



COMPLETE line

Solutions for the control cabinet

Quick reference guide



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.



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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).



LIMITED LIFETIME WARRANTY

BUILD WITH CONFIDENCE

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.



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.

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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. All from a single source and tailored to your application.



POWER RELIABILITY

- Power Supplies
- Surge Protection
- Circuit Breakers




Scan the QR code to learn more online



Power Supplies




Single phase power supplies

Power supply model	Output voltage	Output current	Noted feature	Description	Order no.
QUINT POWER High availability for critical systems 	5 V DC	5 A	—	UNO-PS/1AC/5DC/25W	2904374
		5 A	Push-in connection	QUINT-4-PS/1AC/5DC/5/PT	2904595
		8 A	—	UNO-PS/1AC/5DC/40W	2904375
	12 V DC	2.5 A	—	UNO-PS/1AC/12DC/30W	2902998
		2.5 A	Push-in connection	QUINT-4-PS/1AC/12DC/2.5/PT	2904605
		4.6 A	—	UNO-PS/1AC/12DC/55W	2902999
		5 A	NEC Class 2	TRIO-PS-2G/1AC/12DC/5/C2LPS	2903157
		7.5 A	Push-in connection	QUINT-4-PS/1AC/12DC/7.5/PT	2904607
		8.3 A	—	UNO-PS/1AC/12DC/100W	2902997
		10 A	—	TRIO-PS-2G/1AC/12DC/10	2903158
		15 A	—	QUINT-4-PS/1AC/12DC/15	2904608
	15 V DC	2 A	—	UNO-PS/1AC/15DC/30W	2903000
3.67 A		—	UNO-PS/1AC/15DC/55W	2903001	
6.67 A		—	UNO-PS/1AC/15DC/100W	2903002	
TRIO POWER Standard power for machine control cabinets 	24 V DC	1.3 A	Push-in connection	QUINT4-PS/1AC/24DC/1.3/PT	2909575
		1.3 A	—	QUINT4-PS/1AC/24DC/1.3/SC	2904597
		1.3A	—	UNO-PS/1AC/24DC/30W	2902991
		2.5A	—	UNO-PS/1AC/24DC/60W	2902992
		2.5 A	—	TRIO-PS/1AC/24DC/2.5	2866268
		2.5 A	Push-in connection	QUINT4-PS/1AC/24DC/2.5/PT	2909576
		2.5 A	—	QUINT4-PS/1AC/24DC/2.5/SC	2904598
		2.5 A	T-BUS, Integrated MOSFET	QUINT4-SYS-PS/1AC/24DC/2.5/SC	2904614
		3 A	NEC Class 2	TRIO-PS-2G/1AC/24DC/3/C2LPS	2903147
		3.5 A	—	QUINT-PS/1AC/24DC/3.5	2866747
		3.75 A	NEC Class 2	UNO-PS/1AC/24 DC/90W/C2LPS	2902994
		3.8 A	Push-in connection	QUINT4-PS/1AC/24DC/3.8/PT	2909577
		3.8 A	—	QUINT4-PS/1AC/24DC/3.8/SC	2904599
		4.2 A	—	UNO-PS/1AC/24DC/100W	2902993
		5 A	—	QUINT4-PS/1AC/24DC/5	2904600
		5 A	—	TRIO-PS-2G/1AC/24DC/5	2903148
		5 A	—	UNO2-PS/1AC/24DC/120W	1110466
		10 A	—	UNO2-PS/1AC/24DC/240W	1096432
		10 A	—	QUINT4-PS/1AC/24DC/10	2904601
		10 A	—	TRIO-PS-2G/1AC/24DC/10	2903149
		10A	Conformal coated	QUINT4-PS/1AC/24DC/10/CO	2904625
		10A	Coated, Integrated MOSFET	QUINT4-PS/1AC/24DC/10/+	2904616
		20 A	—	QUINT4-PS/1AC/24DC/20	2904602
		20 A	—	TRIO-PS-2G/1AC/24DC/20	2903151
		20 A	Coated, Integrated MOSFET	QUINT4-PS/1AC/24DC/20/+	2904617
		40A	—	UNO2-PS/1AC/24DC/960W	1110043
		40A	Coated, Integrated MOSFET	QUINT4-PS/1AC/24DC/40/+	2904618
40 A	—	QUINT4-PS/1AC/24DC/40	2904603		
UNO POWER Basic power for a variety of applications 	48 V DC	1.25 A	—	UNO-PS/1AC/48DC/60W	2902995
		2.08 A	—	UNO-PS/1AC/48DC/100W	2902996
		5 A	—	QUINT4-PS/1AC/48DC/5	2904610
		5 A	—	TRIO-PS-2G/1AC/48DC/5	2903159
		10A	—	UNO2-PS/1AC/48DC/240W	1110155
		10 A	—	QUINT4-PS/1AC/48DC/10	2904611
		10A	—	QUINT4-PS/1AC/48DC/10/CO	2904626
		10 A	—	TRIO-PS-2G/1AC/48 DC/10	2903160
		20 A	—	QUINT4-PS/1AC/48DC/20	2904612





Power Supplies

Three phase power supplies

Power supply model	Output voltage	Output current	Noted feature	Description	Order no.
	24 V DC	5 A	—	QUINT4-PS/3AC/24DC/5	2904620
		5 A	—	TRIO-PS-2G/3AC/24DC/5	2903153
		10 A	—	QUINT4-PS/3AC/24 DC/10	2904621
		10 A	—	TRIO-PS-2G/3AC/24DC/10	2903154
		20 A	—	QUINT4-PS/3AC/24DC/20	2904622
		20A	IO Link	QUINT4-PS/3AC/24DC/20/IOL	1151048
		20 A	—	TRIO-PS-2G/3AC/24DC/20	2903155
		40 A	—	QUINT4-PS/3AC/24DC/40	2904623
		40 A	IO Link	QUINT4-PS/3AC/24DC/40/IOL	1151047
		40 A	—	TRIO-PS-2G/3AC/24DC/40	2903156
	48 V DC	20 A	—	QUINT4-PS/3AC/48DC/20	2904627

