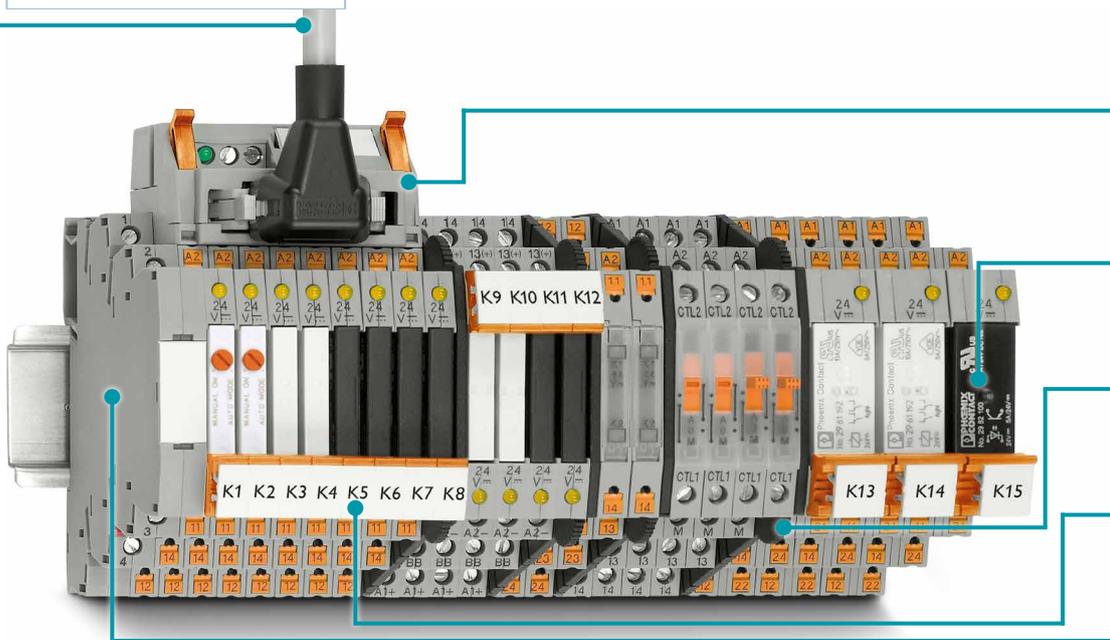
V8 adapter

Input card	Output card
2296553	2295554

Wide range of solutions
Over 600 standard and specialty relay solutions

Partition plate
2966841 - PLC - ATP-BK

Terminal marking
6.2 mm wide: 0828736
14 mm: 0829144
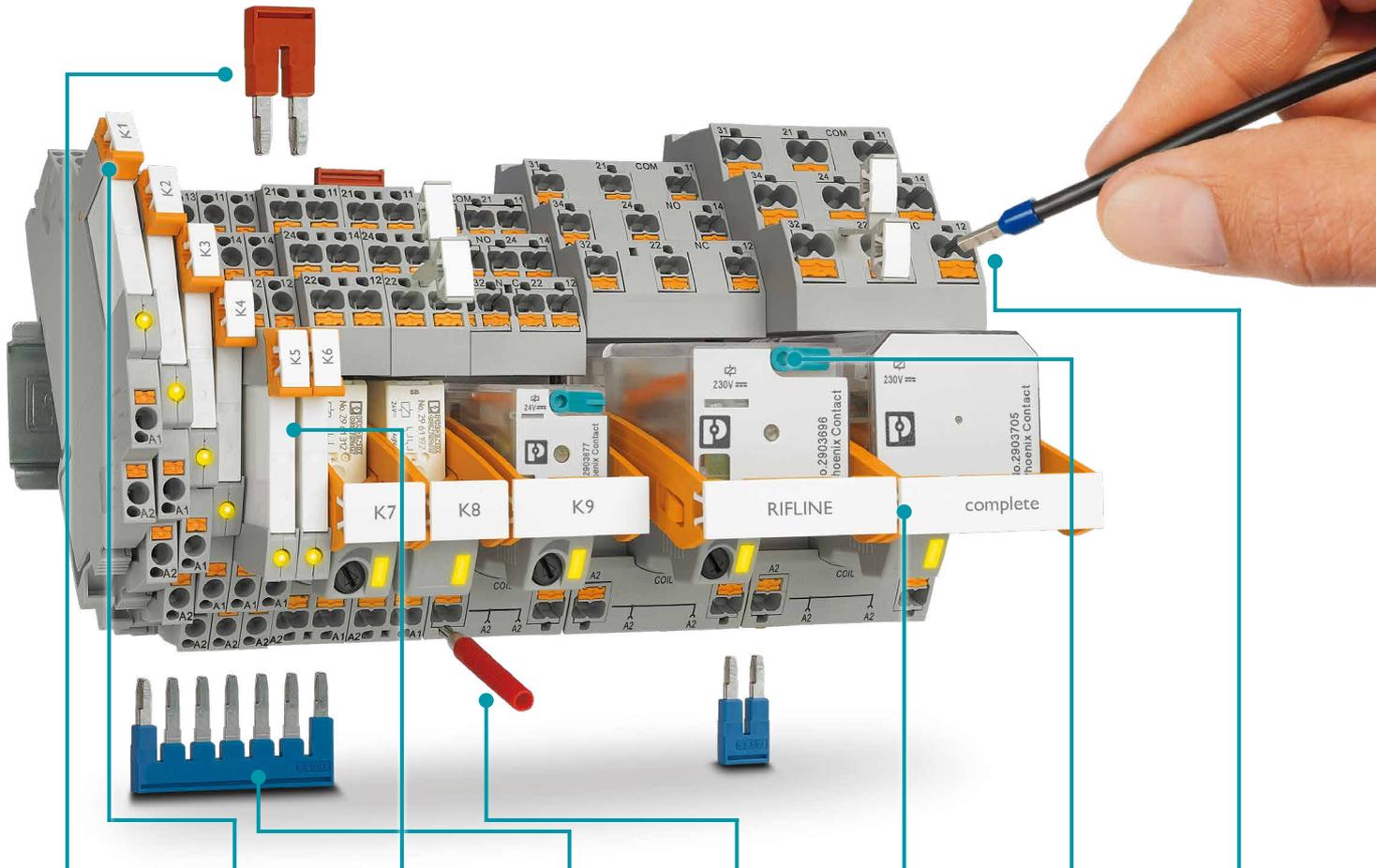
Potential distribution
2966508 — PLC-ESK GY

General Purpose and Ice-cube Relays

RIFLINE complete — industrial relay system

Phoenix Contact RIFLINE complete industrial relay system is a cost-effective modular ice cube relay series with products ranging from a slim 6.2 mm coupling relay to a small power contactor replacement. RIFLINE complete uses familiar technologies and accessories from CLIPLINE complete, such as Push-in technology, plug-in bridges, end clamps, test plugs, and marking accessories, making it an economical choice.

| Easy potential distribution using FBS bridging | Wide range of marking options | Slimline relays to ice cube style relays, available in Push-in Technology | Reduced A2 "common" terminal wiring effort using FBS bridging | Test plug adapters | Completely assembled modules include relay, base, retention clip, and inductive kickback protection | Manual operators with push-to-test and twist-to-lock functions | Wide wire range: terminals from 20 AWG to 10 AWG |

Electromechanical relays — RIFLINE

Type	Input voltage	Output current	Sets of contacts	Termination style	Description	Order no.
RIF-0 6.2 mm wide 66 mm tall Lowest profile of all relays	24 V DC	6 A	NO only	Push-in	RIF-0-RPT-24DC/ 1	2903361
RIF-1 16 mm wide 75 mm tall Pin contacts	24 V DC	11 A	SPDT	Push-in	RIF-1-RPT-LDP-24DC/1X21	2903342
		8 A	DPDT	Push-in	RIF-1-RPT-LDP-24DC/2X21	2903334
		50 mA	DPDT	Push-in	RIF-1-RPT-LDP-24DC/2X21AU	2903330

Electromechanical relays — RIFLINE

Type	Input voltage	Output current	Sets of contacts	Termination style	Description	Order no.
RIF-1 16 mm wide 75 mm tall Pin contacts	120 V AC	10 A	SPDT	Push-in	RIF-1-RPT-LV-120AC/1X21	2903340
		8 A	DPDT	Push-in	RIF-1-RPT-LV-120AC/2X21	2903332

Electromechanical ice-cube relays — RIFLINE

Type	Input voltage	Output current	Sets of contacts	Termination style	Description	Order no.
RIF-2 31 mm wide 75 mm tall Blade contacts	24 V DC	10 A	2PDT	Push-in	RIF-2-RPT-LDP-24DC/2X21	2903315
		6 A	4PDT	Push-in	RIF-2-RPT-LDP-24DC/4X21	2903308
	120 V AC	8.5 A	2PDT	Push-in	RIF-2-RPT-LV-120AC/2X21	2903311
		6 A	4PDT	Push-in	RIF-2-RPT-LV-120AC/4X21	2903305
RIF-3 40 mm wide Pin contacts	24 V DC	8.5 A	3PDT	Push-in	RIF-3-RPT-LDP-24DC/3X21	2903294
	120 V AC	6 A	3PDT	Push-in	RIF-3-RPT-LV-120AC/3X21	2903293
RIF-4 42 mm wide Small contactor style Blade contacts	24 V DC	10 A	3PDT	Push-in	RIF-4-RPT-LDP-24DC/3X21	2903278
	120 V AC	8 A	3PDT	Push-in	RIF-4-RPT-LV-120AC/3X21	2903277

Please note: Additional contact arrangement and coil voltage options are also available

Electromechanical ice-cube relays (with manual switch) — ECOR Faston series

Type	Input voltage	Output current	Sets of contacts	Description	Order no.
ECOR Faston relay plugs	24 V DC	12 A	1PDT	REL-FO/LD-24DC/1X21MS	1308302
	24 V DC	8 A	2PDT	REL-FO/LD-24DC/2X21/MS	1308298
	120 V AC	12 A	1PDT	REL-FO/LRC-120AC/1X21/MS	1308327
	120 V AC	12 A	2PDT	REL-FO/LRC-120AC/2X21/MS	1308316

Accessories — ECOR-1 Faston

Type	Description	Order no.
Base (SINGLE pole)	ECOR-1-BSC2/FO/1X21	1308331
Base (DOUBLE pole)	ECOR-1-BSC2/FO/2X21	1308332
Bracket	ECOR-FO-RH-1H	1325205

Electromechanical ice-cube relays — ECOR-2 series

Type	Input voltage	Output current	Sets of contacts	Description	Order no.
ECOR 2 relay plugs	24 V DC	12 A	2PDT	REL-IR-BL/L- 24DC/2X21	1032526
	115 V AC	12 A	2PDT	REL-IR-BL/L-115AC/2X21	1109556
	24 V DC	6 A	4PDT	REL-IR-BL/L- 24DC/4X21	1032527
	24 V AC	6 A	4PDT	REL-IR-BL/L- 24AC/4X21	1109563
	115 V AC	6 A	4PDT	REL-IR-BL/L-115AC/4X21	1109564

Accessories — ECOR-2

Type	Description	Order no.
Base (screw terminals)	ECOR-2-BSC3/4X21	2907521
Bracket	ECOR-RH-2L	1051972

Please note: Rated current values are for standalone relay plugs only. When assembled onto the base, value will default to lowest rated current between the base and plug

Timer Relays

Multifunctional timer relays with OLED display and NFC communication

Benefit from precise adjustment and easy handling with the MACX-TR smart multifunctional timer relays. Control your timer processes easily and reliably via the OLED display and pushbuttons.

Your advantages

☑ Easy handling directly on the device with a combination of OLED display and pushbuttons

☑ Intuitive time settings – no calculations or checks needed

☑ Optional communication via NFC and smartphone app

))NFC))

Scan the QR code to learn more online

MACX-TR series

Connection	Functions	Description	Order no.
Screw	Multifunctional timer	Single config.	MACX-TR-1T-MUL	1096429
Push-in	Multifunctional timer	Single config.	MACX-TR-1T-MUL-PT	1096431
Screw	Multifunctional timer	Dual config.	MACX-TR-2T-MUL	1103345
Push-in	Multifunctional timer	Dual config.	MACX-TR-2T-MUL-PT	1103355
Screw	OFF delay timer	MACX-TR-1T-POFF	1119403
Push-in	OFF delay timer	MACX-TR-1T-POFF-PT	1119399

Monitoring Relays

Versatile monitoring functions with intuitive operation

The smart MACX-MR monitoring relay provides you with many monitoring functions with extended setting options, large measuring ranges, and a broad supply voltage range.

Your advantages

☑ High-contrast OLED display for on-site configuration and measured value display

☑ Smart configuration and easy transfer of configurations with the MACX-MR app via NFC communication

☑ Wide supply voltage range with galvanic isolation from the measuring circuit

☑ PIN protection against unauthorized changes

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MACX-MR Series

Connection	Functions	Description	Order no.
Screw	3 Phase voltage monitoring	Up to 690 V	MACX-MR-3V-690	1336410
Push-in	3 Phase voltage monitoring	Up to 690 V	MACX-MR-3V-690-PT	1336412
Push-in	3 Phase voltage monitoring	Up to 900 V	MACX-MR-3V-900-PT	1336547
Screw	1 Phase voltage monitoring	MACX-MR-V-600	1336426
Push-in	1 Phase voltage monitoring	MACX-MR-V-600-PT	1336507
Screw	Phase monitoring	MACX-MR-PH-690	1336404
Push-in	Phase monitoring	MACX-MR-PH-690-PT	1336408
Screw	Temperature monitoring	MACX-MR-PTC	1336523
Push-in	Temperature monitoring	MACX-MR-PTC-PT	1336527

Speed Starters With Intuitive Operation

CONTACTRON

The Speed Starter is the new device class between motor starters and frequency converters with a particularly intuitive operation. This compact solution provides all of the functions necessary for different speeds, soft start, and safe stopping with the Safe Torque Off (STO) function. The CONTACTRON Speed Starter features simple operation with various speeds, and soft start, all the way to energy efficiency and ramping functions. The addition of the analog input terminals allows you to easily vary the speed via a 4-20 mA or 0-10 V signal.

Single phase input models are rated for three phase motors upto a nominal voltage of 240 V AC. Three phase input models are rated for three phase motors upto a nominal voltage of 480 V AC.

Scan the QR code to learn more online

Your advantages with our speed starters

✓ **Simple, safe, and efficient** ✓ **Quick installation and startup** ✓ **Safe shutdown with Safe Torque Off (STO)** ✓ **Saving space in the control cabinet** (35 mm) ✓ **Cost-effective solution**

Safe Torque Off   Various speeds   Direct start

Reversing start   Ramp function   Motor protection

Speed starters

Input	Input (V AC)	Output power rating (kW)	Integrated EMC filter	Description	Order no.
Single phase	110…..240	0.25	No	CSS 0.25-1/3	1201132
Single phase	110…..240	0.25	Yes	CSS 0.25-1/3-EMC	1201520
Single phase	110…..240	0.37	No	CSS 0.37-1/3	1201135
Single phase	110…..240	0.37	Yes	CSS 0.37-1/3-EMC	1201600
Single phase	110…..240	0.55	No	CSS 0.55-1/3	1201494
Single phase	110…..240	0.55	Yes	CSS 0.55-1/3-EMC	1201602
Single phase	110…..240	0.75	No	CSS 0.75-1/3	1201509
Single phase	110…..240	0.75	Yes	CSS 0.75-1/3-EMC	1201613
Single phase	110…..240	1.5	No	CSS 1.5-1/3	1201511
Single phase	110…..240	1.5	Yes	CSS 1.5-1/3-EMC	1201642
Three phase	220…..480	0.25	No	CSS 0.25-3/3	1201679
Three phase	220…..480	0.25	Yes	CSS 0.25-3/3-EMC	1201713
Three phase	220…..480	0.37	No	CSS 0.37-3/3	1201683
Three phase	220…..480	0.37	Yes	CSS 0.37-3/3-EMC	1201825
Three phase	220…..480	0.55	No	CSS 0.55-3/3	1201694
Three phase	220…..480	0.55	Yes	CSS 0.55-3/3-EMC	1201828
Three phase	220…..480	0.75	No	CSS 0.75-3/3	1201695
Three phase	220…..480	0.75	Yes	CSS 0.75-3/3-EMC	1201829
Three phase	220…..480	1.5	No	CSS 1.5-3/3	1201650
Three phase	220…..480	1.5	Yes	CSS 1.5-3/3-EMC	1201696

# Smart Solutions for Functional Safety

Inputs

Safety sensors initiate the safety function. Safe RFID non-contact door switches offer full SIL 3/PLe safety protection in a series wiring connection. Easily monitor door access and safe position with slim profile, non-contact door switches. PSRswitch allows for up to 30 sensors to be connected in series, with diagnostic status communicated to a controller via IO-Link. Quick and easy connection via M12 cabling makes for a full Phoenix Contact solution.

Logic

Safety logic devices are the brain of the safety system, controlling safety function by monitoring both inputs and outputs. From simple single function, to distributed safe control networks, logic devices ensure proper function and detect any errors from the sensors of output devices. These scalable solutions provide the right safety function for all types of systems, from a single e-stop safety relay to a fully integrated safety solution monitoring a factory automation process.
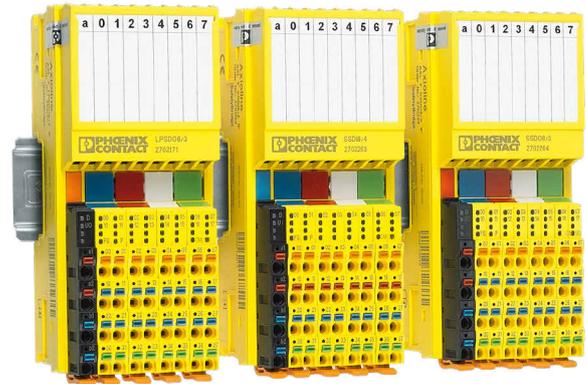
Outputs

Outputs are responsible for energizing and de-energizing equipment safely and reliably. Hybrid motor starters with integrated safety functionality up SIL 3/PLe allow streamlined integration of emergency stop circuitry for three-phase motors up to 5HP. Eliminating the need for a redundant contactor and all of the associated interlocking wiring can save 75% on space and wiring time. Additional functionality, such as overload protection or reversing contactors, can all be achieved in a slim, 22.5 mm housing. Outputs are available as stand-alone devices, as part of a modular motor starter system, or as a networkable motor starter.

PSRmodular Safety System

Your flexible safety solution — tool-free

PSRmodular is a configurable small-scale controller. It allows you to monitor several safety functions in a single application. It is easy to create the safety logic using the PSRmodular software and drag and drop.

The system functions as a stand-alone solution, and can act as the overall machine control system for smaller machines. You can use the basic module as a separate component for this purpose.

Scan the QR code to learn more online

Your advantages

- ☑ Configure safety with easy SAFECONF software
- ☑ 20 safe inputs and 4 safe outputs
- ☑ Expandable with I/O and relay modules
- ☑ Live program view via USB mini cable
- ☑ Networking gateway available

Safe motion monitoring

Safe extension modules for monitoring downtimes, speed, direction of rotation, and NPN/PNP proximity switches, single or double encoders (HTL, TTL, SINCOS), and monitoring of up to two axis per module.

PSRmodular

Safe digital inputs	EDM/ reset inputs	Safe digital outputs	Max. no. of safe I/Os in the system	Signal outputs	Max. no. of signal outputs in the system	Max no. of operators (blocks)	Max. timer/ muting/ guard locks	Max. no. of external signals	Description	Order no.
8	2	2 x pair	128 / 16	2	32	64	32 / 4 / 4	8 / 16	PSR-M-B1- SDI8-SDO2-DO2-P	1104972
8	4	4 x single	128 / 32	4	48	128	48 / 8 / 8	32 / 32	PSR-M-B2- SDI8-SDO4-DO4-PI	1104975
8	4	4 x single	128 / 32	4	48	128	48 / 8 / 8	32 / 32	PSR-M-B3-SDI8-SDO4-DO4-PI	1300897
8	4	4 x single	128 / 32	4	48	128	48 / 8 / 8	32 / 32	*PSR-M-B3-XC-SDI8-SDO4-DO4-PI	1337855

All modules are also avaliable with screw connection — *PSR-M-B3 features an integrated gateway

Flexible extension modules with 8 or 16 signal outputs

If there are not enough I/Os, you can extend the system on a modular basis with up to 14 safety-related extension modules. They are simply connected to the base module via the DIN rail connector. This provides you with additional I/Os for connecting more sensors and actuators.

The modular safety technology can be incorporated into existing networks via a gateway.

PSRmodular combines functionality and flexibility, and closes the gap between simple safety relays and programmable safe controllers.

[1] Some common expansion cards are listed below. Please consult our website for all expansion options
[2] When adding additional IO, the T-BUS connector is required for the controller expansion IO includes the connector

Safe extension modules

Type	Inputs	Outputs	Description	Order no.
Digital IN/OUT	8 digital	4x or 2 pairs	PSR-M-EF1-SDI8-SDO4-DO4-PI	1104889
Digital IN/OUT	8 digital	2 pairs	PSR-M-EF8-SDI8-SDO2-DO2-PI	1105523
Digital IN	16 digital	—	PSR-M-EF2-SDI16-PI	1104887
Digital OUT	—	4 pairs	PSR-M-EF4-SDO4-DO4-PI	1104868
Digital OUT	—	4 x 2 A	PSR-M-EF5-SDO4-2A-DO8-PI	1104977
Relay	—	4 x relay	PSR-M-EF6-SDOR4-PI	1104983
Digital OUT	—	8	PSR-M-E1-DO8-PI	1105133
Digital OUT	—	16	PSR-M-E2-DO16-PI	1105136

Safety Relays

PSRmini: Highly compact safety relays for machine building

Type	Applications							Output contacts					Safety approvals — PL in accordance with EN ISO 13849-1	Safety approvals — SILCL in accordance with EN 62061	Width in mm	Connection technology — Screw connection	Connection technology — Push-in connection
PSR-MS20[1] 24 V DC	●	●	—	●	—	—	—	A	1	—	—	1	c[4]	1[4]	6.8	2904950	—
PSR-MS21 24 V DC	Coupling module for safe controllers						—	A	1	—	—	1	e	3	6.8	2702192	—
PSR-MS25[1] 24 V DC	●	●	—	●	—	—	—	M	1	—	—	1	c[4]	1[4]	6.8	2904951	—
PSR-MS30 24 V DC	●	●	—	●	—	●	—	A	1	—	—	—	e	3	6.8	2904952	—
PSR-MS35 24 V DC	●	●	—	●	—	●	—	M	1	—	—	—	e	3	6.8	2904953	—
PSR-MS40[3] 24 V DC	●	●	—	—	—	●	—	A	1	—	—	1	e	3	6.8	2904954	—
PSR-MS45[3] 24 V DC	●	●	—	—	—	●	—	M	1	—	—	1	e	3	6.8	2904955	—
PSR-MS50[2] 24 V DC	●	●	—	●	—	—	—	A	1	—	—	1	e	3	6.8	2904956	—
PSR-MS55[2] 24 V DC	●	●	—	●	—	—	—	M	1	—	—	1	e	3	6.8	2904957	—
PSR-MS60[3] 24 V DC	●	●	●	●	—	●[10]	—	A	2	—	—	—	e	3	6.8	2904958	—
PSR-MC20[1] 24 V DC	●	●	—	●	—	—	—	A/M	3	—	—	1	c[4]	1[4]	12.5	2700466	2700467
PSR-MC30 24 V DC	●	●	—	●	—	●	—	A/M	2	—	—	1	e	3	12.5	2700498	2700499
PSR-MC31 24 V DC	●	●	●	●	—	●	●	A/M	2 (pnp)	—	—	1	e	3	12.5	1015520	1015503
PSR-MC32 24...230 V DC	●	●	●	●	—	●[10]	—	A/M	3	—	1	—	e	3	12.5	2700524	2700525

[1] 1-channel sensor circuit [2] Antivalent sensor circuit [3] Without cross-circuit detection [4] Up to PL e/SIL 3 possible depending on the application [5] EN-81 approval [6] In conjunction with suitable evaluation device [7] Non-delayed contacts: Cat. 4/PL e, SIL 3, off-delayed contacts: Cat. 3/PL d, SIL 2 [8] Type IIIA in accordance EN 574 [9] Type IIIC in accordance with EN 574 [10] Also compatible with PSRswitch [11] IO-Link device [12] Safety relay for CONTACTRON pro
A = autostart, M = manual, monitored start

Safety Relays

PSRmini: Highly compact safety relays for machine building

Type	Applications							Output contacts					Safety approvals		Width in mm	Connection technology	
									NO	delay	NC	SC	PL in accordance with EN ISO 13849-1	SILCL in accordance with EN 62061		Screw connection	Push-in connection
PSR-MC34 24 V DC	●	●	—	●	—	●	—	A/M	3	—	—	1	e	3	12.5	2700540	2700548
PSR-MC37[5] 24 V DC	●	●	—	●	—	—	—	A	3	—	1	1	e	3	22.5	2702411	2702412
PSR-M38[12] 24 V DC	●	●	●	●	—	●[10]	—	A/M	2	—	—	1	e	3	22.5	1009831	1009832
PSR-MC40[3] 24 V DC	●	●	●	●	—	●[10]	—	A/M	3	—	—	1	e	3	12.5	2700569	2700570
PSR-MC42[11] 24 V DC	●	●	●	●	—	●[10]	—	A/M	2	—	—	1	e	3	17.5	2702801	2702902
PSR-MC43[11] 24 V DC	●	●	●	●	—	●[10]	—	A/M	2 (pnp)	—	—	1	e	3	17.5	1087561	1087569
PSR-MC45 24 V DC	●	●	●	●	—	●	—	A/M	3	—	—	1	e	3	22.5	1082024	1082029
PSR-MC50[2] 24 V DC	●	●	—	●	—	—	—	A/M	3	—	—	1	e	3	12.5	2700553	2700564
PSR-MC70 24 V DC	●	●	●	●	—	●[10]	—	A/M	1	1	—	1	c[4]	1[4]	12.5	2702094	2702095
PSR-MC72 24 V DC	●	●	●	●	—	●[10]	—	A/M	1	1	—	1	e	3	12.5	2702096	2702097
PSR-MC73 24 V DC	●	●	●	●	—	●[10]	—	A/M	3	2	—	1	e	2	22.5	1015533	1015526
PSR-MC82 24 V DC	Contact extension							—	5	—	1	1	e[6]	3[6]	17.5	2702382	2702383

[1] 1-channel sensor circuit [2] Antivalent sensor circuit [3] Without cross-circuit detection [4] Up to PL e/SIL 3 possible depending on the application [5] EN-81 approval [6] In conjunction with suitable evaluation device [7] Non-delayed contacts: Cat. 4/PL e, SIL 3, off-delayed contacts: Cat. 3/PL d, SIL 2 [8] Type IIIA in accordance EN 574 [9] Type IIIC in accordance with EN 574 [10] Also compatible with PSRswitch [11] IO-Link device [12] Safety relay for CONTACTRON pro
A = autostart, M = manual, monitored start

PSRclassic: Conventional safety relays for machine building

Type	Applications							Output contacts				Safety approvals PL in accordance with EN ISO 13849-1	Safety approvals SILCL in accordance with EN 62061	Connection technology Screw connection	Connection technology Push-in connection
PSR-ESA2-B 24 V AC/DC	●	●	—	—	—	—	A	4	—	1	—	c[2]	1[2]	2963802	2963954
PSR-ESAM2/3X1-B 230 V AC/DC	●	●	—	—	—	—	A/M	3	—	1	—	c[2]	1[2]	2901430	2901431
PSR-ESAM4/2X1 24 V AC/DC	●	●	—	—	—	—	A/M	2	—	1	—	e	3	2900525	2900526
PSR-ESAM4/8X1 24 V AC/DC	●	●	—	—	—	—	A/M	8	—	1	—	e	3	2963912	2963996
PSR-ESD-30 24 V DC	●	●	●	●	—	●	A/M	2	2	—	—	e	3	2981800	2981813
PSR-ESD-300 24 V DC	●	●	●	—	—	●	A/M	3	2	1	—	e[4]	3[4]	2981428	2981431
PSR-ESL4[1] 24 V AC/DC	●	●	●	—	—	●	A/M	3	—	1	—	e	3	2981059	2981062
PSR-THC4[5] 24 V AC/DC	—	●	—	—	●	—	A	2	—	1	—	e	3	2963721	2963983
PSR-URML4[1] 24 V DC	Contact extension for OSSD signals							3	—	1	—	e	3	2903583	2903584
PSR-URM4 42 ... 230 V AC/DC	Contact extension							4	—	2	—	e[3]	3[3]	2702924	2702925
PSR-URM4 24 V AC/DC	Contact extension							5	—	2	—	e[3]	3[3]	2963734	2964005
PSR-URM4-B 24 V AC/DC	Contact extension							5	—	2	—	e[3]	3[3]	2981033	2981046

[1] Without cross-circuit detection [2] Up to PL e / SILCL 3 possible depending on the application [3] In conjunction with suitable evaluating device
[4] Non-delayed contacts: Cat. 4 / PL e, SILCL 3, contacts with dropout delay: Cat. 3 / PL d, SILCL 2 [5] Type IIIC in accordance with EN 574
A = autostart, M = manual, monitored start

Safety Relays

PSRmini: Highly compact, safe coupling relays for the process industry																	
Type	**Applications**	**Output contacts**			**Diagnostics/proof test**				**Safety approvals**					→‖←	**Connection technology**	
	Highly compact, safe coupling relays for failsafe controllers:	(contact symbol)	(contact symbol)	(contact symbol)	Visual via LED	Active error feedback via A1[2]	Measurement on the device	Self-monitoring with interlocking	SIL in accordance with IEC 61508 / 61511	SIL in accordance with IEC 50156	ATEX / IECEx / Class I Zone 2	G3 in accordance with ANSI / ISA-S71.04	GL	Width in mm	Screw connection	Push-in connection
PSR-PS20 24 V DC	For safety-related shutdown (ESD)	1	1	1	●	●	●	—	3	3	●	●	●	6.8	2700356	—
PSR-PS21 24 V DC		1	1	1	●	●	●	—	2	2	●	●	●	6.8	2700357	—
PSR-PS22 24 V DC		1	1	—	●	●	●	—	3	3	●	●	●	6.8	2702524	—
PSR-PS23 24 V DC		1	1	—	●	—	●	—	3	3	●	●	●	6.8	2702663	—
PSR-PS40 24 V DC		1	—	1	●	—	—	●	3	3	●	●	●	6.8	2700398	—
PSR-PC20 24 V DC		1	1	1	●	●	●	—	3	3	●	●	●	12.5	2700577	2700578
PSR-PC21 24 V DC		2	2	—	●	—	●	—	3	—	●	●	—	12.5	1086945	1086946
PSR-PC32 24 ... 230 V		2	1	—	●	—	●	—	3	3	●	●	●	17.5	2700581	2700582
PSR-PC40 24 V DC		2	—	1	●	●	—	●	3	3	●	●	●	12.5	2700588	2700589
PSR-PC50 24 V DC	For safety-related switch-on (F&G)	1	—	1	—	●	●	—	3[1]	—	●	—	●	17.5	2904664	2904665
PSR-PC51 24 V DC		1	1	—	—	●	●	—	3	3	●	●	●	17.5	2702522	2702523
PSR-PC52 24 V DC		1	1	—	—	●	●	—	3	3	●	●	●	17.5	1017062	1017064

[1] Low demand mode
[2] With suitable controller

Safety Relays

PSRclassic: Conventional safe coupling relays for the process industry

Type	Applications	Output contacts			Diagnostics/proof test				Safety approvals					→‖←	Connection technology	
					Visual via LED	Active error feedback via A1[2]	Measurement on the device	Self-monitoring with interlocking	SIL in accordance with IEC 61508 / 61511	SIL in accordance with IEC 50156	ATEX / IECEx / Class I Zone 2	G3 in accordance with ANSI / ISA-S71.04	GL	Width in mm	Screw connection	Push-in connection
PSR-FSP 24 V DC	Classic, safe coupling relays for failsafe controllers: / For safety-related shutdown (ESD)	1	1	—	—	—	●	—	3	3	—	—	●	17.5	2981978	2981981
PSR-FSP/2x1 24 V DC		2	1	—	—	—	●	—	3	3	—	—	●	17.5	2986960	2986957
PSR-FSP2/2x1 24 V DC		2	1	—	—	—	●	—	2	2	—	—	●	17.5	2986575	2986588
PSR-ESP4 24 V DC		2	1	—	—	—	—	●	1[1]	—	—	—	●	22.5	2981020	2981017

[1] Up to PL e/SIL 3 possible depending on the application

PSRmotion: Zero-speed and over-speed safety relays

Type	Applications					Output contacts		Safety approvals			Connection technology	
	(motor)	(encoder)	(initiator)	n=0	n<n_max			Category in accordance with EN ISO 13849-1	PL in accordance with EN ISO 13849-1	SIL in accordance with EN 62061	Screw connection	Push-in connection
PSR-MM25 24 V DC	●	—	—	●	—	1	2	3	e	3	2702355	2702356
PSR-MM30 24 V DC	—	●	●	●	●	2	2	4	e	3	2702357	2702358
PSR-MM35 24 V DC	●	—	—	—	●	1	1	4	e	3	1249515	1249516

Legend for applications, outputs, and safety approvals

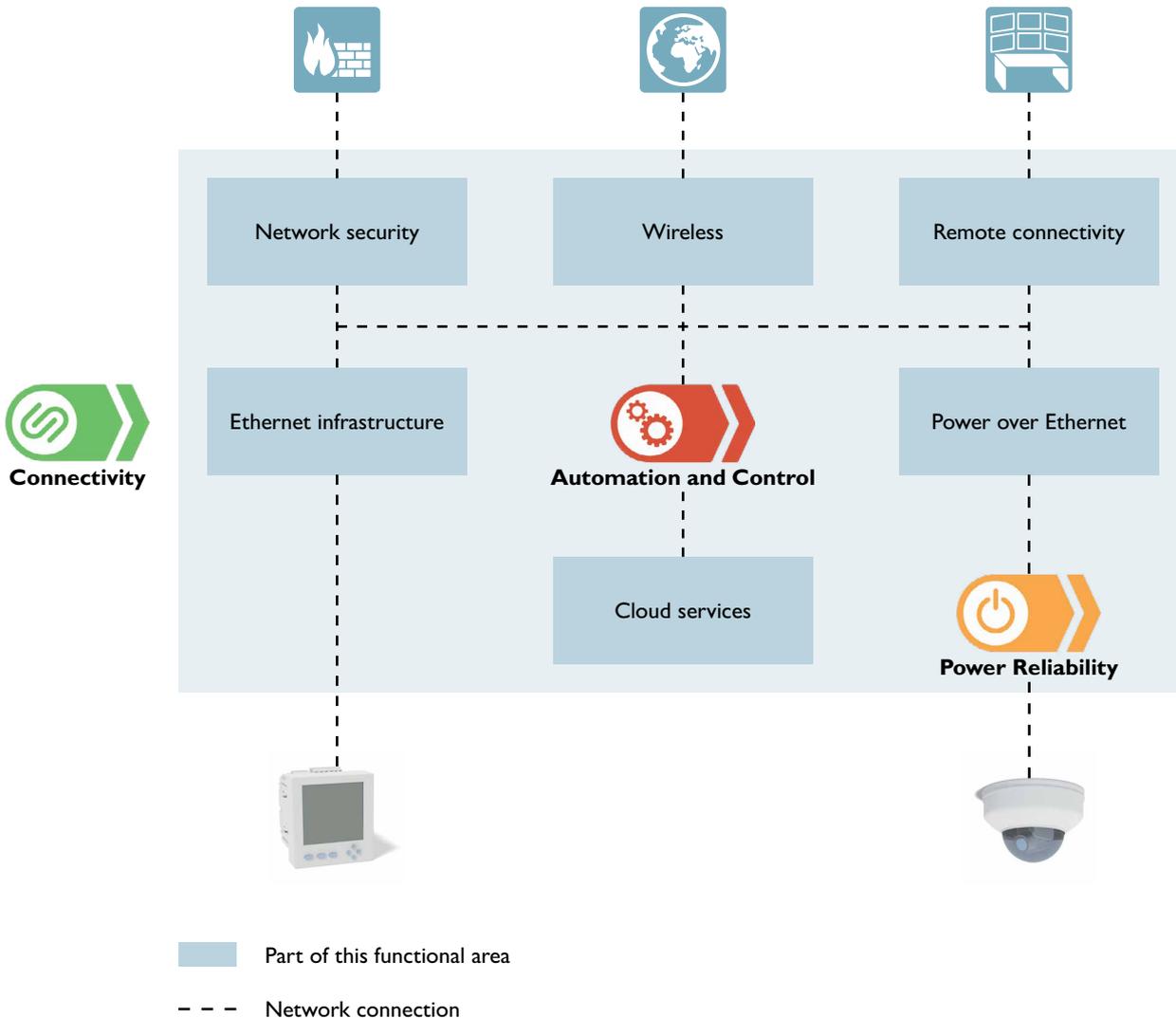| Emergency stop	Safety door switch, mechanical	Light grid	Solenoid switch	Two-hand function	Transponder switch	Safety shut-off mats	Start/restart	Enabling current path /N/O contact	Off-delayed contact	N/C contact	Sensor-free motor monitoring	Encoder	Initiators

Networking

With the broad range of technologies supported by Phoenix Contact networking and security products, you can design and implement scalable, reliable, and high-functioning systems.