Recommended surge protection/power supply input


PLT-SEC-T3... 	Phase	Voltage	Output current	Description	Order no.
VAL-US... 	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 power


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.
—	24DC/24DC/5A	QUINT4-UPS/24DC/24DC/5	2906990
—	24DC/24VDC/10A	QUINT4-UPS/24DC/24DC/10	2907066
—	24DC/24VDC/20A	QUINT4-UPS/24DC/24DC/20	2907071
—	24DC/24VDC/40A	QUINT4-UPS/24DC/24DC/40	2907077
USB	24DC/24DC/5A	QUINT4-UPS/24DC/24DC/5/USB	2906991
USB	24DC/24VDC/10A	QUINT4-UPS/24DC/24DC/10/USB	2907067
USB	24DC/24VDC/20A	QUINT4-UPS/24DC/24DC/20/USB	2907072
USB	24DC/24VDC/40A	QUINT4-UPS/24DC/24DC/40/USB	2907078
ETHERNET IP	24DC/24VDC/5A	QUINT4-UPS/24DC/24DC/5/EIP	2906994
ETHERNET IP	24DC/24DC/10A	QUINT4-UPS/24DC/24DC/10/EIP	2907069
ETHERNET IP	24DC/24VDC/20A	QUINT4-UPS/24DC/24DC/20/EIP	2907074
ETHERNET IP	24DC/24VDC/40A	QUINT4-UPS/24DC/24DC/40/EIP	2907080
PROFINET	24DC/24DC/5A	QUINT4-UPS/24DC/24DC/5/PN	2906993
PROFINET	24DC/24VDC/10A	QUINT4-UPS/24DC/24DC/10/PN	2907068
PROFINET	24DC/24VDC/20A	QUINT4-UPS/24DC/24DC/20/PN	2907073
PROFINET	24DC/24VDC/40A	QUINT4-UPS/24DC/24DC/40/PN	2907079
ETHERCAT	24DC/24DC/5A	QUINT4-UPS/24DC/24DC/5/EC	2906996
ETHERCAT	24DC/24VDC/10A	QUINT4-UPS/24DC/24DC/10/EC	2907070
ETHERCAT	24DC/24VDC/20A	QUINT4-UPS/24DC/24DC/20/EC	2907076
ETHERCAT	24DC/24VDC/40A	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

Uninterruptible Power Supplies (UPS) — DC power



Energy storage type — UPS-BAT/PB

Load current	Buffer time																				Energy storage			
	Minutes										Hours													
	1	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	5	8	10	15	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																								

1+1 ... Two energy-storage types of the same capacity are required, based on ambient temperature of 20°C.

Energy storage type — LI-ION or VLRA-WTR

Load current	Buffer time															Energy storage									
	Seconds					Minutes					Hours														
	10	15	30	1	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	5	8	10	15	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																									

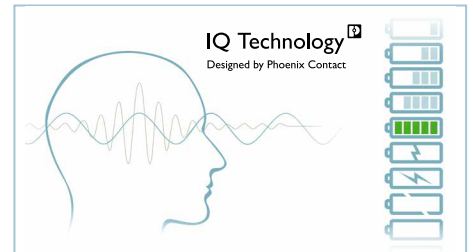
1+1 ... Two energy-storage types of the same capacity are required, based on ambient temperature of 20°C.

Uninterruptible Power Supplies (UPS)

AC power — 1 kVA double-conversion

QUINT IQ technology

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



	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

Scan the QR code to learn more online about QUINT IQ technology



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.

Energy storage type — UPS-BAT/PB

Power	Buffer time															Energy storage								
	Minutes					Hours																		
	2	3	4	5	8	10	15	20	25	30	40	50	1	1.5	2	3	4	6	9	10				
100 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
200 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
300 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
400 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
500 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
600 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
700 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
800 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
900 W	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1

1+1: For the QUINT AC UPS/1kVA, two energy storage devices of the same capacity are always required. The data is based on an ambient temperature of 20°C.

Surge Protection Power


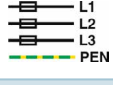
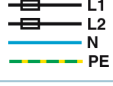
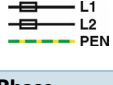

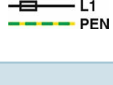
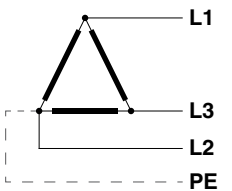
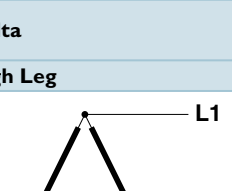

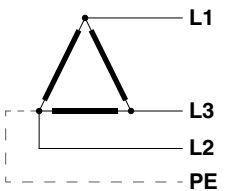

VAL-US Series

Scan the QR code to learn more online



Surge protection made easy

The VAL-US series 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. Our VAL-US series offers a complete portfolio of configurations for Canadian and U.S. power systems.