Ethernet infrastructure devices provide everything from basic connectivity to advanced managed switches, with options that include powering end devices, field-wiring connectivity, and converting between physical media.

With network security, proper separation of IT and OT networks can be achieved along with providing defense-in-depth to ensure critical assets are protected by state-of-the-art technology .

Cellular remote connectivity powers communication with devices around the globe, while the increasing capabilities of cloud services provide the support and data management that is behind IIoT.

Wireless technology enables convenient, reliable, and cost effective communication whether on the factory floor or to remote sites miles away.

Connectivity

Network security	Wireless	Remote connectivity
Ethernet infrastructure	**Automation and Control**	Power over Ethernet
	Cloud services	**Power Reliability**

Part of this functional area

Network connection

Unmanaged Ethernet Switches

FL SWITCH 1000N unmanaged switches

FL SWITCH 1000N

EAC IK CE
cULus RoHS

Plastic construction
-10°C – +60°C

FL SWITCH 1000NT

EAC IK CE
cULus RoHS
Ex DNV·GL

Metal construction*
-40°C – +75°C
Conformal coat variants
hazardous approvals
maritime approvals

*Base and DIN-latch

Your advantages

☑ Cost-effective
☑ Gigabit/Fast ethernet speed
☑ Simple
☑ Multiple fiber options

Switch 1000N

Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
5	—	5	10/100 Mbps	FL SWITCH 1005N	1085039
5	2 SFP	7	10/100 Mbps	FL SWITCH 1005N-2SFX	1085176
4	1 Fiber SC-D	5	10/100 Mbps	FL SWITCH 1004N-FX	1084159
4	1 Fiber ST	5	10/100 Mbps	FL SWITCH 1004N-FX ST	1085179
4	1 Single mode fiber SC	5	10/100 Mbps	FL SWITCH 1004N-FX SM	1085214
4	1 SFP	5	10/100 Mbps	FL SWITCH 1004N-SFX	1085177
8	—	8	10/100 Mbps	FL SWITCH 1008N	1085256
16	—	16	10/100 Mbps	FL SWITCH 1016N	1085255

Switch 1100N

Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
4	1 SFP	5	10/100/1000 Mbps	FL SWITCH 1104N-SFP	1085173
5	—	5	10/100/1000 Mbps	FL SWITCH 1105N	1085254
5	2 SFP	7	10/100/1000 Mbps	FL SWITCH 1105N-2SFP	1085171
8	—	8	10/100/1000 Mbps	FL SWITCH 1108N	1085243
16	—	16	10/100/1000 Mbps	FL SWITCH 1116N	1085219

Switch 1000NT

Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
5	—	5	10/100 Mbps	FL SWITCH 1005NT	1085170
8	—	8	10/100 Mbps	FL SWITCH 1008NT	1085165
4	1 Fiber SFP	5	10/100 Mbps	FL SWITCH 1004NT-SFX	1085169
5	2 Fiber SFP	7	10/100 Mbps	FL SWITCH 1005NT-2SFX	1085164
12	2 Fiber SFP	14	10/100 Mbps	FL SWITCH 1012NT-2SFP	1249598
24	—	24	10/100 Mbps	FL SWITCH 1024T	1343027

Switch 1100NT

Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
5	—	5	10/100/1000 Mbps	FL SWITCH 1105NT	1085163
8	—	8	10/100/1000 Mbps	FL SWITCH 1108NT	1085162
16	—	16	10/100/1000 Mbps	FL SWITCH 1116T	1085115

IP67 Machine mounted switches

`IP67`

Unmanaged machine mounted IP67 switch

	Class I Div 2	Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
	✓	8	—	8	10/100 Mbps	FL SWITCH 1608	1196227
					10/100/1000 Mbps	FL SWITCH 1708	1196228

Managed machine mounted IP67 switch

	Class I Div 2	Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
	✓	8	—	8	10/100 Mbps	FL SWITCH 2608	1106500
					10/100/1000 Mbps	FL SWITCH 2708	1106615

PoE and Ethernet Installation Technology

Power over ethernet

Security cameras, wireless access points, VoIP telephones, and even sensors are some of the many devices that employ the convenience and cost savings of PoE technology.

Scan the QR code to learn more online

PoE

Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
8	8 PoE af/at	8	10/100/1000 Mbps	FL SWITCH 1000-8POE-GT	1102079
5	4 PoE af/at	5	10/100/1000 Mbps	FL SWITCH 1001-4POE-GT	1102077
5	4 PoE af/at	5	10/100 Mbps	FL SWITCH 1001T-4POE	2891064
5	4 PoE af/at	5	10/100/1000 Mbps	FL SWITCH 1001T-4POE-GT	1026937
8	8 PoE af/at	8	10/100 Mbps	FL SWITCH 1000N-8POE	1343031
8	8 PoE af/at	10	10/100/1000 Mbps	FL SWITCH 1100T-8POE-2SFP	1467018
8	8 PoE af/at/bt	8	10/100 Mbps	FL SWITCH 1000-8POE	1342622
8	8 PoE af/at/bt	8	10/100/1000 Mbps	FL SWITCH 1100T-8POE	1343034
5	8 PoE af/at/bt	7	10/100/1000 Mbps	FL SWITCH 1100-5POE-2SFP	1342621

PoE injectors

PoE injector

Connection method	Temperature range	Power budget	Special features	PoE standard	Description	Order no.
RJ45/RJ45	0 °C ... +55 °C	2 x 15 W	Electrical isolation in the power supply unit	IEEE 802.3 af	FL PSE 2TX	2891013
	0 °C ... +60 °C	15/30 W	—	IEEE 802.3 af/at (PoE+)	INJ 1000	2703005
		60 W	Electrical isolation in the power supply unit	Prepared for PoE bt (PoE++)	INJ 1010	2703007
	-40 °C ... +75 °C	15/30 W	Electrical isolation in the power supply unit, surge protection and shield current diagnostics	IEEE 802.3 af/at (PoE+)	INJ 1000-T	2703006
		60 W		Prepared for PoE bt (PoE++)	INJ 1010-T	2703008
		15/30 W		IEEE 802.3 af/at (PoE+)	INJ 1100-T	2703009

Patch panels

Connection method	Type	Shielding	Cable shield connection	Description	Order no.
RJ45/RJ45	Standard ethernet patch panel, 8-pos., 10/100/1000 Mbps	Right on the DIN rail	Using an RJ45 socket	PP-RJ-RJ	2703015
RJ45/RJ45			Tooless using shield contact spring	PP-RJ-SC	2703016
RJ45/IDC				PP-RJ-IDC	2703019

Managed Switches

Managed Switches 2000 and 2100

Simple unmanaged switch or powerful managed switch? The intelligent 2000 switches (Fast ethernet switch) and 2100 switches (Gigabit switch) combine the best of both worlds. They are as easy to use as an unmanaged switch yet provide the features of a managed switch. This improves the stability and robustness of your machine network.

Intelligent switches for the machine — Switch 2000 and 2100

	Copper ports	Fiber optic ports	Combo ports	Port speed	Special features	Description	Order no.
	5 x RJ45	—	—			FL SWITCH 2005	2702323
	8 x RJ45	—	—	10/100 Mbps	RSTP, Ethernet I/P, extended multicast filtering and Profinet class A	FL SWITCH 2008	2702324
	16 x RJ45	—	—			FL SWITCH 2016	2702903
	5 x RJ45	—	—			FL SWITCH 2105	2702665
	8 x RJ45	—	—	10/100/1000 Mbps		FL SWITCH 2108	2702666
	16 x RJ45	—	—			FL SWITCH 2116	2702908

Supply voltage: 18...32 V DC, temperature range: 0°C ... +60°C, IP20, front port outlet direction

Managed Switches 2200 and 2300

With easy startup and a variety of versions with functions graded according to the application, the 2200 and 2300 managed switches enable cost-effective management of your ethernet network. In addition to the extended scope of functions, the switches offer communication via fiberglass, as well as approvals for the maritime sector and the process industry.

Switch 2200 and 2300 intelligent switches for universal use — Class I, Div 2

	Copper ports	Fiber optic ports	Combo ports	Port speed	Special features	Description	Order no.
	5 x RJ45	—	—			FL SWITCH 2205	2702326
	8 x RJ45	—	—			FL SWITCH 2208	2702327
	7 x RJ45	1 x MM SC	—			FL SWITCH 2207-FX	2702328
	7 x RJ45	1 x SM SC	—			FL SWITCH 2207-FX SM	2702329
	6 x RJ45	2 x MM SC	—			FL SWITCH 2206-2FX	2702330
	6 x RJ45	2 x SM SC	—		RSTP, Ethernet I/P, extended multicast filtering and Profinet class B	FL SWITCH 2206-2FX SM	2702331
	6 x RJ45	2 x MM ST	—			FL SWITCH 2206-2FX ST	2702332
	6 x RJ45	2 x SM ST	—	10/100 Mbps		FL SWITCH 2206-2FX SM ST	2702333
	6 x RJ45	2 x SFX	—		Digital alarm output Fast Ring Detection, Large Tree Support, MRP Manager, up to 32 static VLANs, pool-based DHCP server and option 82	FL SWITCH 2206-2SFX	2702969
	4 x RJ45	2 x SFX	2 x SFX/RJ45			FL SWITCH 2204-2TC-2SFX	2702334
	16 x RJ45	—	—			FL SWITCH 2216	2702904
	14 x RJ45	2 x MM SC	—			FL SWITCH 2214-2FX	2702905
	14 x RJ45	2 x SM SC	—			FL SWITCH 2214-2FX SM	2702906
	14 x RJ45	2 x SFX	—			FL SWITCH 2214-2SFX	1006188
	12 x RJ45	2 x SFX	2 x SFX/RJ45			FL SWITCH 2212-2TC-2SFX	2702907
	8 x RJ45	—	—			FL SWITCH 2308	2702652
	6 x RJ45	2 x SFP	—			FL SWITCH 2306-2SFP	2702970
	4 x RJ45	2 x SFP	2 x SFP/RJ45	10/100/1000 Mbps		FL SWITCH 2304-2GC-2SFP	2702653
	16 x RJ45	—	—			FL SWITCH 2316	2702909
	14 x RJ45	2 x SFP	—			FL SWITCH 2314-2SFP	1006191
	12 x RJ45	2 x SFP	2 x SFP/RJ45			FL SWITCH 2312-2GC-2SFP	2702910
	8 x RJ45	—	—			FL SWITCH 2208 PN	1044024
	6 x RJ45	2 x SFX	—	10/100 Mbps		FL SWITCH 2206-2SFX-PN	1044028
	16 x RJ45	—	—			FL SWITCH 2216 PN	1044029
	14 x RJ45	2 x SFX	—		PROFINET (preset), PROFINET status LEDs	FL SWITCH 2214-2SFX PN	1044030
	8 x RJ45	—	—			FL SWITCH 2308 PN	1009220
	6 x RJ45	2 x SFP	—	10/100/1000 Mbps		FL SWITCH 2306-2SFP PN	1009222
	16 x RJ45	—	—			FL SWITCH 2316 PN	1031673
	14 x RJ45	2 x SFP	—			FL SWITCH 2314-2SFP PN	1031683

Supply voltage: 12... 57 V DC (redundant), temperature range: - 40°C ... +70°C, IP20, front port outlet direction, PROFINET Class B. Approvals: DNV/GL, BV, ABS, LR, RINA, IECEx, ATEX Zone 2

Secure Remote Connectivity

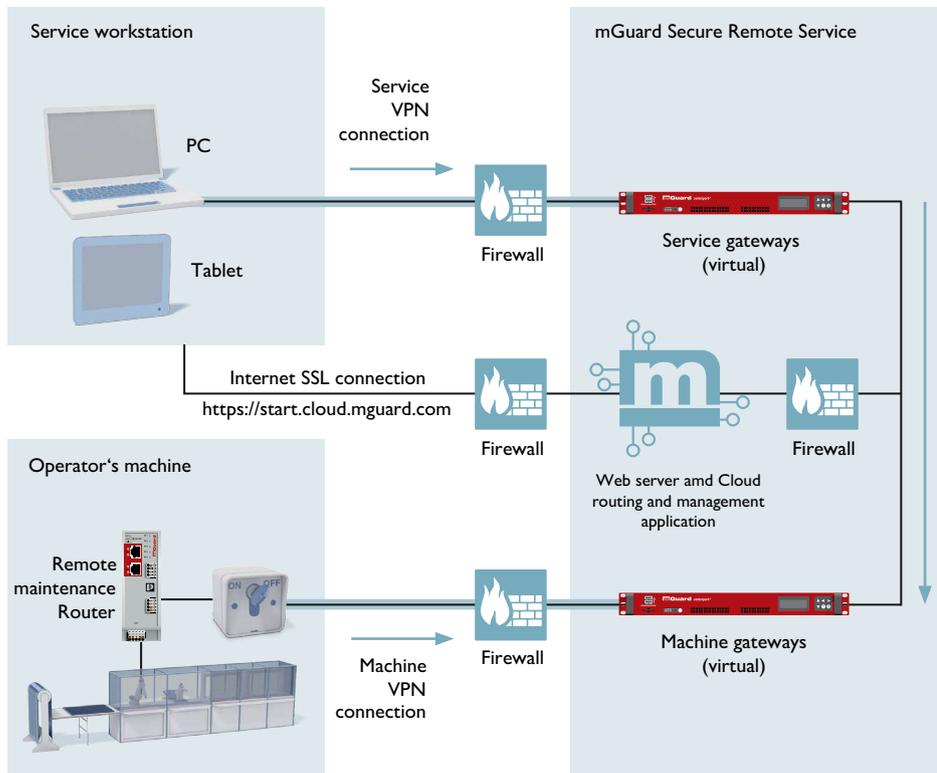## Industrial routers for remote maintenance and cybersecurity

Our robust industrial routers connect various networks via cable (LAN router and NAT router) or mobile network (3G/UMTS/4G/LTE router) for the remote maintenance and protection of your local network. A large number of products feature integrated VPN and firewall functions. For the highest level of security, the mGuard routers protect against cyber attacks and malware.

mGuard

Notes	mGuard Secure Cloud	Routing/ NAT	Configurable firewall	Description	Order no.
Remote access gateway with 1 LAN and 1 WAN port	✓	✗	✗	CLOUD CLIENT 1001T-TX/TX	1221706
Gigabit router with 1 LAN, 1 WAN port supporting VPN/Remote access (2 tunnels), Routing/NAT and a firewall	✓	✓	✓	FL MGUARD 2102	1357828
Gigabit router with 4 LAN, 1 WAN port supporting VPN/Remote access (2 tunnels), Routing/NAT and a firewall	✓	✓	✓	FL MGUARD 2105	1357850
Gigabit router WITH 1 LAN, 1 WAN port supporting VPN/Remote access (250 tunnels), Routing/NAT and a fully featured stateful firewall.	✓	✓	✓	FL MGUARD 4302	1357840
Gigabit router WITH 4 LAN, 1 WAN port supporting VPN/ Remote access (250 tunnels), Routing/NAT and a fully featured stateful firewall. Configurable DMZ port also available	✓	✓	✓	FL MGUARD 4305	1357875
Cellular radio for 4G (CAT 4), worldwide use	✓	✓	✓	TC ROUTER 3002T-4G GL	1632697

Cloud-based Remote Maintenance

Intelligent service concepts with the mGuard Secure Cloud

Service workstation

PC

Tablet

Service VPN connection

Firewall

mGuard Secure Remote Service

Service gateways (virtual)

Internet SSL connection
https://start.cloud.mguard.com

Firewall

Firewall

Web server amd Cloud routing and management application

Operator's machine

Remote maintenance Router

Machine VPN connection

Firewall

Machine gateways (virtual)

Features

- ☑ Highly secure IPsec VPN communication
- ☑ 2-factor authentication
- ☑ User management for access to various customers and systems
- ☑ Superior availability worldwide
- ☑ Operated in Germany in accordance with the most stringent security and data protection standards
- ☑ Industry-proven mGuard security technology

See more of what we have to offer for industrial ethernet

Download: Industrial Ethernet PDF

Ⓢ Connectivity

Whether in a control cabinet or in the field – the energy industry places a large number of demands on connection technology. It must be as safe and secure as it is durable, and it must also be easy to operate. Connection technologies from Phoenix Contact meet these demands.