VAL-US series								
IEC/UL	Network type				SPD type IEC		Description	Order no.
	Voltage	Phase	IEC	UL	T1/T2	T2		
TN-S (3+1) 	400/690V AC	3-phase	TN-C	Three Phase Wye		✓	VAL-US-347/30/3+0-FM	2910383
	347/600V AC		TN-S			✓	VAL-US-347/30/3+1-FM	1079099
	277/480V AC					✓	VAL-US-277/40/3+1-FM	2910374
TN-C (3+0) 	277/480V AC	3-phase	TN-S	Three Phase Wye		✓	VAL-US-240/40/3+1-FM	2910367
						✓	VAL-US-277/80/4+0-FM	2910380
						✓	VAL-US-277/80/3+0-FM	1075896
						✓	VAL-US-240/40/3+0-FM	2910366
2-phase/Single Split Phase								
TN-S (2+1) 	240/415V AC	2-phase	TN-S	Single Split Phase		✓	VAL-US-240/40/2+1-FM	2910365
			TN-C			✓	VAL-US-240/40/2+0-FM	2910364
		TN-C (2+0) 		1-phase	TN-S	Single Phase		✓
TN-C					✓		VAL-US-277/80/1+0-FM	2910377
1-phase/Single Phase								
TN-S (1+1) 	120/240V AC	2-phase	TN-S	Single Split Phase	✓		VAL-US-120/65/2+1-FM	2910358
						✓	VAL-US-120/40/2+0-FM	2910351
						✓	VAL-US-120/65/2+0-FM	2910357
TN-C (1+0) 		2-phase	TN-C	Single Split Phase		✓	VAL-US-120/40/2+1-FM	2910352
						✓	VAL-US-120/65/3+1-FM	2910360
						✓	VAL-US-120/40/3+1-FM	2910354
Delta 	120/208V AC	3-phase	TN-S	Three Phase Wye		✓	VAL-US-120/65/3+0-FM	2910359
						✓	VAL-US-120/40/3+0-FM	2910353
						✓	VAL-US-120/40/3+0-FM	2910353
Corner Grounded 	400V AC	1-phase	TN-C	Single Phase		✓	VAL-US-347/30/1+0-FM	2910381
						✓	VAL-US-277/40/1+1-FM	2910373
						✓	VAL-US-120/65/1+1-FM	2910356
Delta systems								
High Leg 	120V AC	1-phase	TN-S	Single Phase		✓	VAL-US-120/40/1+0-FM	2910348
						✓	VAL-US-120/40/1+1-FM	2910349
						✓	VAL-US-120/40/1+1-FM	2910349
Delta 	(+/-) 48V DC 60V DC	1-phase	TN-S	Single Phase	✓		VAL-US-48/65/1+1V-FM	2910346
						✓	VAL-US-48/40/1+1V-FM	2910344
						✓	VAL-US-48/65/1+0-FM	2910345
			TN-C		✓		VAL-US-48/40/1+0-FM	2910343
Delta systems								
Delta	Network type				SPD type IEC		Description	Order no.
	Voltage	UL	T1/T2	T2				
High Leg 	960V AC	Corner Grounded		✓	VAL-US-600D/30/2+0-FM	2910390		
				✓	VAL-US-600D/30/3+0-FM	2910391		
	690V AC	Corner Grounded		✓	VAL-US-480D/30/2+0-FM	2910385		
				✓	VAL-US-480D/30/3+0-FM	2910386		
	480V AC	High Leg Delta		✓	VAL-US-480HLD/30/3+1V-FM	2910387		
	240V AC	Corner Grounded		✓	VAL-US-240D/40/2+0-FM	2910369		
			✓	VAL-US-240D/40/3+0-FM	2910370			
	High Leg Delta		✓	VAL-US-240HLD/40/3+1-FM	2910371			



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.
	Loop	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			
	Discrete	Screw	24 V DC	Indirect	PT-IQ-2X2+F-24DC-PT	2800981		
				Direct	PT-IQ-2X2+F-48DC-PT	2801266		
			48 V DC	Direct	PT-IQ-2X2+F-48DC-PT	2801266		
		Push-in	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					
	Screw	24 V DC	—	PT-IQ-5-HF+F-5DC-PT	2801292			
			Direct	PT-IQ-PTB-PT	2801296			
		48 V DC	Direct	PT-IQ-4X1-24DC-PT	2801271			
	Push-in	24 V DC	Direct	PT-IQ-4X1+F-24DC-PT	2801272			
		48 V DC	Indirect	PT-IQ-5-HF-5DC-PT	2801291			

Surge Protection

TERMITRAB Complete

Scan the QR code to learn more online




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.	
	Loop	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		
				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			
				Direct	TTC-6P-1X2-24DC-PT-I	2906815			
		Direct		TTC-6-1X2-24DC-PT	2906804				
		48 V DC		Direct	TTC-3-1x2-24DC-PT	2907325			
		Discrete		Screw	12 V DC	Direct	✓	✓	TTC-6P-1X2-48DC-PT-I
			24V DC		Indirect	TTC-6P-2X1-12DC-UT-I			2908201
	24V DC		Direct		TTC-6P-2X1-F-M-24DC-UT-I	2906784			
			Direct		TTC-6P-2X1-24DC-UT-I	2906810			
	48 V DC		Indirect		TTC-6-2X1-24DC-UT	2906799			
	Push-in		12 V DC		Indirect	✓	TTC-6P-2X1-F-48DC-UT-I		2908208
			24V DC	Indirect	TTC-6P-2X1-F-12DC-PT-I		2908206		
				Direct	TTC-6P-2X1-F-M-24DC-PT-I	2906794			
			Direct	TTC-6P-2X1-24DC-PT-I	2906816				
			Direct	TTC-6-2X1-24DC-PT	2906805				
			48 V DC	Direct	TTC-3-2x1-24DC-PT	2907326			
						✓	✓	TTC-6P-2X1-48DC-PT-I	2908204

Coaxial surge protection (CN)

	Signal	Connection	Voltage	Grounding	Pluggable	Monitoring	Description	Order no.
	Discrete	Screw	<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.
	Discrete	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
			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

TMC 8: UL 489-listed circuit breakers



1 Pole



2 Pole



3 Pole



Ampere rating	Description	Order no.
1	TMC 81B 01A	2907478
2	TMC 81B 02A	2907479
5	TMC 81B 05A	2907482
20	TMC 81B 20A	2907492
1	TMC 81C 01A	2907558
2	TMC 81C 02A	2907559
3	TMC 81C 03A	2907560
4	TMC 81C 04A	2907561
5	TMC 81C 05A	2907562
6	TMC 81C 06A	2907563
10	TMC 81C 10A	2907566
15	TMC 81C 15A	2907571
20	TMC 81C 20A	2907573
1	TMC 81D 01A	2907626
2	TMC 81D 02A	2907627
4	TMC 81D 04A	2907629
5	TMC 81D 05A	2907630
7	TMC 81D 07A	2907632
8	TMC 81D 08A	2907633
15	TMC 81D 15A	2907638
1	TMC 82C 01A	2907582
3	TMC 82C 03A	2907585
5	TMC 82C 05A	2907587
6	TMC 82C 06A	2907588
10	TMC 82C 10A	2907591
15	TMC 82C 15A	2907594
15	TMC 82D 15A	2907662
2	TMC 83C 02A	2907608
3	TMC 83C 03A	2907609
5	TMC 83C 05A	2907611
10	TMC 83C 10A	2907615
15	TMC 83C 15A	2907618

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.

Tables shown feature the most common units. For more options and accessories, please scan the QR code.



Single channel electronic circuit breakers — **NEC Class2




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




Thermomagnetic Device Circuit Breakers




TMC 7: UL 1077-recognized circuit breakers

	Ampere rating	Description	Order no.
1 Pole 	1	TMC 71B 01A	1011962
	5	TMC 71B 05A	1019912
	10	TMC 71B 10A	1019916
	16	TMC 71B 16A	1019920
	1	TMC 71C 01A	1019972
	2	TMC 71C 02A	1019973
	3	TMC 71C 03A	1019974
	4	TMC 71C 04A	1019975
	5	TMC 71C 05A	1019976
	6	TMC 71C 06A	1019977
2 Pole 	7	TMC 71C 07A	1019978
	8	TMC 71C 08A	1019979
	10	TMC 71C 10A	1019980
	15	TMC 71C 15A	1019983
	20	TMC 71C 20A	1019985
	30	TMC 71C 30A	1019987
	63	TMC 71C 63A	1019992
	50	TMC 71D 50A	1020057
	63	TMC 71D 63A	1020059
	5	TMC 72B 05A	1019934
3 Pole 	8	TMC 72B 08A	1019937
	2	TMC 72C 02A	1019995
	3	TMC 72C 03A	1019996
	4	TMC 72C 04A	1019997
	5	TMC 72C 05A	1019998
	6	TMC 72C 06A	1019999
	7	TMC 72C 07A	1020000
	10	TMC 72C 10A	1020002
	15	TMC 72C 15A	1020005
	20	TMC 72C 20A	1020007
10	TMC 72D 10A	1020069	
1	TMC 73D 01A	1020082	

Electronic circuit breakers module — Class I, Div 2

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

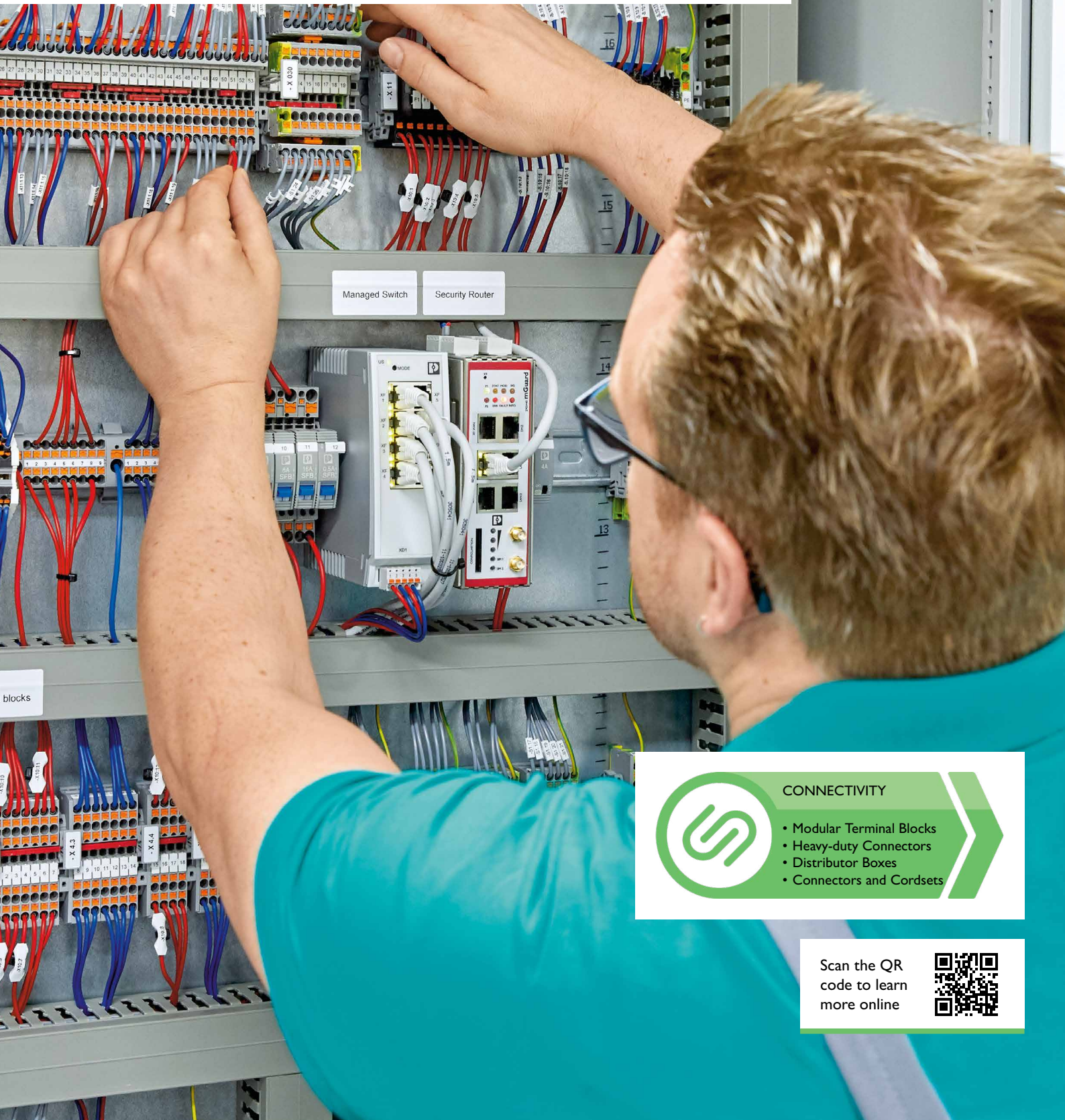
Electronic circuit breakers module compact — **NEC Class2