CONNECTIVITY

- Heavy-duty Connectors
- Distributor Boxes
- Connectors and Cordsets

Scan the QR code to learn more online

Connectivity

Connections in the cabinet, through the cabinet, and in the field are the bridge between the field-based sensors and logic controlling a system.

The automation and control level reads inputs and drives outputs. These devices must be connected by secure discrete wiring or through networks.

These same devices must be reliably powered, which requires efficient distribution and marshalling to energize and balance loads. Loads can range from small milliamp signals to high horsepower motor connections, depending on the end application.

Analog signals often require special functionality at the connection point, such as testing, measurement, or fusing. Specialty terminal blocks support these functions.

When system complexity and I/Os increase, networking field signals outside the enclosure is often a more efficient way to integrate larger systems than point-to-point wiring.

Passive distributor boxes for every application

In decentralized connection technology, passive distributor systems connect the I/O devices to the PLC. Phoenix Contact provides a series of sensor/actuator boxes that are specially tailored for every demand. Examples include different thread sizes, various connection technologies for the master cable, and products where the specifications go beyond the scope typically found in industrial environments.
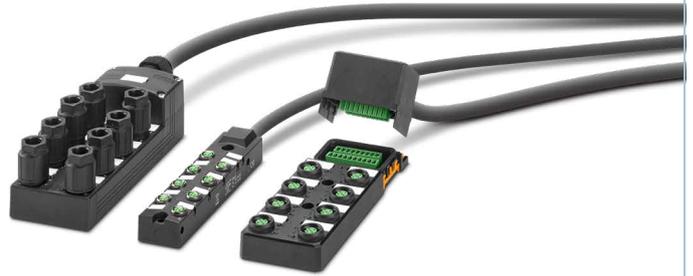
Through

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.

Field

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 analog signals and brings them back to the control level. Networks or industrial protocols are used to communicate with devices using the same language.

RJ45 STANDARD Industrial Ethernet Patch Cables

With the cable sheath in the **Low Smoke Zero Halogen (LSZH)** material class, the shielded patch cables are ideally suited for future-proof cabling solutions in building automation.
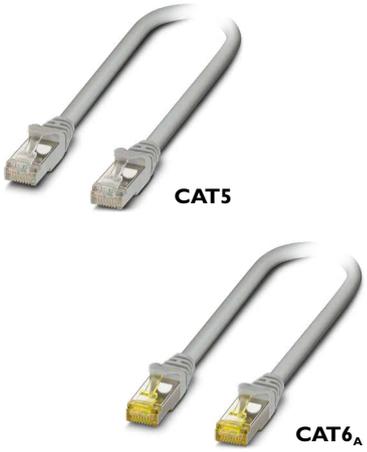
Data transmission speeds of up to 10 Gbps in accordance with CAT5 and CAT6$_A$ allow demanding ethernet applications to be implemented. The protected locking clip ensures a robust design and increased vibration resistance. Comprehensive approvals for the global market and cable lengths from 0.3 m to 20 m allow versatile applications.

Your advantages

☑ Ideal for demanding ethernet applications with up to 10 Gbps data transmission in accordance with CAT6$_A$

☑ Ideal for building automation and control cabinet applications due to the use of cable sheath with LSZH material class

☑ Reliable due to the protected locking clip

☑ Standard lengths (0.3 m to 20 m)

RJ45 standard shielded patch cables

Length	Order no. CAT5 (up to 1 Gbps)	Order no. CAT6$_A$ (up to 10 Gbps)
0.3 m	1227558	1227572
0.5 m	1227559	1227573
1 m	1227560	1227575
1.5 m	1227561	1227578
2 m	1227562	1227580
3 m	1227563	1227581
5 m	1227564	1227583
7.5 m	1227565	1227585
10 m	1227566	1227588
12.5 m	1227567	1227590
15 m	1227570	1227591
20 m	1227571	1227593

CAT5

CAT6$_A$

High-flex Ethernet Cordsets

Your advantages

- ☑ Category 5, up to 1 Gbps
- ☑ -40°C ... +80°C
- ☑ UV-Resistant CMX outdoor jacket, 600 V rating
- ☑ Up to 20 million lateral flex bend cycles
- ☑ Up to 4.8 million torsional flex cycles
- ☑ Tray-rated for co-location with power cables

Applications

- Robotics and factory automation
- Integrators/cabinet builders/panel shops
- Machine builders
- Surveillance (IP Cameras)
- Vision systems
- Network infrastructure

RJ45 high-flex ethernet patch cables — Teal TPE 600 V cable jacket

Length	Order no. 4-wire (2-pair) Straight / Straight	Order no. 8-wire (4-pair) Straight / Straight
0.3 m	1199417	1199422
0.5 m	1199415	1199427
1 m	1199413	1199426
2 m	1199412	1199425
3 m	1199411	1199424
5 m	1199410	1199423
10 m	1199408	1199421
15 m	1199405	1199420
20 m	1199404	1199418

M12 high-flex ethernet cordsets — Teal TPE 600 V cable jacket

Design	Configuration	0.5 m	1 m	2 m	5 m	10 m	15 m	20 m	30 m	40 m	CMAT
4-pos. D-code	Male straight / Open end	—	—	1406131	1408727	1408728	1418065	1418066	1418067	1418068	1405876/.../...
	Male 90° / Open end	—	—	1406126	1408734	1408735	—	—	—	—	1405871/.../...
	Female straight / Open end	—	—	1406130	1408729	1408730	—	—	—	—	1405875/.../...
	Female 90° / Open end	—	—	1406125	1408736	1408738	—	—	—	—	1405870/.../...
	Male straight / Male straight	1408732	—	1406128	1418076	1418077	1418078	1418079	—	—	1405873/.../...
	Male straight / Female straight	1408731	—	1406129	—	—	—	—	—	—	1405874/.../...
	Male 90° / Male 90°	1408741	—	1406123	—	—	—	—	—	—	1405868/.../...
	Male 90° / Female 90°	1408739	—	1406124	—	—	—	—	—	—	1405869/.../...
	Male straight / RJ45 straight	1408733	—	1406127	1409860	1409861	1409862	1418087	—	—	1405872/.../...
	Male 90° / RJ45 straight	1408742	—	1406122	—	—	—	—	—	—	1405867/.../...
8-pos. A-code	Male straight / Open end	—	—	1406121	1408743	1408744	1418069	1418071	1418072	1418075	1405865/.../...
	Male 90° / Open end	—	—	1406116	1408751	1408752	—	—	—	—	1405860/.../...
	Female straight / Open end	—	—	1406120	1408745	1408746	—	—	—	—	1405864/.../...
	Female 90° / Open end	—	—	1406115	1408754	1408755	—	—	—	—	1405859/.../...
	Male straight / Male straight	1408748	—	1406118	1418080	1418081	1418082	1418083	—	—	1405862/.../...
	Male straight / Female straight	1408747	—	1406119	—	—	—	—	—	—	1405863/.../...
	Male 90° / Male 90°	1408757	—	1406113	—	—	—	—	—	—	1405857/.../...
	Male 90° / Female 90°	1408756	—	1406114	—	—	—	—	—	—	1405858/.../...
	Male straight / RJ45 straight	1408749	—	1406117	1409863	1409864	1409865	1417873	—	—	1405861/.../...
	Male 90° / RJ45 straight	1408758	—	1406112	—	—	—	—	—	—	1405856/.../...
8-pos. X-code	Male straight / Open end	—	1407467	1407468	1407469	1407470	1440575	1440588	—	—	1408648/.../...
	Male straight / Male straight	1440465	1407483	1407484	1407485	1407486	1440517	1440520	—	—	1408644/.../...
	Male straight / RJ45 straight	1440591	1407471	1407472	1407473	1407474	1440643	1440656	—	—	1408647/.../...

RJ45 Patch Cables for Industrial Applications

Individual cabling solutions in industrial applications

The RJ45 patch cables in the INDUSTRIAL series were specifically developed for industrial applications. The shielding concept, vibration resistance, and robust molding ensure reliable data transmission in industrial areas. With the different outlet directions and the wide variety of cables offered by Phoenix Contact, you will find the right cable for flexible installation, drag chains, and robots.

Technical data
- Robust molded connector
- 360° shroud
- Five cable outlet directions
- CAT5 (4-pos. up to 100 Mbps, 8-pos. up to 1 Gbps)
- CAT6$_A$ (up to 10 Gbps)
- One-design connector
- Maximized insertion depth
- All cables are part of the RJ45 INDUSTRIAL connector system
- Approvals: CE, RoHS, REACH, WEEE, EAC, UL

Ideal for demanding data transmission applications in industrial areas

Cable overview: RJ45 INDUSTRIAL

Cable	93B	93C	93M	93K	93R	94B	94C	94F
Schema								
Sheath	PVC	PUR	PUR	PVC	PUR	PUR	PUR	PUR
Design	AWG 22/7	AWG 22/19	AWG 22/7	AWG 22/7	AWG 22/19	AWG 26/7	AWG 26/19	AWG 26/7
Shielding	SFTQ	SFTQ	SFTQ	SFTQ	SFTQ	SF/UTP	SF/UTP	S/FTP
Transmission category	CAT5 (100 Mbps)	CAT5 (100 Mbps)	CAT5 (100 Mbps)	CAT5 (100 Mbps)	CAT5 (100 Mbps)	CAT5 (1 Gbps)	CAT5 (1 Gbps)	CAT6$_A$ (10 Gbps)
Application	Type B Flexible	Type C Drag chain	Type B Flexible	Type B Flexible	Type R Robot	Type B Flexible	Type C Drag chain	Type B Flexible

ⓘ Detailed information on our cables can be found in the technical data for the item on our web shop

INDUSTRIAL patch cables

Configurable item*	1247656				1247661				1247639	1247647	1387606	1387607
Cable	93B, 93C, 93K, 93M, 93R								94B, 94C, 94D		94F	
Protocol	PROFINET / EtherCAT® / Sercos								Ethernet			
Transmission speed	CAT5 (up to 100 Mbps)								CAT5 (up to 1 Gbps)		CAT6$_A$ (up to 10 Gbps)	
Cable	93B	93C	93M	93K	93B	93C	93M	93K	94B	94C	94B	94C	94F	94F

Cable	93B	93C	93M	93K	93B	93C	93M	93K	94B	94C	94B	94C	94F	94F
0.5 m	1112785	1112939	1112925	1112931	1112877	1112871	1113336	—	1441453	1112918	1441195	1113331	1113823	1113204
1.0 m	1112817	1112937	1112924	1112930	1112876	1112857	1113335	—	1441456	1112916	1441200	1113212	1112909	1113202
2.0 m	1112820	1112936	1112923	1112929	1112875	1112870	1113334	—	1441463	1112914	1441443	1113211	1112908	1113198
3.0 m	1112823	1112935	1112921	1112928	1112874	1112869	1113333	1112858	1441464	1112913	1441444	1113210	1112907	1113197
5.0 m	1112856	1112933	1112920	1112927	1112873	1112868	1113332	1113178	1441466	1112912	1441659	1113209	1112906	1113196

Standard item in fixed length (other lengths available under web code #2675)
*Configurable cable and length between 0.5 m and 90.0 m

RJ45 Patch Cables for Industrial Applications

INDUSTRIAL patch cables, angled

Configurable item*	1247660	1247629	1247652	1247633	1247662	1247628	1247646	1247653	1387614	1387609	1387619	1387620
Cable	93B 93C 93K 93M 93R				94B 94C 94D				94F			
Protocol	PROFINET / EtherCAT / SERCOS				Ethernet							
Transmission speed	CAT5 (up to 100 Mbps)				CAT5 (up to 1 Gbps)				CAT6$_A$ (up to 10 Gbps)			
Cable	93B				—				94F			
0.3 m	1113311	1113322	1113292	1113297					1113237	1113249	1113221	1113225
0.5 m	1113304	1113321	1113291	1113295		—			1113236	1113248	1113220	1113224
1.0 m	1113310	1113320	1113290	1113294					1113235	1113247	1113219	1113223
2.0 m	1113309	1113319	1113289	1113293					1113234	1113246	1113218	1113222

Standard item in fixed length (other lengths available under web code #2675)
*Configurable cable and length between 0.5 m and 90.0 m

Configurator for cables and lines

Our configurator directs you to the appropriate RJ45 patch cable for your application – whether for industrial or building applications.

USB patch cables

USB version	USB 2.0	USB 3.2 Gen. 1		USB 3.2 Gen. 2
Head 1 USB type	USB type A			USB type C
Head 2 USB type	USB type A		USB type C	
Sheath material	PVC			
1.0 m	1333136	1333151	1333165	1333197
2.0 m	1333139	1333156	1333187	1333213*
3.0 m	1333140	1333157	1333190	1333214*

ⓘ Other lengths available: 0.3, 0.5, 1.5, 1.8, and 5.0 m   *USB 3.2 Gen. 1

HDMI patch cables

HDMI version	HDMI high speed with ethernet channel				
Head 1 HDMI type	HDMI type A				
Head 2 HDMI type	HDMI type A				
2.0 m	1332082	3.0 m	1332083	5.0 m	1332084

ⓘ Other lengths available: 0.3, 0.5, 1.0, 1.5, and 7.5 m

Cabling Solutions

The ideal RJ45 connectors for PROFINET cabling up to 1 Gbps or Ethernet cabling up to 10 Gbps. QUICKON fast connection technology for assembling without the need for special tools guarantees quick and easy installation in the field. Together with the RJ45 connectors with crimp connection technology, Phoenix Contact provides the ideal solution for every application from CAT5 to CAT6$_A$.

RJ45 connectors

Protocol		Ethernet		PROFINET	Ethernet
Connection technology		IDC insulation displacement connectors			Crimp*
Connection range	AWG 26 ... AWG 24	AWG 26 ... AWG 23		AWG 22	AWG 27 ... AWG 24
CAT5	—	1656725	1658008	1658435	1414382
CAT6$_A$	1419001	—	—	—	1414395

*Requires crimping tool VS-CT-RJ45-H, 1653265

The RJ45 INDUSTRIAL connectors for data transmission speeds up to 10 Gbps are a future-oriented solution for your interface. The one-piece design and assembly without the need for special tools facilitate easy handling.

RJ45 INDUSTRIAL connectors

Protocol	PROFINET				Ethernet			
Connection technology	IDC insulation displacement connectors							
Connection range	AWG 23 ... AWG 22				AWG 26 ... AWG 24			
Category	CAT5			CAT6$_A$	CAT5			CAT6$_A$
Cable outlet	Straight	Upward	Downward	Straight	Straight	Upward	Downward	Straight
Order no.	1421126	1421127	1421128	1149847	1421607	1421876	1421877	1149846

The universal DIN rail adapters offer a high degree of flexibility in a small space. The one-piece housing snaps quickly and easily onto the DIN rail. Accepts RJ45 IDC modules and couplers.

DIN rail adapters

Type	DIN rail adapter
Gray, kit*	1100077
Gray, kit**	1769127
Gray, unassembled	1041740

*includes 1x 1041740 and 1x 1417274   **includes 1x 1041740 and 1x 1041760

RJ45 modules for the DIN rail adapter

Inserts	RJ45 coupling module	RJ45 cable connection with IDC connection
CAT6$_A$	1041760	1417274

RJ45 Version 6 for IP67 / Outdoor Applications

The version 6 data connectors from Phoenix Contact are a cost-effective option for IP-protected connectors. The portfolio of packaged RJ45 connectors includes versions with IDC and crimp connection for CAT5 and CAT6$_A$ applications, as well as preassembled patch cables.

Version 6 RJ45 connectors

Connection technology	IDC	Crimp	IDC	Crimp
External cable diameter	5 mm ... 8.5 mm			
Connection range	AWG 26 ... AWG 23	AWG 27 ... AWG 24	AWG 26 ... AWG 23	AWG 27 ... AWG 24
Colour	Gray		Black	
CAT5	1656990	1414383*	1658493	1414408*
CAT6$_A$	—	1414406*	—	1414410*

*Tool 1653265 required

The version 6 panel-mount frames and further version 6 accessories are a convenient and simple option for creating a reliable IP-protected connection between version 6 data connectors and devices.

Version 6 panel-mount frames

Panel cutout	Circular		Square	
Colour	Gray	Black	Gray	Black
For keystone modules	1689844	1658053	1689080	1658642
For freenet modules	1653744	1658668	—	—
For PCB modules	—	—	1689446	1658655

Version 6 accessories

Description	Protective cover, for covering the contact insert in the panel-mount frame	
Colour	Gray	Black
Order no.	1652606	1658066

The version 6 panel-mount frames can be extended to create the matching insert for your mating connector by adding the appropriate coupling modules for RJ45 and FO connections as well as the cable connection modules for copper connections.

RJ45 jack insert

Description	Cable module	Coupler		PCB module
Connection system	Freenet	Keystone	Freenet	—
CAT5	1652936	1689064	—	1653087
CAT6$_A$	1418984	1086108	1086111	—

FDX 20 Fusion Splice Boxes

FDX 20 splice boxes are the perfect solution for the integration and protection of fiber optics in the industrial environment. Pre-installed pigtails are included in these boxes for quick and easy termination of fiber cable runs using the fusion splicing method. Fusion splicing utilizes an electric arc to fuse two optical fibers together, resulting in a splice that is not only stronger than mechanical splices, but also offers much lower loss and reflectance.

The FDX 20 series also features a steel housing, a patented 3-stage strain relief system, a splice tray, top and bottom entry cable glands, and a splice comb for the protection of fiber cables and splices.

Scan the QR code to learn more online

FDX 20 series for DIN rail mounting
High-speed, future-proof data transmission

The new splice boxes from Phoenix Contact ensure continuously reliable data transmission in real time. With their compact and uniform design, the splice boxes provide plenty of interior space for the secure connection of fiber optics.

FDX 20 series for 19" rack mounting
For all common FO interfaces

The 19-inch splice boxes of the FDX 20 series from Phoenix Contact provide ample interior space for the convenient and secure connection of fiber optics. The IP20 boxes can be extended and their depth can be adjusted. They are particularly suitable for real-time data transmission in industrial applications and data centers.

Fiber optic splice boxes, FDX 20 series, IP20, with pre-terminated pigtails

	DIN rail mounting			19-inch rack mounting		
Fiber type	**6x LC duplex**	**12x LC duplex**	**6x SC duplex**	**12x LC duplex**	**24x LC duplex**	**12x SC duplex**
OM1 (G62.5/125 μm)	1343377	—	1343380	—	—	—
OM2 (G50/125 μm)	1019713	1019709	1019700	1145416	1145375	1145408
OM3 (G50/125 μm)	1343378	—	1343381	—	—	—
OM4 (G50/125 μm)	1019712	1019708	1019698	1145415	1145413	1145406
OS2 PC (E9/125 μm)	1019711	1019707	1019692	1145411	1145409	1143631

FO Singlemode/Multimode Patch Cables

With exceptional quality, the FO patch cables from Phoenix Contact provide the ideal conditions for reliable data transmission with data rates of up to 40 Gbps. The huge variety of connector types and cable lengths enables an individual solution to be created for every application.

Fiber-optic cables

		Zip cord fiber classes	Sheath colour	Fiber category	Ethernet protocol / typical range	Typical wavelength	Fiber structure
Multimode			Orange	OM1	1000Base-SX: min. 350 m 1000Base-LX: min. 550 m	850 nm 1300 nm	62.5 µm / 125 µm
			Orange	OM2	1000Base-SX: min. 525 m 1000Base-LX: min. 1000 m	850 nm 1300 nm	50 µm / 125 µm
			Aqua	OM3	1000Base-SX: min. 1000 m 1000Base-LX: min. 550 m 10GBase-SX: min. 300 m	850 nm	50 µm / 125 µm
			Heather violet	OM4	1000Base-SX: min. 1040 m 1000Base-LX: min. 600 m 10GBase-SX: min. 550 m	850 nm	50 µm / 125 µm
Singlemode			Yellow	OS2	10GBase-LR: min. 10 km 10GBase-ER: min. 40 km	1310 nm 1550 nm	8 µm / 125 µm

FO patch cables (length: 1.0 m*)

Description	OM1			OM2			OM3	
Type	LC	SC	ST	LC	SC	ST	LC	SC
LC	1146497	1146498	1146499	1115633	1115607	1115588	1185473	1185480
SC	1146498	1146504	—	1115607	1115536	1115574	1185480	1185485
ST	1146499	—	1146501	1115588	1115574	1115560	—	—

Description	OM4		OS2 UPC			OS2 APC	
Type	LC	SC	LC	SC	ST	LC	SC
LC	1115625	1115601	1115636	1115618	1115596	1115630	1115613
SC	1115601	1115424	1115618	1115550	1115582	1115613	1115544
ST	—	—	1115596	1115582	1115565	—	—

*Further available length versions: 0.5 m, 1 m, 2 m, 3 m, 5 m, 10 m configurable

Heavy-duty Connectors

Industrial connectors from the HEAVYCON complete series protect your interfaces and ensure the reliable transmission of power, data, and signals even under the harshest conditions. The industrial connectors are resistant to dirt, water, vibrations, and high levels of mechanical strain. The heavy-duty connectors have a seal rating of up to IP69K.
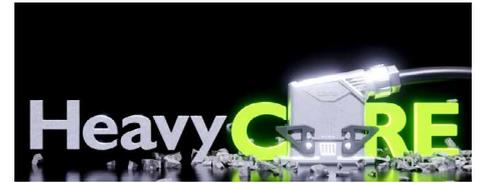
Rock-solid performance, ready when you are.

Scan the QR code to learn more online

Standard (metal) | **Evo (plastic)**
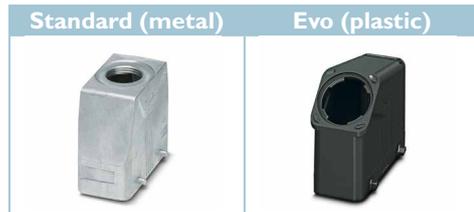
Selector guide — Pick 4 parts

1	2	3	4
INSERT (M&F)	BASE	SLEEVE HOUSING	CABLE GLAND

HEAVYCON STANDARD

Poles	Tech.	Socket (F) Order no.	Socket (F) Description	Plug (M) Order no.	Plug (M) Description	Panel mounting base With cover	Panel mounting base w/o cover	Hood - Top entry Low profile	Hood - Top entry High profile	Hood - Lateral entry Low profile	Hood - Lateral entry High profile
6	Screw	1648128	HC-B 6-I-UT-F	1648115	HC-B 6-I-UT-M	1411319	1411318	1412574 (M20)	1412566 (M25)	1412570 (M20)	1412562 (M25)
	Push-in	1407727	HC-B 6-I-PT-F	1407728	HC-B 6-I-PT-M						
	Crimp	1648160	HC-B 6-I-CT-F	1648157	HC-B 6-I-CT-M						
10	Screw	1648186	HC-B 10-I-UT-F	1648173	HC-B 10-I-UT-M	1411321	1411320	1412629 (M20)	1412605 (M32)	1412625 (M25)	1412600 (M25)
	Push-in	1407729	HC-B 10-I-PT-F	1407730	HC-B 10-I-PT-M						
	Crimp	1605569	HC-B 10-I-CT-F	1605624	HC-B 10-I-CT-M						
16	Screw	1648241	HC-B 16-I-UT-F	1648238	HC-B 16-I-UT-M	1411325	1411324	1412730 (M32)	1412689 (M32)	1412726 (M32)	1412679 (M32)
	Push-in	1407731	HC-B 16-I-PT-F	1407732	HC-B 16-I-PT-M						
	Crimp	1648283	HC-B 16-I-CT-F	1648270	HC-B 16-I-CT-M						
24	Screw	1648306	HC-B 24-I-UT-F	1648296	HC-B 24-I-UT-M	1411331 + 1346546	—	1412779 (M32)	1412754 (M32)	1412774 (M32)	1412750 (M32)
	Push-in	1407735	HC-B 24-I-PT-F	1407736	HC-B 24-I-PT-M						
	Crimp	1648348	HC-B 24-I-CT-F	1648335	HC-B 24-I-CT-M						

HEAVYCON EVO

Poles	Tech.	Socket (F) Order no.	Socket (F) Description	Plug (M) Order no.	Plug (M) Description	Panel mounting base With cover	Panel mounting base w/o cover	Hood - Top and lateral entry Low profile	Hood - Top and lateral entry High profile
6	Screw	1648128	HC-B 6-I-UT-F	1648115	HC-B 6-I-UT-M	1407622	1407621	1407619	1407620
	Push-in	1407727	HC-B 6-I-PT-F	1407728	HC-B 6-I-PT-M				
	Crimp	1648160	HC-B 6-I-CT-F	1648157	HC-B 6-I-CT-M				
10	Screw	1648186	HC-B 10-I-UT-F	1648173	HC-B 10-I-UT-M	1407633	1407632	1407626	1407627
	Push-in	1407729	HC-B 10-I-PT-F	1407730	HC-B 10-I-PT-M				
	Crimp	1605569	HC-B 10-I-CT-F	1605624	HC-B 10-I-CT-M				
16	Screw	1648241	HC-B 16-I-UT-F	1648238	HC-B 16-I-UT-M	1407647	1407646	1420931	1407642
	Push-in	1407731	HC-B 16-I-PT-F	1407732	HC-B 16-I-PT-M				
	Crimp	1648283	HC-B 16-I-CT-F	1648270	HC-B 16-I-CT-M				
24	Screw	1648306	HC-B 24-I-UT-F	1648296	HC-B 24-I-UT-M	1407661 + 1346546	—	1420935	1407657
	Push-in	1407735	HC-B 24-I-PT-F	1407736	HC-B 24-I-PT-M				
	Crimp	1648348	HC-B 24-I-CT-F	1648335	HC-B 24-I-CT-M				

Accessories — Cable gland

HEAVYCON STANDARD		HEAVYCON EVO	
M20	1411163	7-13 mm	1407669 (M20 equivalent)
M25	1411165	9-17 mm	1407670 (M25 equivalent)
M32	1411166	11-21 mm	1407671 (M32 equivalent)
M40	1411167	19-28 mm	1407672 (M40 equivalent)

M8/M12 Distributor Boxes

Distributor boxes for signal and power applications

Use distributor boxes for quick and clear cabling in the field. Distributor boxes bundle several cables into one master cable that is connected to the controller. Thanks to the status indicator, you have an overview of a large number of signals.

Scan the QR code to learn more online

M8 — Metal thread	M12 — Metal thread	M12 — Plastic thread

M8 — Metal thread

Pos.	LED	Single or double occupancy	Cable glands	Connector: Requires master cable*	Length	Description	Order no.
8	✓	Single	—	—	5 m	SACB- 8/3-L- 5,0PUR-M8 HD	1197232
					10 m	SACB- 8/3-L-10,0PUR-M8 HD	1197236
		Double	—	1166980 (M16)	5 m	SACB- 8/4-L- 5,0PUR-M8 HD	1197314

M12 — Metal thread

Pos.	LED	Single or double occupancy	Cable glands	Connector: Requires master cable*	Length	Description	Order no.
8	✗	Single	1516881	—	5 m	SACB-8/ 8- 5,0PUR SCO	1517042
					10 m	SACB-8/ 8-10,0PUR SCO	1517055
		Double	1516894	—	5 m	SACB-8/16- 5,0PUR SCO	1517068
					10 m	SACB-8/16-10,0PUR SCO	1517071
	✓	Single	1516823	—	5 m	SACB-8/ 8-L- 5,0PUR SCO	1517165
					10 m	SACB-8/ 8-L-10,0PUR SCO	1517178
		Double	1516836	—	5 m	SACB-8/16-L- 5,0PUR SCO	1517181
					10 m	SACB-8/16-L-10,0PUR SCO	1517194

M12 — Plastic thread

Pos.	LED	Single or double occupancy	Cable glands	Connector: Requires master cable*	Length	Description	Order no.
8	✗	Single	1452783	—	5 m	SACB-8/ 8- 5,0PUR SCO P	1452518
					10 m	SACB-8/ 8-10,0PUR SCO P	1452521
		Double	1452796	1692844 (M23)	5 m	SACB-8/16- 5,0PUR SCO P	1452547
					10 m	SACB-8/16-10,0PUR SCO P	1452550
	✓	Single	1452848	—	5 m	SACB-8/ 8-L- 5,0PUR SCO P	1452699
					10 m	SACB-8/ 8-L-10,0PUR SCO P	1452709
		Double	1452851	1692459 (M23)	5 m	SACB-8/16-L- 5,0PUR SCO P	1452725
					10 m	SACB-8/16-L-10,0PUR SCO P	1452738

*Master cables

	Type	Number of positions	Cable material	Cable length	Description	Order no.
	Master cable with M23 plug, angled	19	PUR/PVC black	5 m	RCK-TWUM/BL16+3/ 5,0PUR-U	1684072
				10 m	RCK-TWUM/BL16+3/10,0PUR-U	1684085
	Master cable with M16 plug, angled	12		5 m	SAC-12P- 5,0-PUR/M16FR	1693720
				10 m	SAC-12P-10,0-PUR/M16FR	1693733

*Alternative products in accordance with RoHS II without exemption are also available

Accessories

	M8 Screw plug	M12 Screw plug	M12 Plug (Fast locking)
Description	PROT-M8	PROT-MS SCO	PROT-M12
Order no.	1682540	1553129	1680539

Connectors

Phoenix Contact offers metric circular connectors for industrial automation in a variety of designs: from small to large, straight or angled, molded or for assembly in the field. The wide-ranging portfolio offers versatile solutions for transmitting signals, data, and power.

A comprehensive range of M8 and M12 flush-type connectors and panel feed-through have emerged as a result of the various requirements for sensor/actuator device connection technology in industrial environments.

Customer-specific developments for assembly enable optimum adaptation to individual device concepts.

Configurator for cables

Configure your cable connection for signal, data, and power transmission in IP6x environments or for control cabinet applications. Freely selectable cable lengths and cable ends allow customized cable assemblies.

Scan the QR code to access our online cable configurator

Features and benefits

- ☑ 3 to 17 positions
- ☑ A, B, D or X coding
- ☑ Available connections: Screw, Insulation displacement, Push-in, and Crimp

M8

	Positions	Connection	Gender	Diameter	Description	Order no.
	3-pos.	Screw	Male straight	3.5...5 mm	SACC-M 8MS-3CON-M-SW	1501252
			Female straight		SACC-M 8FS-3CON-M-SW	1506888
		Insulation displacement	Male straight	2.5...5 mm	SACC-M 8MS-3QO-0,25-M	1441008
			Female straight		SACC-M 8FS-3QO-0,5-M	1441066
	4-pos.	Screw	Male straight	3.5...5 mm	SACC-M 8MS-4CON-M	1681169
			Female straight		SACC-M 8FS-4CON-M-SW	1506891
		Insulation displacement	Male straight		SACC-M 8MS-4QO-0,5-M	1441037
			Female straight	2.5...5 mm	SACC-M 8FS-4QO-0,5-M	1441079

M12

	Positions	Connection	Gender	Diameter	Description	Order no.
	4-pos.	Screw	Male straight	4...6 mm	SACC-M12MS-4CON-PG 7-M	1662528
			Male angled		SACC-M12MR-4CON-PG7-M	1681101
			Female straight		SACC-M12FS-4CON-PG7-M	1681127
			Female angled		SACC-M12FR-4CON-PG7-M	1681143
		Insulation displacement	Male straight		SACC-M12MS-4QO-0,75-M	1641785
			Female straight		SACC-M12FS-4QO-0,75-M	1641772
		Push-lock	Male straight	4...8 mm	SACC-MS-4PL M SCO	1424657
			Male angled		SACC-M12MR-4PL M	1424654
			Female straight		SACC-M12FS-4PL M	1424655
			Female angled		SACC-M12FR-4PL M	1424656
	5-pos.	Screw	Male straight	4...6 mm	SACC-M12MS-5CON-PG 7-M	1663116
			Male straight	6...8 mm	SACC-M12MS-5CON-PG 9-M	1681460
			Male angled		SACC-M12MR-5CON-PG 7-M	1663129
			Female straight	4...6 mm	SACC-M12FS-5CON-PG 7-M	1662968
			Female angled		SACC-M12FR-5CON-PG 7-M	1662984
		Push-lock	Male straight	4...8 mm	SACC-M12MS-5PL M	1424649
			Male angled		SACC-M12MR-5PL M	1424651
			Female straight		SACC-M12FS-5PL M	1424652
			Female angled		SACC-M12FR-5PL M	1424653
	8-pos.	Screw	Female straight	6...8 mm	SACC-M12FS-8CON-PG9-M	1513347
			Male straight		SACC-M12MS-8CON-PG9-M	1513334
		Insulation displacement	Male straight	5...9.7 mm	SACC-M12MS-8QO-0,5 SH	1414610
			Female straight		SACC-M12FS-8QO-0,5 SH	1414611

Cordsets

Quick and reliable connection, even in confined spaces
Connect sensors and actuators quickly and easily in the field using assembled cables for signal and power transmission. Choose from a range of versions and cable qualities. For requirements that go beyond the classic specifications for industrial environments, we offer a range of specially tailored products. We will also be happy to implement individual solutions on request.

Scan the QR code to learn more online

M8

	Pos.	Gender / Head	Length	Non-shielded PUR jacket order no.	Non-shielded CMAT order no.	Shielded PUR jacket order no.	Shielded CMAT order no.
		Male / Female / Straight	1.5 m	1681923	1405935	1455285	1405828
		Female / Straight	5 m	1669628	1405956	1521737	1405834
		Female / Right angle		1669631	1405957	1521782	1405835
	3-pos.	Male / Straight		1681680	1405939	1521630	1405830
		Male / Right angle		1681716	1405944	1521685	1405833
		Female / Straight	10 m	1694101	1405956	1521740	1405834
		Female / Right angle		1694169	1405957	1521795	1405835
		Male / Straight		1693584	1405939	1521643	1405830
		Male / Right angle		1694114	1405944	1521698	1405833
		Male / Female / Straight	1.5 m	1682168	1405902	1455735	1405810
		Female / Straight	5 m	1681868	1405923	1521931	1405822
		Female / Right angle		1681897	1405924	1521986	1405823
	4-pos.	Male / Straight		1681800	1405906	1521834	1405818
		Male / Right angle		1681839	1405911	1521889	1405821
		Female / Straight	10 m	1683484	1405923	1521944	1405822
		Female / Right angle		1694172	1405924	1521999	1405823
		Male / Straight		1694143	1405906	1521847	1405818
		Male / Right angle		1694156	1405911	1521892	1405821

M12

	Pos.	Gender / Head	Length	Non-shielded PUR jacket order no.	Non-shielded CMAT order no.	Shielded PUR jacket order no.	Shielded CMAT order no.
		Male / Female / Straight	1.5 m	1681525	—	1500826	—
		Female / Straight	5 m	1683510	1405947	1682809	1405927
		Female / Right angle		1694525	1405959	1682838	1405934
	3-pos.	Male / Straight		1668030	1405949	1682676	1405929
		Male / Right angle		1668153	1405955	1682702	1405932
		Female / Straight	10 m	1693034	1405958	1500680	1405933
		Female / Right angle		1694538	1405959	1500693	1405934
		Male / Straight		1682566	1405949	1500664	1405929
		Male / Right angle		1694444	1405955	1500677	1405932
		Male / Female / Straight	1.5 m	1668373	—	1500868	—
		Female / Straight	5 m	1668124	1405925	1682867	1405900
		Female / Right angle		1668247	1405926	1682922	1405901
	4-pos.	Male / Straight		1668069	1405916	1682647	1405896
		Male / Right angle		1668182	1405922	1682896	1405899
		Female / Straight	10 m	1683002	1405925	1500716	1405900
		Female / Right angle		1681389	1405926	1500729	1405901
		Male / Straight		1682993	1405916	1694389	1405896
		Male / Right angle		1694457	1405922	1500703	1405899
		Male / Female / Straight	1.5 m	1681606	1405886	1500907	1405877
		Female / Straight	5 m	1669848	1405892	1682951	1405884
		Female / Right angle		1669877	1405893	1682980	1405885
	5-pos.	Male / Straight		1669783	1405888	1682731	1405879
		Male / Right angle		1669819	1405891	1682773	1405883
		Female / Straight	10 m	1683374	1405886	1500758	1405877
		Female / Right angle		1694541	1405892	1500761	1405884
		Male / Straight		1683361	1405893	1500732	1405885
		Male / Right angle		1694460	1405888	1500745	1405879
		Male / Female / Straight	1.5 m	1522697	1405891	1522985	1405883
		Female / Straight	5 m	1520369	1405851	1522888	1405843
		Female / Right angle		1522642	1405852	1522930	1405844
	8-pos.	Male / Straight		1522516	1405847	1526981	1405839
		Male / Right angle		1522561	1405850	1522833	1405842
		Female / Straight	10 m	1520372	1405851	1522891	1405843
		Female / Right angle		1522655	1405852	1522943	1405844
		Male / Straight		1522529	1405847	1522794	1405839
		Male / Right angle		1522574	1405850	1522846	1405842

M12 Power

Phoenix Contact offers M12 Power connections for AC and DC power in a variety of designs: from straight or angled, molded or for assembly in the field. The wide-ranging portfolio offers versatile solutions field devices from Phoenix Contact.