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



Connectivity

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



CONNECTIVITY

- Modular Terminal Blocks
- 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.

Cabinet

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



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.

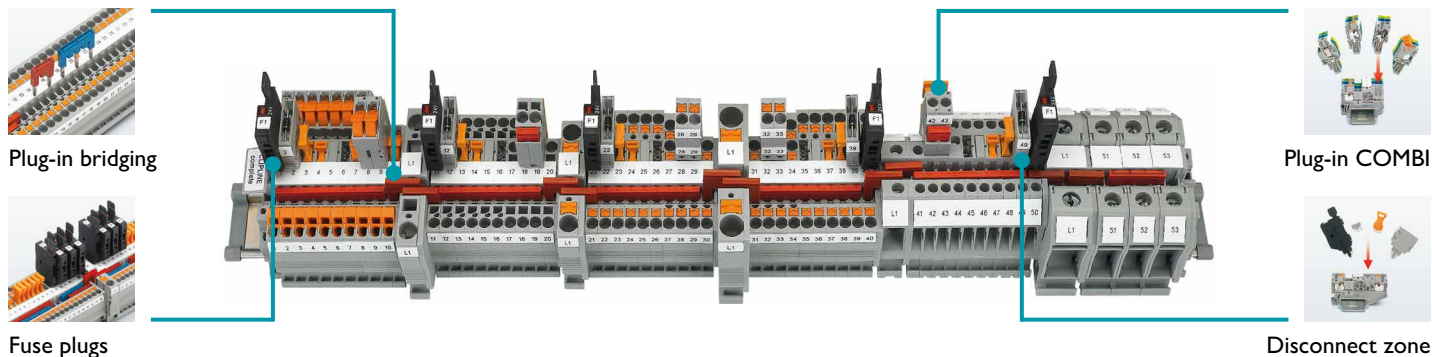





Modular Terminal Blocks

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 flexibly combined with one another using the same accessories.



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 TM
Designed by PHOENIX CONTACT

AWG	I _{max}	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking Side	Marking Top
26-14	15A	2	PT 1.5/S	3208100	3208142	3213014	1204504	0829486	0829484
	—		PT 1.5/S PE	3208139					
	15A	3	PT 1.5/S-TWIN	3208155	3208184				
	15A	4	PT 1.5/S-QUATTRO	3208197	3208375				
26-12	20A	2	PT 2.5	3209510	3030417	3030161	1204517	0828744	0828734
	—		PT 2.5-PE	3209536					
	20A	3	PT 2.5-TWIN	3209549	3030488				
	20A	4	PT 2.5-QUATTRO	3209578	3030514				
	—		PTTB 2.5	3210567	3211634				
	—	—	PTTB 2.5-PE	3210596					
24-10	30A	2	PT 4	3211757	3030420	3030336	1204517	0828746	0828736
	—		PT 4-PE	3211766					
	6.3A		PT 4-HESI (5X20 FUSE)	3211861					
	6.3A		PT 4-HESILED 24 (5X20 FUSE)	3211903					
	30A	3	PT 4-TWIN	3211771	3208977				
	30A	4	PT 4-QUATTRO	3211797	3208979				
	28A		PTTB 4	3211786	3030462				
	—	—	PTTB 4-PE	3211854					

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}	Connections	Description	Order no.	Cover	Bridge (2-pos.)	Screwdriver	Marking Side	Marking Top
26-12	20	2	UT 2.5	3044076	3047028	3030161	1212587	0828734	—
	—		UT 2.5-PE	3044092					
	20	3	UT 2.5-TWIN	3044513	3047141				
	20	4	UT 2.5-QUATTRO	3044542	3047170				
	—		UTTB 2.5	3044636	3047293				
	—	—	UTTB 2.5-PE	3044665					
	20	6	UT 2.5-3L	3214259	3214314				
	—		—	UT 2.5-3PE					

Modular Terminal Blocks



26-10	30	2	UT 4	3044102	3047028	3030336	1212587	0828736	—	
	—		UT 4-PE	3044128						
	6.3		UT 4-HESI (5X20 FUSE)	3046032						—
	6.3		UT 4-HESILED 24 (5X20 FUSE)	3046090						—
	30	3	UT 4-TWIN	3044364	3047141					
	30		UT 4-QUATTRO	3044571	3047170					
	30	4	UTTB 4	3044814	3047293					
—	UTTB4-PE		3044759							
26-8	50	2	UT-6	3044131	3047028	3030284	1205066	0828740	—	
	—		UT6-PE	3044157	—					

Spring cage (ST)

Accessories

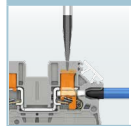


- Standard spring for error-free vibration resistance
- Save money with uniform bridging, marking, and accessories