Power up to 16 A/690 V
- Connection cross-sections up to 2.5 mm^2
- For 1-phase and 3-phase mains voltage applications
- Protected against mismatching for AC and DC applications

M12 Power

	Power connectors	Gender / Head	Length	Cable material / Connector	Description	Order no.
	M12 L-coded	Female / Straight	5 m	Black PUR	SAC-4P- 5,0-PUR/M12FSL	1425075
		Female / Straight	10 m		SAC-4P-10,0-PUR/M12FSL	1425076
		Male connector	—	Push-lock	SACC-M12MSL-4FEPL-CL	1151368
		Female connector	—		SACC-M12FSL-4FEPL-CL	1080233
	M12 T-coded	Female / Straight	5 m	Black PUR	SAC-4P- 5,0-PUR/M12FST	1408825
		Female / Straight	10 m		SAC-4P- 10,0-PUR/M12FST	1408826
		Male connector	—	Push-lock	SACC-M12MST-4CT-CM SH	1151362
		Female connector	—		SACC-M12FST-4CT-CM SH	1151366

Feed-Throughs

Panel-mount sensor receptacles with leads

Panel-mount receptacles allow for a waterproof quick-disconnect into a cabinet or device. There are various options for mounting direction, panel cutout size, lead length, or number of positions.

Front mount

The receptacle threads or pushes through into the enclosure from the front, and is secured with a locknut in the rear (inside) of the enclosure. This provides the most security against tampering, but does not allow pre-wiring of leads until after the product is mounted. Since the enclosure could be either tapped and threaded or punched, the locknut is ordered separately.

Rear mount

The receptacle pushes through the enclosure from the rear and is secured with a locknut on the front (outside) of the enclosure. This allows leads to be pre-terminated to terminals, then pushed into the cutout during final installation. A locknut is included since the enclosure is never threaded for a rear-mount receptacle. A full range for direct PCB mount is also available, see the website for details.

M8 Panel-mount Receptacles With 0.5m Pre-terminated Leads

				M8 3-pos. A-code	M8 4-pos. A-code	
M8 — 3 and 4-pos. sensor receptacles with pre-terminated leads						
Style	**Configuration**	**Panel mount thread**	**AWG**			**Locknut**
Front mount	Female	8 mm	24 AWG	1500350	1500363	1504071
	Male	8 mm	24 AWG	1500334	1500347	1504071
Rear mount	Female	10 mm	24 AWG	1456080	1456093	Included
	Female	12 mm	24 AWG	1453449	1453452	Included
	Male	8 mm	24 AWG	1453478	1453481	Included

ⓘ Additional lengths can be requested

M12 Panel-mount Receptacles With 0.5 m Pre-terminated Leads

				M12 4-pos. A-code	M12 5-pos. A-code	M12 8-pos. A-code	
M12 — 4, 5, and 8-pos. sensor receptacles with pre-terminated leads							
Style	**Configuration**	**Panel mount thread**	**AWG**				**Locknut**
Front mount	Female	PG9	22 AWG	1693788	1671098	—	1504084
	Female	16 mm	22 AWG	1523434	1520039	—	1504097
	Male	PG9	22 AWG	1693762	1671111	—	1504084
	Male	16 mm	22 AWG	1523450	1520055	—	1504097
Rear mount	Female	PG9	22 AWG	1556621	1542729	—	Included
	Female	16 mm	22 AWG	1419632	1419658	—	Included
	Male	PG9	22 AWG	1556618	1542703	—	Included
	Male	16 mm	22 AWG	1419629	1419645	—	Included
Front mount	Female	PG9	24 AWG	—	—	1513758	1504084
	Female	16 mm	24 AWG	—	—	1523476	1504097
	Male	PG9	24 AWG	—	—	1513774	1504084
	Male	16 mm	24 AWG	—	—	1523492	1504097
Rear mount	Female	PG9	24 AWG	—	—	1542732	Included
	Female	16 mm	24 AWG	—	—	1419690	Included
	Male	PG9	24 AWG	—	—	1542716	Included
	Male	16 mm	24 AWG	—	—	1419687	Included

ⓘ Additional lengths can be requested

Ethernet Panel Feed-through Solutions

	M12 to RJ45		M12 to M12			M12 with shielded cable			Cable gland
	Straight	Angled	Female to female	Male to female	Length	Front mount	Rear mount		Plastic
4-pos. D-Code	1414398	1414397	1424326	—	2 m	1405837	1405866		
8-pos. A-Code	1414396	1414393	—	1551697	2 m	—	1412820		1076600
					5 m	—	1407877		
8-pos. X-Code	1404549	1404548	—	—	0.5 m	—	1424135		
					1 m	—	1424148		
					2 m	—	1424151		
					5 m	—	1424164		

	RJ45 CAT6$_A$ (Socket/Socket)	USB A 3.0 (Socket/Socket)
Details	With cover	With cover
Description	SI-RND-R1A	SI-RND-U1A
Order no.	1425186	1425185

Panel feed-throughs (Locknut included)

	M12 Pin	M12 Socket
Push-lock		
4-pos. A-code	SACC-E-M12MS-4PL-M20	SACC-E-M12FS-4PL-M20
	1139802	1139803
5-pos. A-code	SACC-E-M12MS-5PL-M20	SACC-E-M12FS-5PL-M20
	1139804	1139805

MINI 7/8" — 16 UNF Cordsets and Connectors

Our industry-compatible MINI 7/8" 16 UNF screw threaded connectors and cordset product range allows you to quickly connect sensors and switches and other devices in the field.

MINI 7/8"-16UNF cordsets

Cable jacket: Yellow PVC
Wire gauge: 18 AWG and 16 AWG
Properties: IP68, UL listed under E221474 per UL2238

# Wires	Configuration	18 AWG, [547] PVC				16 AWG, [U20] PVC			
		1 m	2 m	5 m	10 m	1 m	2 m	5 m	10 m
4-pos.	Female Straight / Open End	1416472	1416601	1416603	1416604	1416530	1416798	1416799	1416800
	Female 90° / Open End	1416471	1416589	1416590	1416600	1416527	1416795	1416796	1416797
	Male Straight / Open End	1416477	1416618	1416621	1416623	1416551	1416810	1416811	1416812
	Male 90° / Open End	1416476	1416614	1416616	1416617	1416543	1416809	1416807	1416808
	Male Straight / Female Straight	1416478	1416625	1416626	1416627	1416553	1416814	1416815	1416816
	Male 90° / Female Straight	1416475	1416610	1416612	1416613	1416540	1416804	1416805	1416806
	Male 90° / Female 90°	1416474	1416605	1416608	1416609	1416534	1416801	1416802	1416803
5-pos.	Female Straight / Open End	1416480	1416631	1416632	1416633	1416559	1416820	1416821	1416822
	Female 90° / Open End	1416479	1416628	1416629	1416630	1416556	1416817	1416818	1416819
	Male Straight / Open End	1416484	1416644	1416645	1416646	1416580	1416833	1416834	1416835
	Male 90° / Open End	1416483	1416641	1416642	1416643	1416569	1416830	1416831	1416832
	Male Straight / Female Straight	1416485	1416647	1416649	1416650	1416586	1416836	1416837	1416838
	Male 90° / Female Straight	1416482	1416638	1416639	1416640	1416565	1416827	1416828	1416829
	Male 90° / Female 90°	1416481	1416634	1416636	1416637	1416562	1416823	1416824	1416825

1/2" NPT MINI 7/8" receptacles

Cable: PVC Litz Wires, 1 meter
Wire Gauge: 18 AWG and 16 AWG
Properties: IP68, UL Listed under E221474 per UL2238

# Wires	Image	Configuration	18 AWG [547]	16 AWG [U20]
3-pos.		Male	1417764	1417769
		Female	1420948	1420953
4-pos.		Male	1417765	1417770
		Female	1420949	1420954
5-pos.		Male	1417766	1417771
		Female	1420950	1420955

7/8" T-Distributors

	Positions	Description	Order no.
	3	SAC-3P-MINT/2XMIN VP US	1351104
	4	SAC-4P-MINT/2XMIN VP US	1351105
	5	SAC-5P-MINT/2XMIN VP US	1351106

Cabinet Efficiency

Efficiently building a quality control cabinet starts with what you use to build it. Quick, flexible marking systems, automated tools and hand tools, cable/wire management, and cabinet accessories are often overlooked methods of reducing errors and cutting commissioning time. Thoughtful selection of these "secret weapons" translates directly to the bottom-line profitability of any shop floor.
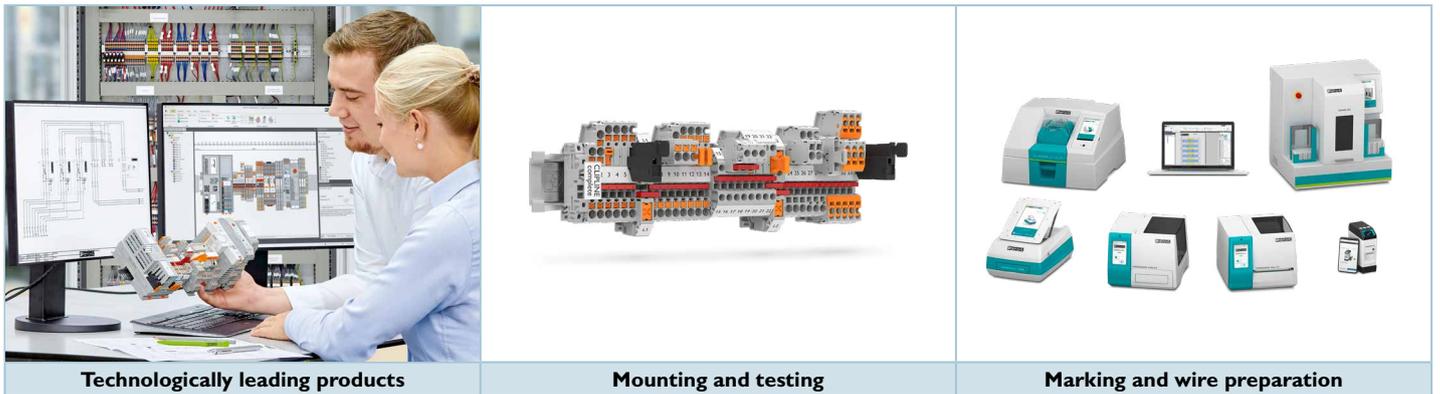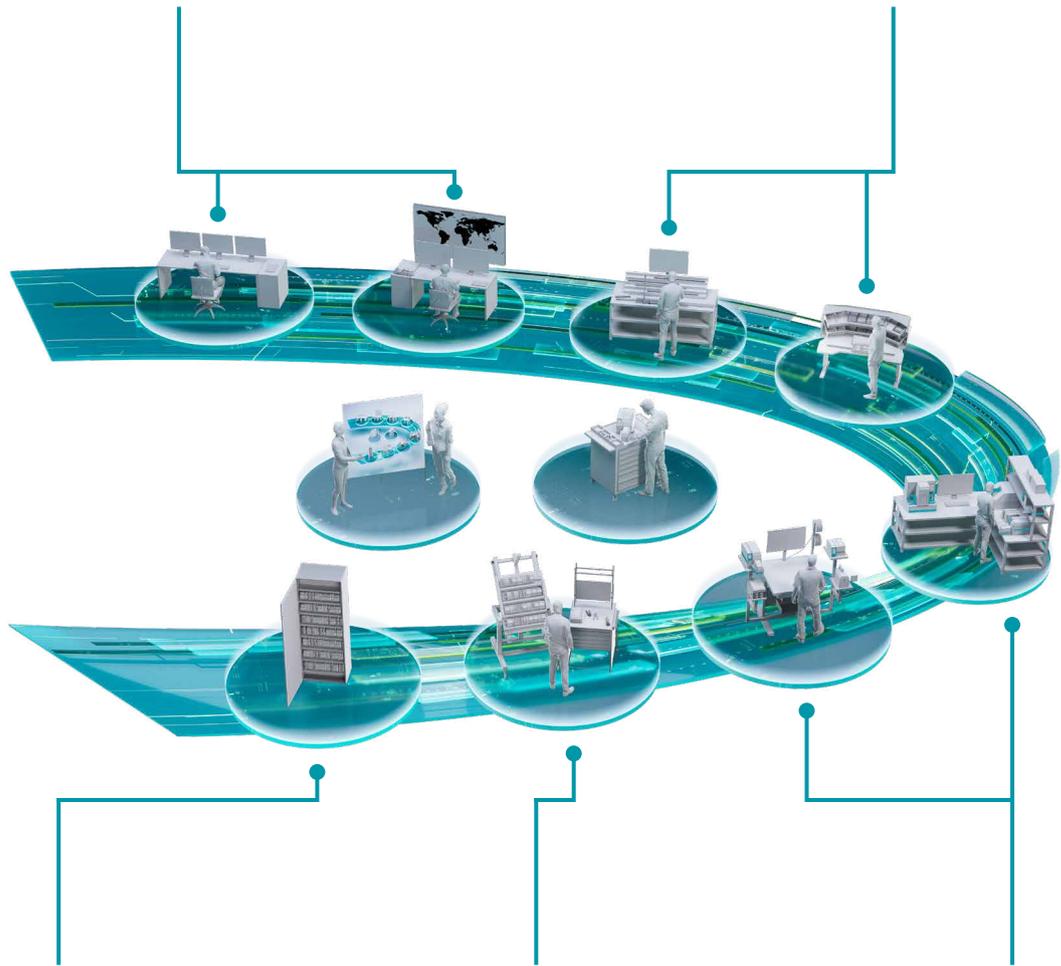
CABINET EFFICIENCY

• Terminal Blocks
• Printers and Marking Materials
• Installation
• Cable Management
• Accessories

Scan the QR code to learn more online

Efficiency in Cabinet Building

Engineering and project planning

Mechanical processing and assembling

Technologically leading products

Mounting and testing


Marking and wire preparation

Modular Terminal Blocks

All connection technologies – one system

With CLIPLINE complete, the unique terminal block system from Phoenix Contact, you are free to choose the connection technology. This versatility enables you to respond flexibly to different demands and requirements anywhere in the world. All connection technologies can be freely combined with one another using the same accessories.

Plug-in bridging

Fuse plugs

Plug-in COMBI

Disconnect zone
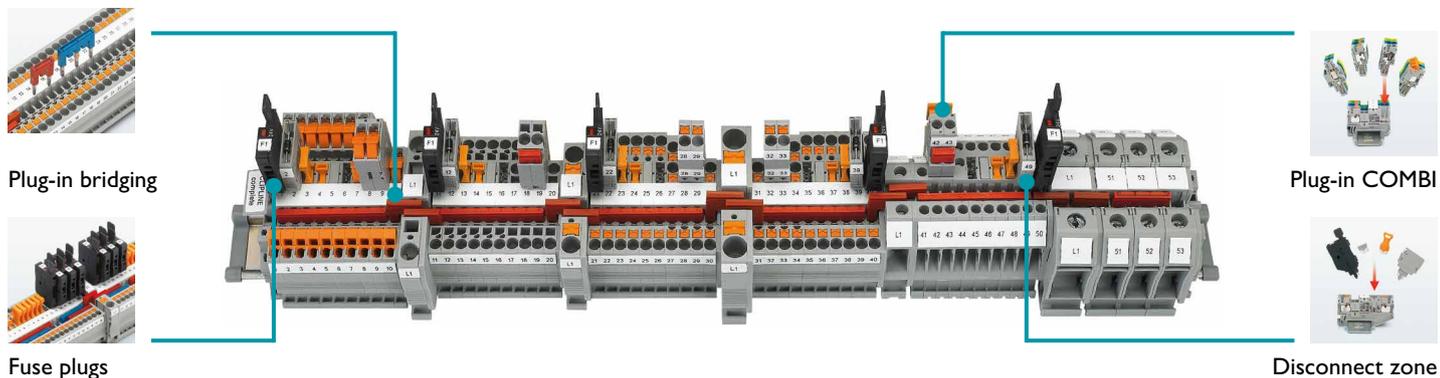
Push-X (XT / XTV)   Accessories

- Push-X technology is one of the fastest and most flexible connection technologies
- Quick installation of stranded wires without the need for ferrules or tools!
- Simple wire release with any tool via integrated pusher
- Full compatibility with existing systems from CLIPLINE complete.

Push-X Technology[P]
Designed by Phoenix Contact

AWG	I_max	Type	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking	
									Side	Top
18-12	24 A	Feed-through	2	XT 2,5	1343106	3030417	3030161	1204517	0828744	0828734
	—	Ground		XT 2,5-PE	1343116					
	24 A	Feed-through	3	XT 2,5-TWIN	1343117	3030488				
		Feed-through	4	XT 2,5-QUATTRO	1343129	3030514				
	22 A	Double-level		XTTB 2,5	1453789	1453880				
	20 A	Knife-disconnect	2	XT 2,5-MT	1462716	3211003				
		Knife-disconnect	4	XT 2,5-QUATTRO-MT	1462725	3038590				
14-8	41 A	Feed-through	2	XTV 6	1329493	1329515	3030284	1204520	0828748	0828740
	—	Ground		XTV 6-PE	1329495					
	41 A	Feed-through	3	XTV 6-TWIN	1329499	1329516				
		Feed-through	4	XTV 6-QUATTRO	1329511	1329517				
12-6	57 A	Feed-through	2	XTV 10	1329547	1329608	3005947	1204517	0829204	0829142
	—	Ground		XTV 10-PE	1329550					
	57 A	Feed-through	3	XTV 10-TWIN	1329603	1329609				
10-4	76 A	Feed-through	2	XTV 16	1329672	1329675	3005950		0829214	0829144
	—	Ground		XTV 16-PE	1329674					

Push-in (PT)   Accessories

- Simple push-in spring, ideal for solid and ferruled wires
- Tool-free termination
- 50 percent lower insertion force
- Orange pushbutton permits easy conductor release using any type of tool without direct contact with live parts
- Uniformed Push-in Technology available on thousands of Phoenix Contact parts

Das Original
Push-in Technology[P]
Designed by PHOENIX CONTACT

AWG	I_max	Type	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking	
									Side	Top
26-14	15 A	Feed-through	2	PT 1.5/S	3208100	3208142	3213014	1204504	0829486	0829484
	—	Ground		PT 1.5/S PE	3208139					
	15 A	Feed-through	3	PT 1.5/S-TWIN	3208155	3208184				
	15 A	Feed-through	4	PT 1.5/S-QUATTRO	3208197	3208375				
26-12	20 A	Feed-through	2	PT 2.5	3209510	3030417	3030161	1204517	0828744	0828734
	—	Ground		PT 2.5-PE	3209536					
	20 A	Feed-through	3	PT 2.5-TWIN	3209549	3030488				
	20 A	Feed-through	4	PT 2.5-QUATTRO	3209578	3030514				
	20 A	Double-level	4	PTTB 2.5	3210567	3211634				
	—	Ground		PTTB 2.5-PE	3210596					
	20 A	3 Level	6	PT 2,5-3L	3210499	3211647	3030161	1204517	0828744	—
	18 A	4 Level	8	PT 2,5-4L	1334599	1336340				
24-10	30 A	Feed-through	2	PT 4	3211757	3030420	3030336	1204517	0828746	0828736
	—	Ground		PT 4-PE	3211766					
	6.3 A	Fuse modular		PT 4-HESI (5X20)	3211861					
	6.3 A	Fuse modular		PT 4-HESILED 24 (5X20)	3211903					
	30 A	Feed-through	3	PT 4-TWIN	3211771	3208977				
	30 A	Feed-through		PT 4-QUATTRO	3211797	3208979				
	28 A	Double-level	4	PTTB 4	3211786	3030462				
	—	Ground		PTTB 4-PE	3211854					

Push-in Vertical (PTV) — Accessories

The PTV series combines all the handling advantages of our Push-in technology with the clarity of a screw terminal
- Clear distinction between operating level and wiring
- No bending radius
- Simple wiring
- No special tool required

Das Original
Push-in Technology[P]
Designed by PHOENIX CONTACT

AWG	I_max	Type	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking Side	Marking Top
26-12	24 A	Feed-through	2	PTV 2.5	1078960	1088746	3030161	1204517	0828744	0828734
	—	Ground		PTV 2.5 PE	1078963					
	24 A	Feed-through	3	PTV 2.5 TWIN	1078966	1088747				
		Feed-through	4	PTV 2.5 QUATTRO	1078999	1088748				
	20 A	Knife-disconnect	2	PTV 2,5-MT	1079063	1079918				
		Knife-disconnect	4	PTV 2,5-QUATTRO-MT	1079070	1083616				
24-10	32 A	Feed-through	2	PTV 4	1088728	1088746	3030336		0828746	0828736
	—	Ground		PTV 4 - PE	1088730					
	32 A	Feed-through	3	PTV 4 TWIN	1088731	1088747				
		Feed-through	4	PTV 4- QUATTRO	1088734	1088748				
	20 A	Knife-disconnect	2	PTV 4-MT	1088739	1079918				
	6.3 A	Fuse modular		PTV 4 HESILED 24	1088743					
20-8	41 A	Feed-through	2	PTV 6	1116734	1180894	3030284	1204520	0828748	0828740
	—	Ground		PTV 6-PE	1116736					
	41 A	Feed-through	3	PTV 6 TWIN	1116737	1180923				
		Feed-through	4	PTV 6- QUATTRO	1116871	1180930				

Screw clamp (UT) — Accessories

- Universal multi-wire connection with highest pullout force
- Save money with uniform bridging, marking, and accessories as part of the Clipline Complete system
- Maintenance-free conductor connection with the Reakdyn® principle – there is no need to tighten the terminal block screws

AWG	I_max	Type	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking Side	Marking Top
26-12	20 A	Feed-through	2	UT 2.5	3044076	3047028	3030161	1212587	0828734	—
	—	Ground		UT 2.5-PE	3044092					
	20 A	Feed-through	3	UT 2.5-TWIN	3044513	3047141				
	20 A	Feed-through		UT 2.5-QUATTRO	3044542	3047170				
	20 A	Double-level	4	UTTB 2.5	3044636	3047293				
	—	Ground		UTTB 2.5-PE	3044665					
	20 A	3 Level	6	UT 2.5-3L	3214259	3214314				
	—	Ground		UT 2.5-3PE	3214275					
26-10	30 A	Feed-through	2	UT 4	3044102	3047028	3030336	1212587	0828736	—
	—	Ground		UT 4-PE	3044128					
	6.3 A	Fuse modular		UT 4-HESI (5X20)	3046032	—				
	6.3 A	Fuse modular		UT 4-HESILED 24 (5X20)	3046090	—				
	30 A	Feed-through	3	UT 4-TWIN	3044364	3047141				
	30 A	Feed-through		UT 4-QUATTRO	3044571	3047170				
	30 A	Double-level	4	UTTB 4	3044814	3047293				
	—	Ground		UTTB4-PE	3044759					
26-8	50 A	Feed-through	2	UT-6	3044131	3047028	3030284	1205066	0828740	
	—	Ground		UT6-PE	3044157	—				

Bolt connection (RT) — Accessories

- Captive hardware with a hinged cover delivers a safe termination
- Save money with uniform bridging, marking, and accessories

AWG	I_max	Type	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking Side	Marking Top
26-14	24 A	Feed-through	2	RT-3	3049013	3049097	3030336	1205053	0828740	See Marking Guide
26-10	41 A	Feed-through		RT-5	3049026	—	3030284	1205079	0829144	
14-2	125 A	Feed-through		RT-8	3049042	3049194	3005947	1205066	0829146	

PTFIX distribution blocks

	Technical data	Connections	Mounting	Description	Order no.
	Power Contact: Current/Voltage: 57 A / 690 V AWG: 20-10	7	Transverse to the NS 35 DIN rail	PTFIX 6/6X2,5-NS35 GY	3273066
		13		PTFIX 6/12X2,5-NS35 GY	3273088
		19		PTFIX 6/18X2,5-NS35 GY	3273110
	Pick-off contacts: Current/Voltage: 24 A / 690 V AWG: 26-14	7	Along the NS 35 DIN rail	PTFIX 6/6X2,5-NS35A GY	3273198
		13		PTFIX 6/12X2,5-NS35A GY	3273220
		19		PTFIX 6/18X2,5-NS35A GY	3273242

PowerTurn (PTPOWER)

The PTPOWER high-current terminal blocks provide you with the fastest and most user-friendly connection option currently available for wiring large conductors
- Patented PowerTurn spring connection technology allow large conductors to be connected quickly and easily
- Up to three high-quality spring steel pressure springs work in combination with the prismatic terminal body base to create a vibration-resistant connection
- Installation on NS 35/15 Din rail

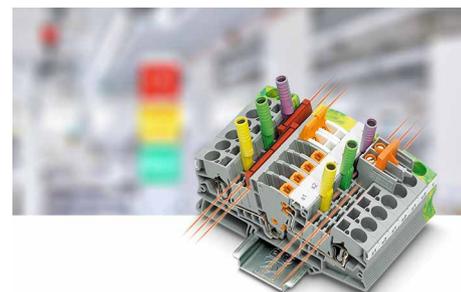| AWG	I_max	Type	Connections	Description	Order no.	Bridge (2-pos.)	Screwdriver	Marking
14-2	115 A	High-current		PTPOWER 35	3212064	3005963		
	—	Ground		PTPOWER 35-PE	3212066	3005963		
8-1	140 A	High-current		PTPOWER 50	3260050	3260067		
	—	Ground	2	PTPOWER 50-PE	3260052	3260067	1206612	0829142
4	230 A	High-current		PTPOWER 95	3260100	3260157		
	—	Ground		PTPOWER 95-PE	3260106	3260157		
2-300 kcmil	270 A	High-current		PTPOWER 185	1054722	3215057		

Fuse terminal blocks (UK HESI)

- For 10 x 38 CC fuse-links in accordance with UL 4248-4, up to 600 V
- For 10 x 38 fuse-links in accordance with IEC 60269-2, up to 690 V AC

AWG	I_max	Fuse type	Poles	LED indication	Description	Order no.	Bridge (2-pos.)	Screwdriver	Marking
18-4	30 A	Class CC	1	✘	UK 10,3-CC HESI N	3048580	3009300	1212587	0829204
			2	✘	UK 10,3-CC HESI N 2POL	3048593	3009300	1212587	0829204
			3	✘	UK 10,3-CC HESI N 3POL	3048603	3009300	1212587	0829204
			1	✓	UK 10,3-CC HESILED N 600	3048616	3009300	1212587	0829204
			2	✓	UK 10,3-CC HESILED N 600 2POL	3048629	3009300	1212587	0829204
			3	✓	UK 10,3-CC HESILED N 600 3POL	3048632	3009300	1212587	0829204
18-3		Ceramic: 10.3 x 38 mm	1	✘	UK 10,3-HESI N	3048386	3009300	1212587	0829204
			1	✓	UK 10,3-HESILED N 690	3048399	3009300	1212587	0829204

Test-disconnect Terminal Blocks

The test-disconnect and current transformer terminal blocks allow you to freely select the connection technology. The modular design and online configurator assist you in selecting suitable terminal blocks and accessories for testing and short-circuiting current transformers according to your application.

A patented triple-function shaft is incorporated into the design of the current transformer terminal blocks, ensuring a compact and flexible structure. Latching is integrated into the end positions, and optional switching locks are available to prevent unintentional changes to the switching state.

Test-disconnect and current transformer terminal blocks (ME/MEA)

AWG	I_max	Connection technology	Function shafts	Current transformer terminal block	Test disconnect terminal bock	Description	Order no.	Cover	Marking
20-8	30 A	Push-X	6	✓		XTVMEA 6	1446173	1447809	0828740
26-10	30 A	Push-in	4		✓	PTVME 6/S-P	1166809	1164789	0828740
20-8	30 A	Push-in	6		✓	PTME 6	3212170	3034426	0828740
24-10	26 A	Push-in	2		✓	PTME 4	3212139	3212167	0828736
24-8	30 A	Screw	6		✓	UTME 6	3047400	3047426	0828740
26-10	25 A	Screw	2		✓	UTME 4	3047452	3047491	0828736
24-10	30 A	Screw	2		✓	USST 6-T	3070312	3070367	0828740
26-6	55 A	Screw	2		✓	URTK/S-BEN 10	0309109	0308029	0828740

Printers

The advantages of our industrial printers

With our industrial printers, you can create markings more easily than ever before: whether using laser, UV LED, or thermal transfer technology. The wide range of printing and marking systems that we offer is guaranteed to provide you with the right solution for marking terminal blocks, conductors and cables, devices, and systems. All printers are particularly easy to use.

- ☑ THERMOMARK CARD 2.0: Maintenance-free operation with proven thermal transfer printer technology
- ☑ BLUEMARK E.CARD: Fast, high quality printing and low maintenance UV inkjet printer for high volume
- ☑ THERMOMARK ROLL 2.0: Fast, high-quality, and durable printing
- ☑ THERMOMARK E.300: Suitable for all roll materials in the MARKING system product portfolio
- ☑ THERMOMARK GO.K: Mobile thermal transfer printer for marking materials in cartridge format
- ☑ THERMOMARK GO: Operated entirely via digital devices using MARKING system app

Industrial marking for every application

The right industrial printer is available for all of your marking requirements.

With the various marking technologies, you can create markings that are ideally suited for your application.

Printers

	Material	Volume	Size	Description	Order no.
	Card and sheet	Manual feed	Desktop	THERMOMARK CARD 2.0	1085267
	Card and sheet	Automated feed	Desktop	BLUEMARK E.CARD US	1506740
	Roll	< 50,000 labels/yr.	Desktop	THERMOMARK ROLL 2.0	1085260
	Roll	> 50,000 labels/yr.	Large/desktop	THERMOMARK E.300 D US	1287033
	Cartridge	Low	Hand-held	THERMOMARK GO.K	1184146
	Cartridge	Low	Hand-held (Starter Kit)	THERMOMARK GO.K SET	1184148
	Cartridge	Low	Hand-held with die cut option labels	THERMOMARK GO	1090747
	Cartridge	Low	Hand-held with die cut option labels (starter kit)	THERMOMARK GO SET	1221548

Conductor/Cable Marking

Shrink sleeves

Conductor size	Lettering field size [mm / in]	Markers per roll	Description	Order no.
1 - 3.3 mm or 22-18 AWG	15 x 5 / 0.59 x 0.20	1000	WMS 3,2 (15X5)R	0800380
		4000	WMS 3,2 (15X5)RL	0800390
	30 x 5 / 1.18 x 0.20	500	WMS 3,2 (30X5)R	0800374
		2000	WMS 3,2 (30X5)RL	0800387
		5000	WMS 3,2 (30X5)RXL	0804268
	60 x 5 / 2.36 x 0.20	250	WMS 3,2 (60X5)R	0800364
		1000	WMS 3,2 (60X5)RL	0800384
1.6 - 4.8 mm or 18-14 AWG	15 x 9 / 0.59 x 0.35	1000	WMS 4,8 (15X9)R	0800382
		4000	WMS 4,8 (15X9)RL	0800391
		10000	WMS 4,8 (15X9)RXL	0800397
	30 x 9 / 1.18 x 0.35	500	WMS 4,8 (30X9)R	0800375
		2000	WMS 4,8 (30X9)RL	0800388
		5000	WMS 4,8 (30X9)RXL	0800395
	60 x 9 / 2.36 x 0.35	250	WMS 4,8 (60X9)R	0800366
		1000	WMS 4,8 (60X9)RL	0800385
		2500	WMS 4,8 (60X9)RXL	0800393
2.4 - 6.4 mm or 16-10 AWG	15 x 10 / 0.59 x 0.39	1000	WMS 6,4 (15X10)R	0801593
		4000	WMS 6,4 (15X10)RL	0801594
		10000	WMS 6,4 (15X10)RXL	0801595
	30 x 10 / 1.18 x 0.39	500	WMS 6,4 (30X10)R	0800376
	60 x 10 / 2.36 x 0.39	250	WMS 6,4 (60X10)R	0800367
3.5 - 9.5 mm or 12-8 AWG - 2/0	30 x 16 / 1.18 x 0.63	500	WMS 9,5 (30X16)R	0800377
		2000	WMS 9,5 (30X16)RL	0804267
	60 x 16 / 2.36 x 0.63	250	WMS 9,5 (60X16)R	0800368
		1000	WMS 9,5 (60X16)RL	0803105

Wrap around labels

Conductor size	Lettering field size [mm / in]	Markers per roll	Description	Order no.
< 3 mm or < 10 AWG	13 x 10 / 0.51 x 0.39	5000	WML 3 (13X10)R	0800073
< 5 mm or < 6 AWG	25 x 10 / 0.98 x 0.39	3000	WML 5 (25X10)R	0817523
< 6 mm or < 4 AWG	13 x 13 / 0.51 x 0.51	7000	WML 6 (13X13)R	0816252
< 7.5 mm or < 2 AWG	13 x 13 / 0.51 x 0.51	4000	WML 7,5 (13X13)R	0800074
	17 x 9 / 0.67 x 0.35	1500	WML 7,5 (17X9)R	0828444
	25 x 13 / 0.98 x 0.51	2100	WML 7,5 (25X13)R	0800075
< 12 mm or < 4/0	25 x 19 / 0.98 x 0.75	1000	WML 12 (25X19)R	0800076
< 14 mm or < 0.55 in Ø	25 x 19 / 0.98 x 0.75	1500	WML 14 (25X19)R	0817536
	38 x 19 / 1.5 x 0.75	1000	WML 14 (38X19)R	0817552
< 18 mm or < 0.75 in Ø	12 x 12 / 0.47 x 0.47	2500	WML 18 (12X12)R	0817507
< 20 mm or < 0.79 in Ø	31 x 25 / 1.22 x 0.98	500	WML 20 (31X25)R	0828457
< 22 mm or < 0.875 in Ø	25 x 25 / 0.98 x 0.98	900	WML 22 (25X25)R	0800078
< 36 mm or < 1.45 in Ø	25 x 38 / 0.98 x 1.5	500	WML 36 (25X38)R	0817510
< 46 mm or < 1.825 in Ø	25 x 38 / 0.98 x 1.5	250	WML 46 (25X38)R	0800067

Available in other sizes, quantities, and colours

Ribbon

Conductor size	Description	Order no.
Standard ink ribbon for all thermal marking - CARD PRINTER length 300 m	THERMOMARK-RIBBON 110-TC	0801371
Standard ink ribbon heat shrink materials - ROLL PRINTER length 300 m	THERMOMARK-RIBBON 110-WMSU	0801358
Standard ink ribbon for all thermal marking (not heat shrink) ROLL PRINTER length 300 m	THERMOMARK-RIBBON 110	5145384
Standard ink ribbon for all thermal marking - PRIME PRINTER length 70 m	TMP-RIBBON 110 BK 100	0803374