28-12	20	2	ST 2.5	3031212	3030417	3030161	1204517	0828744	0828734
		4	ST 2.5-QUATTRO	3031306	3030514				
28-10	30	2	ST 4	3031364	3030420	3030336	1204517	0828746	0828736
	6.3		ST 4-HESILED 24 (5X20 FUSE)	3036547	—				

PTV (Push-in Vertical)

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[®]
Designed by PHOENIX CONTACT

26-12	20	2	PTV 2.5	1078960	1088746	3030161	1204517	0828734	—
			PTV 2.5 PE	1078963					
		3	PTV 2.5 TWIN	1078966	1088747				
		4	PTV 2.5 QUATTRO	1078999	1078999				
20-10	16	2	PTV 4 HESILED 24	1088743	1079918	3030336	1204517	0828736	—

Bolt connection (RT)

Accessories



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

26-14	24	2	RT-3	3049013	3049097	3030336	1205053	0828740	See Marking Guide
26-10	41		RT-5	3049026	—	3030284	1205079	0829144	
14-2	125		RT-8	3049042	3049194	3005947	1205066	0829146	

PTFIX distribution blocks

Ready to connect blocks with Push-in connection enable fast assembly without manual bridging, offering time savings of up to 80%

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



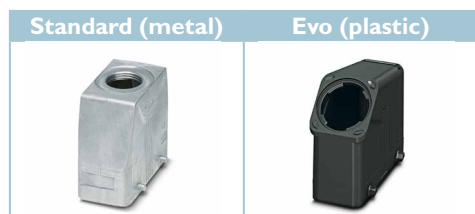
Heavy-duty Connectors

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



Selector guide — Pick 4 parts

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

HEAVYCON STANDARD

Poles	Tech.	Socket (F)		Plug (M)		Panel Mounting Base		Hood - Top Entry		Hood - Lateral Entry	
		Order no.	Description	Order no.	Description	with cover	w/o cover	Low profile	High profile	Low profile	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 + 1414630	—	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)		Plug (M)		Panel Mounting Base		Hood - Top and Lateral Entry	
		Order no.	Description	Order no.	Description	with cover	w/o cover	Low profile	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 + 1414630	—	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	7-13mm	1407669 (M20 equivalent)
M25	1411165	9-17mm	1407670 (M25 equivalent)
M32	1411166	11-21mm	1407671 (M32 equivalent)
M40	1411167	19-28mm	1407672 (M40 equivalent)

M8/M12 Distributor Boxes

Distributor boxes for signal and power applications

Scan the QR code to learn more online



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.



M8 — Metal thread

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

M12 — Metal thread

8	✗	Single	1516881	—	5m	SACB-8/ 8- 5,0PUR SCO	1517042
					10m	SACB-8/ 8-10,0PUR SCO	1517055
		Double	1516894	—	5m	SACB-8/16- 5,0PUR SCO	1517068
					10m	SACB-8/16-10,0PUR SCO	1517071
	✓	Single	1516823	—	5m	SACB-8/ 8-L- 5,0PUR SCO	1517165
					10m	SACB-8/ 8-L-10,0PUR SCO	1517178
		Double	1516836	—	5m	SACB-8/16-L- 5,0PUR SCO	1517181
					10m	SACB-8/16-L-10,0PUR SCO	1517194

M12 — Plastic thread

8	✗	Single	1452783	—	5m	SACB-8/ 8- 5,0PUR SCO P	1452518
					10m	SACB-8/ 8-10,0PUR SCO P	1452521
		Double	1452796	1692844 (M23)	5m	SACB-8/16- 5,0PUR SCO P	1452547
					10m	SACB-8/16-10,0PUR SCO P	1452550
	✓	Single	1452848	—	5m	SACB-8/ 8-L- 5,0PUR SCO P	1452699
					10m	SACB-8/ 8-L-10,0PUR SCO P	1452709
		Double	1452851	1692459 (M23)	5m	SACB-8/16-L- 5,0PUR SCO P	1452725
					10m	SACB-8/16-L-10,0PUR SCO P	1452738

Accessories

	Type	Material	Length	Description	Order no.
	Master cable ring for sensor/actuator boxes	PUR/PVC black	50m	SACB- 8X0,34/ 3X0,75-50,0 PUR	1503344
	Master cable with M23 plug connection	PUR/PVC black	5m	RCK-TGUM/BL16+3/ 5,0PUR-U	1684056



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

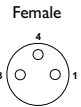
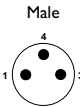
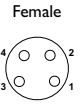
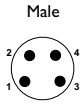
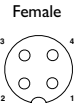
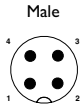
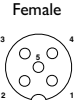
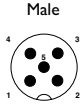
Configure your cable connection for signal, data, and power transmission in IP6x environments or for control cabinet applications. Freely selectable cable lengths and cable ends allow customized cable assemblies.



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										
Female	Male	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	2.5...5 mm	SACC-M 8MS-4QO-0,5-M	1441037			
				Female Straight		SACC-M 8FS-4QO-0,5-M	1441079			
M12										
		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	4...8 mm	SACC-M12MS-4QO-0,75-M	1641785			
				Female Straight		SACC-M12FS-4QO-0,75-M	1641772			
				Push-In		Male Straight	SACC-MS-4PL M SCO	1424657		
						Male Angled	SACC-M12MR-4PL M	1424654		
			Push-In	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 Angled	6...8 mm	SACC-M12MS-5CON-PG 9-M	1681460
Female Straight	4...6 mm	SACC-M12MR-5CON-PG 7-M					1663129			
Female Angled	SACC-M12FR-5CON-PG 7-M	1662984								
Push-In	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			
	Screw					Female Straight	6...8 mm	SACC-M12FS-8CON-PG9-M	1513347	
						Male Straight	SACC-M12MS-8CON-PG9-M	1513334		