Continuous Format Cartridges

Heat shrink labels					
Application	**Compatibility**	**Length**	**Colour**	**Description**	**Order no.**
	THERMOMARK GO.K and THERMOMARK GO	1.8 m / 5.9 ft	Black on white	MM-WMS 3,2 (EX5)R C1 WH/BK	0803923
		1.8 m / 5.9 ft	Black on white	MM-WMS 4,8 (EX9)R C1 WH/BK	0803924
		1.8 m / 5.9 ft	Black on white	MM-WMS 6,4 (EX10)R C1 WH/BK	0803925
		1.8 m / 5.9 ft	Black on white	MM-WMS 9,5 (EX16)R C1 WH/BK	0803926
		1.8 m / 5.9 ft	Black on yellow	MM-WMS 3,2 (EX5)R C1 YE/BK	1116139
		1.8 m / 5.9 ft	Black on yellow	MM-WMS 4,8 (EX9)R C1 YE/BK	1116140
		1.8 m / 5.9 ft	Black on yellow	MM-WMS 6,4 (EX10)R C1 YE/BK	1116141
		1.8 m / 5.9 ft	Black on yellow	MM-WMS 9,5 (EX16)R C1 YE/BK	1116142

Wrap around labels					
	THERMOMARK GO.K and THERMOMARK GO	6.5 m / 21.3 ft	Black on white	MM-WML 3 (EX10)R C1 WH/BK	0803931
		6.5 m / 21.3 ft	Black on white	MM-WML 5 (EX10)R C1 WH/BK	0803932

Nylon cloth labels					
	THERMOMARK GO.K and THERMOMARK GO	6 m / 19.7 ft	Black on white	MM-EMLC (EX12)R C1 WH/BK	0803934
		6 m / 19.7 ft	Black on white	MM-EMLC (EX18)R C1 WH/BK	0803936

Flexible vinyl labels					
	THERMOMARK GO.K and THERMOMARK GO	8 m / 26.2 ft	Black on white	MM-EMLF (EX10)R C1 WH/BK	0803937
		8 m / 26.2 ft	Black on white	MM-EMLF (EX12)R C1 WH/BK	0803938
		8 m / 26.2 ft	Black on white	MM-EMLF (EX18)R C1 WH/BK	0803939
		8 m / 26.2 ft	Black on white	MM-EMLF (EX24)R C1 WH/BK	0803940

Polyester device labels					
	THERMOMARK GO.K and THERMOMARK GO	8 m / 26.2 ft	Black on white	MM-EML (EX10)R C1 WH/BK	0803970
		8 m / 26.2 ft	Black on white	MM-EML (EX12)R C1 WH/BK	0803971
		8 m / 26.2 ft	Black on white	MM-EML (EX18)R C1 WH/BK	0803972
		8 m / 26.2 ft	Black on white	MM-EML (EX24)R C1 WH/BK	0803973

Die-cut Format Cartridges

Heat shrink labels					
Application	**Compatibility**	**No. of labels**	**Colour**	**Description**	**Order no.**
	THERMOMARK GO	235	Black on white	MM-WML 5 (24X10)R C1 WH/BK	1116196
		190	Black on white	MM-WML 6 (13X13)R C1 WH/BK	1116197
		165	Black on white	MM-WML 7,5 (24X13)R C1 WH/BK	1116198

Wrap around labels					
	THERMOMARK GO	50	Black on white	MM-WMTB HF (40X12)R C1 WH/BK	1116166
		20	Black on white	MM-WMTB HF (55X15)R C1 WH/BK	1116207
		20	Black on white	MM-WMTB HF (55X25)R C1 WH/BK	1116209

Nylon cloth labels					
	THERMOMARK GO	297	Black on white	MM-EML (20X8)R C1 WH/BK	1116204
		297	Black on yellow	MM-EML (20X8)R C1 YE/BK	1116205

Additional sizes and colours are available

Installation Equipment and Tools

Cutting tools

Function	Conductor size		Description	Order no.
Cable-cutting tool	Up to 35 mm²		CUTFOX 12	1212128
Cable-cutting tool	Up to 50 mm² or 1/0		CUTFOX 18	1212129
Diagonal cutter	VDE insulated		CUTFOX S VDE	1212207
Cable-binder cutter	For plastic cable binders up to 4.8 mm or 0.187 inches wide		UNIFOX-CT 4,8P	1212609

Stripping tools

Function	Conductor size	Installation type	Description	Order no.
Self-adjusting stripping tool	0.08-2.5 mm² or 28-14AWG	Standard	WIREFOX 2.5	1212368
Self-adjusting stripping tool	0.1 - 4 mm² or 28 - 12 AWG	Special insulation, e.g. PTFE	WIREFOX 4	1212156
Self-adjusting stripping tool	0.02 - 10 mm² or 34 - 8 AWG	Standard	WIREFOX 10	1212150
Strips sensor/actuator cables	4.4 - 7 mm² or 12 - 8 AWG	SAC cables	WIREFOX SAC	1212623
Strips multi-conductor cables	max insulation 1 mm 2.5-11 mm or 10-3/0 AWG	Any	WIREFOX-D 11	1212160
Strips large, multi-conductor cables	4.5 - 40 mm Ø or 0.17 - 1.5 in Ø	Any	WIREFOX-D 40	1212161
Replacement blade available				

Crimping tools

Conductor size	Crimp shape	Description	Order no.
0.14 - 6 mm² or 24 - 10 AWG	Square	CRIMPFOX CENTRUS 6S	1213144
	Hex	CRIMPFOX CENTRUS 6H	1213146
0.14 - 10 mm² or 24 - 8 AWG	Square	CRIMPFOX CENTRUS 10S	1213154
	Hex	CRIMPFOX CENTRUS 10H	1213156
0.25 - 6 mm² or 22 - 10 AWG	Trapezoid	CRIMPFOX 6	1212034
10 - 25 mm² or 6 - 4 AWG	Trapezoid	CRIMPFOX 25R	1212039
0.14-10 mm² or 26-8 AWG	Trapezoid	CRIMPFOX DUO 10	1031721

Ferrules

AWG	Colour	Standard pack	Description	Order no.
22	Turquoise	100	AI 0,34-8 TQ	3203066
20	White	100	AI 0,5-8 WH	3200014
18	Grey	100	AI 0,75-8 GY (0,75 cross section)	3200519
18	Red	100	AI 1-8 RD (1 cross section)	3200030
16	Black	100	AI 1,5-8 BK	3200043
14	Blue	100	AI 2.5-8 BU	3200522
12	Grey	100	AI 4-10 GY	3200535
10	Yellow	100	AI 6-12 YE	3200548
8	Red	100	AI 10-12 RD	3200551

Screwdrivers

Tool	Description	Order no.
Torque screwdriver: 0.3 - 1.2 Nm / 2.6 in. lb - 10.6 in. lb	TSD-M 1,2NM	1212224
Torque screwdriver: 1.2 - 3.0 Nm / 10.6 in. lb - 26.5 in. lb	TSD-M 3NM	1212225
Torque screwdriver: 3.0 - 6.0 Nm / 26.5 in. lb - 53 in. lb	TSD-M 6NM	1212226
Micro screwdriver - Flat head - 0.4 mm blade	SZS 0,4X2,0	1205202
Standard screwdriver - Flat head - 0.6 mm blade	SZF 1-0,6X3,5	1204517
Tool set - 17-part kit	SF-M SET 2	1212756
16 Speed cordless screwdriver set	SF-ASD 16 SET	1200295
#2 Roberston screwdriver, 8" long	SF-SQ 2-200	1072455

Multifunction tools and ferrules

Function	Conductor size	Description	Order no.
Complete kit	0.5 - 2.5 mm² or 20 - 14 AWG	CRIMPFOX 4 IN 1 SET	1200102
Cut, strip, and crimp	0.5 - 2.5 mm² or 20 - 14 AWG	CRIMPFOX 4 IN 1	1200101
Ferrule carrier	0.5 - 2.5 mm² or 20 - 14 AWG	CRIMPFOX 4 IN 1/MAG	1200103
50-ferrule strip - white	0.5 mm² or 20 AWG	AI 0,5-8 WH S1	1200104
50-ferrule strip - gray	0.75 mm² or 18 AWG	AI 0,75-8 GY S1	1200105
50-ferrule strip - red	1.0 mm² or 18 AWG	AI 1,0-8 RD S1	1200106
50-ferrule strip - black	1.5 mm² or 16 AWG	AI 1,5-8 BK S1	1200107
50-ferrule strip - blue	2.5 mm² or 14 AWG	AI 2,5-8 BU S1	1200108

Cable Ducts for Clear Cable Routing

Use cable ducts to bring order to your control cabinet. A large number of cables and conductors are required to connect the various components in the control cabinet. To ensure a good overview and can easily reach every terminal point, cable ducts help to keep the control cabinet tidy and clearly arranged. The portfolio consists of different cable duct sizes, colors, and material types. These various cable ducts allow you to keep cables neatly organized.

Your advantages

- ☑ Cover snaps on easily
- ☑ Single part number for cable duct and cover
- ☑ 2 m length, matches Phoenix Contact 2 m DIN rail product
- ☑ Two score lines for easy removal of fingers and wall, no sharp edges

Scan the QR code to learn more online

Cable ducts

DIMENSIONS (W x H) L=2m		Description	Gray Order no.	Blue Order no.	White Order no.	Halogen free gray Order no.	Halogen free blue Order no.
Nominal size (inches)	Millimetres						
1 x 1	25 x 25	CD 25X25	3240187	—	—	3240340	—
1 x 1 ½	25 x 40	CD 25X40	3240188	—	—	3240341	—
1 x 2	25 x 60	CD 25X60	3240191	3240303	3240618	3240342	3240584
1 x 3	25 x 80	CD 25X80	3240197	3240304	3240619	3240343	3240585
1 x 1 ½	30 x 40	CD 30X40	3240278	—	—	3240344	—
1 x 2	30 x 60	CD 30X60	3240280	—	—	3240345	—
1 x 3	30 x 80	CD 30X80	3240282	—	—	3240346	—
1 x 4	30 x 100	CD 30X100	3240283	—	—	3240347	—
1 ½ x 1 ½	40 x 40	CD 40X40	3240189	—	—	3240348	—
1 ½ x 2	40 x 60	CD 40X60	3240192	3240310	3240625	3240349	—
1 ½ x 3	40 x 80	CD 40X80	3240198	3240311	3240626	3240350	3240592
1 ½ x 4	40 x 100	CD 40X100	3240294	3240312	3240627	3240351	3240593
2 x 1 ½	60 x 40	CD 60X40	3240190	—	—	3240352	—
2 x 2	60 x 60	CD 60X60	3240193	3240314	3240629	3240353	3240595
2 x 3	60 x 80	CD 60X80	3240199	3240315	3240630	3240354	3240596
2 x 4	60 x 100	CD 60X100	3240263	3240316	3240631	3240355	3240597
3 x 2	80 x 60	CD 80X60	3240194	—	—	3240358	—
3 x 3	80 x 80	CD 80X80	3240200	3240320	3240635	3240359	3240601
3 x 4	80 x 100	CD 80X100	3240264	3240321	3240636	3240360	3240602
4 x 3	100 x 80	CD 100X80	3240201	3240324	3240639	3240363	3240605
4 x 4	100 x 100	CD 100X100	3240205	3240325	3240640	3240364	3240606
5 x 3	120 x 80	CD 120X80	3240202	3240327	3240642	3240366	3240608

Accessories

Control Cabinet Lights

The enclosure lights from Phoenix Contact provide optimum lighting for your control cabinet, and are easy to install without tools. In particular, the lower third of the control cabinet is ideally lit via a high-quality lens and prismatic reflector. Choose the lights tailored to your needs from two performance classes and a particularly flexible product range.

300 series enclosure lights

	Product information	Motion sensor	Description	Order no.
	Colour temp. 5000 K, length 350 mm, Housing: Polycarbonate, pivoting, can be switched in series, including mounting accessories	✗	PLD E 409 W 350	1319569
		✓	PLD E 409 W 350 MS	1319573

Accessories

	Optional door switch		PLD E 400-DS-3,0/0,6	1318672

DIN Rail and Accessories

DIN rail

	Material	Perforated	Length (M)	Size W/H (mm)	Description	Order no.
	Steel, galvanized, passivated with a thick layer	✓	2	NS 35/ 7,5	NS 35/ 7,5 PERF 2000MM	0801733
		✗	2	NS 35/ 7,5	NS 35/ 7,5 UNPERF 2000MM	0801681
		✓	2	NS 35/15	NS 35/15 PERF 2000MM	1201730
		✗	2	NS 35/15	NS 35/15 UNPERF 2000MM	1201714

End brackets

|	Mounting	Width (mm)	Description	Order no.
	Screw	9.5	E/NS 35 N	0800886
	Snap on	5.15	CLIPFIX 35-5	3022276
	Snap on	9.5	CLIPFIX 35	3022218

Electrical Outlets

You can choose to wire the electrical outlets with Push-in or screw connection technology. The procedure for mounting the sockets is also extremely flexible. Either latch them onto the DIN rail or mount them directly using screw or adhesive mounting.

Single socket

	Connection	Nominal current	Function	Mounting	Description	Order no.
	Push-in	15 A	—	DIN rail or direct mounting	EO-AB/PT/15	0804165
			LED		EO-AB/PT/LED/15	0804168
			Switch		EO-AB/PT/S/15	0804173
			LED / switch		EO-AB/PT/LED/S/15	0804174
	Screw		—		EO-AB/UT/15	0804152
			LED		EO-AB/UT/LED/15	0804155
		20 A	LED		EO-AB/UT/LED/20	0804509
		15 A	Switch		EO-AB/UT/S/15	0804159
			LED / switch		EO-AB/UT/LED/S/15	0804160

Double socket

	Connection	Nominal current	Function	Mounting	Description	Order no.
	Push-in	15 A	LED	DIN rail or direct mounting	EO-AB/PT/LED/DUO/15	0804177
	Screw		LED		EO-AB/UT/LED/DUO/15	0804163
	Push-in	15 A	GFCI class A	DIN rail or direct mounting	EO-AB/PT/LED/DUO/V/GFI/15	1263626
	Screw				EO-AB/UT/LED/DUO/V/GFI/15	1263628

Notes
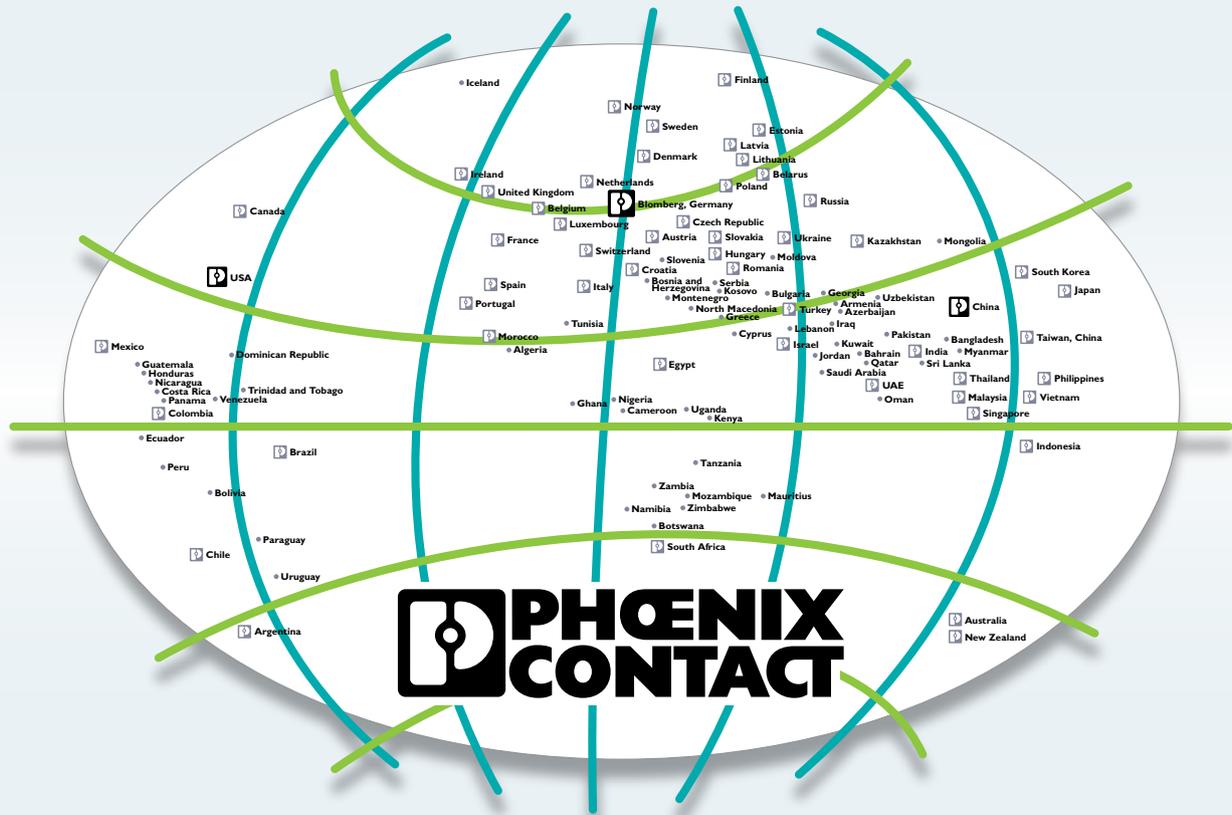
Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing future-oriented products and solutions for the electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network reaching across more than 100 countries with over 20,000 employees, we maintain close relationships with our customers, something we believe is essential for our common success.

Our wide range of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. This especially applies to the target markets of energy, infrastructure, industry, and mobility.

You will find our complete product range at:

phoenixcontact.ca

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