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 product series. 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.	Front-mount receptacle order no.	Rear-mount receptacle order no.		
	3-pos.	Male/Female / Straight	1.5 m	1681923	1405935	1455285	1405828	1500350	1453449		
		Female / Straight	5 m	1669628	1405956	1521737	1405834	1500350	1453449		
		Female / Right angle		1669631	1405957	1521782	1405835	1500350	1453449		
		Male / Straight		1681680	1405939	1521630	1405830	1500334	1453478		
		Male / Right angle		1681716	1405944	1521685	1405833	1500334	1453478		
		Female / Straight	10 m	1694101	1405956	1521740	1405834	1500350	1453449		
				Female / Right angle	1694169	1405957	1521795	1405835	1500350	1453449	
				Male / Straight	1693584	1405939	1521643	1405830	1500334	1453478	
				Male / Right angle	1694114	1405944	1521698	1405833	1500334	1453478	
			4-pos.	Male/Female / Straight	1.5 m	1682168	1405902	1455735	1405810	1500363	1453452
				Female / Straight	5 m	1681868	1405923	1521931	1405822	1500363	1453452
				Female / Right angle		1681897	1405924	1521986	1405823	1500363	1453452
Male / Straight	1681800			1405906		1521834	1405818	1500347	1452481		
Male / Right angle	1681839			1405911		1521889	1405821	1500347	1452481		
Female / Straight	10 m			1683484	1405923	1521944	1405822	1500363	1453452		
				Female / Right angle	1694172	1405924	1521999	1405823	1500363	1453452	
				Male / Straight	1694143	1405906	1521847	1405818	1500347	1452481	
				Male / Right angle	1694156	1405911	1521892	1405821	1500347	1452481	
M12											
	3-pos.			Male/Female / Straight	1.5 m	1681525	—	1500826	—	—	—
				Female / Straight	5 m	1683510	1405947	1682809	1405927	1523434	1419632
		Female / Right angle	1694525	1405959		1682838	1405934	1523434	1419632		
		Male / Straight	1668030	1405949		1682676	1405929	1523450	1419629		
		Male / Right angle	1668153	1405955		1682702	1405932	1523450	1419629		
		Female / Straight	10 m	1693034	1405958	1500680	1405933	1523434	1419632		
				Female / Right angle	1694538	1405959	1500693	1405934	1523434	1419632	
				Male / Straight	1682566	1405949	1500664	1405929	1523450	1419629	
				Male / Right angle	1694444	1405955	1500677	1405932	1523450	1419629	
			4-pos.	Male/Female / Straight	1.5 m	1668373	—	1500868	—	—	—
				Female / Straight	5 m	1668124	1405925	1682867	1405900	1523434	1419632
				Female / Right angle		1668247	1405926	1682922	1405901	1523434	1419632
Male / Straight	1668069			1405916		1682647	1405896	1523450	1419629		
Male / Right angle	1668182			1405922		1682896	1405899	1523450	1419629		
Female / Straight	10 m			1683002	1405925	1500716	1405900	1523434	1419632		
				Female / Right angle	1681389	1405926	1500729	1405901	1523434	1419632	
				Male / Straight	1682993	1405916	1694389	1405896	1523450	1419629	
				Male / Right angle	1694457	1405922	1500703	1405899	1523450	1419629	
	5-pos.			Male/Female / Straight	1.5 m	1681606	1405886	1500907	1405877	1520039	1419658
				Female / Straight	5 m	1669848	1405892	1682951	1405884	1520039	1419658
				Female / Right angle		1669877	1405893	1682980	1405885	1520039	1419658
		Male / Straight	1669783	1405888		1682731	1405879	1520055	1419645		
		Male / Right angle	1669819	1405891		1682773	1405883	1520055	1419645		
		Female / Straight	10 m	1683374	1405886	1500758	1405877	1520039	1419658		
				Female / Right angle	1694541	1405892	1500761	1405884	1520039	1419658	
				Male / Straight	1683361	1405893	1500732	1405885	1520055	1419645	
				Male / Right angle	1694460	1405888	1500745	1405879	1520055	1419645	
			8-pos.	Male/Female / Straight	1.5 m	1522697	1405891	1522985	1405883	1520039	1419658
				Female / Straight	5 m	1520369	1405851	1522888	1405843	1523276	1419690
				Female / Right angle		1522642	1405852	1522930	1405844	1523276	1419690
Male / Straight	1522516			1405847		1526981	1405839	1523292	1419687		
Male / Right angle	1522561			1405850		1522833	1405842	1523292	1419687		
Female / Straight	10 m			1520372	1405851	1522891	1405843	1523276	1419690		
				Female / Right angle	1522655	1405852	1522943	1405844	1523276	1419690	
				Male / Straight	1522529	1405847	1522794	1405839	1523292	1419687	
				Male / Right angle	1522574	1405850	1522846	1405842	1523292	1419687	



Signal Switching and Conditioning

Every signal has a specific purpose and not all signals are the same. And sometimes along the journey, signals may need to be isolated, amplified, or converted to serve their purpose in the system. Ensuring the signal's mission is accomplished can be as simple as choosing a universal product, or might require digging deeper and allowing the application to dictate product selection. Analog signals, digital signals, and motors all require the right product to ensure that the signal gets the job done.



SIGNAL SWITCHING AND CONDITIONING

- Speed Starters
- Interposing Relays
- General Purpose Relays
- Signal Conditioners

Scan the QR code to learn more online



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 4-20mA or 0-10V signal.

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



Interposing Relays

PLC-INTERFACE relays — innovations in switching

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

Triple-rated, hazardous-location relays

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

Specialty


	24 V DC	6 A	NO ONLY - 6.2 mm	Screw	PLC-RSC-24DC/ 1/ACT	2966210
				Screw	PLC-RSC-24DC/ 1AU/SEN	2966317
	120 V AC/DC	6 A	SPDT - 6.2 mm	Screw	PLC-RSC-120UC/21/SO46	5603593

Please note: Other specialty relays available (manual switch, force-guided, filter, high-density, DC motor control, etc.)

Replacement parts — Mechanical relay

	Input-coil voltage	Output current	Sets of contacts	Description	Order no.
	12 V DC	6 A	6 A	SPDT - 6.2 mm	REL-MR-12DC/21
24 V DC	6 A	6 A	SPDT - 6.2 mm	REL-MR-24DC/21	2961105
			DPDT - 14 mm	REL-MR-24DC/21-21	2961192
10 A	10 A	10 A	SPDT - 14 mm	REL-MR-24DC/21HC	2961312
			120 V AC	6 A	6 A
120 V AC	6 A	6 A	DPDT - 14 mm	REL-MR-110DC/21-21	2961202

Solid-state relays

	5 V DC	3 A	3 A	SPST - 6.2 mm	OPT-5DC/24 DC/2	2967989
	24 V DC	3 A	3 A	SPST - 6.2 mm	OPT-24DC/24 DC/2	2966595
	120 V AC	3 A	3 A	SPST - 6.2 mm	OPT-60DC/24 DC/2	2966605

Potential Distribution
2966508 - PLC-ESK GY

Adaptors and system cabling
V8 adaptor: 2295554
PLC-V8/FLK14/OUT
System cable 1m: 2305253
CABLE-FLK14/OE/0,14/100

Wide range of solutions
Over 600 standard and specialty relay solutions

Terminal marking
6.2 mm wide: 0828736
14 mm: 0829144

Partition plate
2966841 - PLC - ATP-BK

PLC Relay Bridging

Easily bridge relays together with plug-in bridges — no tools required.

Available in 2 positions, or in continuous pieces for cutting to custom lengths.



PLC relay bridging

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



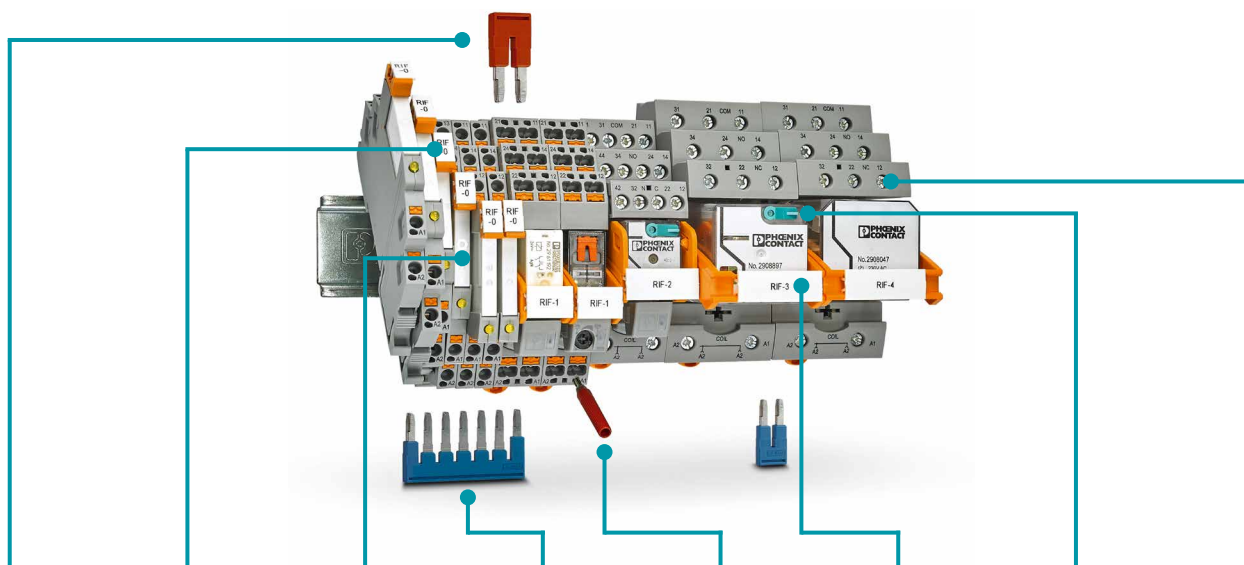
General Purpose and Ice-cube Relays

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.



Scan the QR code to learn more online



Easy potential distribution using FBS bridging	Wide range of marking options	Slimline relays to power contactors, available in screw and push-in connection	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: screw terminals from 20 AWG to 10 AWG
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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	12 V DC	6 A	NO only	Screw	RIF-0-RSC-12DC/ 1	2903367
				Push-in	RIF-0-RPT-12DC/ 1	2903362
	24 V DC	6 A	NO only	Screw	RIF-0-RSC-24DC/ 1	2903366
				Push-in	RIF-0-RPT-24DC/ 1	2903361
RIF-1 16 mm wide 75 mm tall Pin contacts	12 V DC	11 A	SPDT	Screw	RIF-1-RSC-LDP-12DC/1X21	2908500
				Push-in	RIF-1-RPT-LDP-12DC/1X21	2906224
		8 A	DPDT	Screw	RIF-1-RSC-LDP-12DC/2X21	2908501
				Push-in	RIF-1-RPT-LDP-12DC/2X21	2906223
	24 V DC	11 A	SPDT	Screw	RIF-1-RSC-LDP-24DC/1X21	2903358
				Push-in	RIF-1-RPT-LDP-24DC/1X21	2903342
		8 A	DPDT	Screw	RIF-1-RSC-LDP-24DC/2X21	2903350
				Push-in	RIF-1-RPT-LDP-24DC/2X21	2903334
		50 mA	SPDT	Screw	RIF-1-RSC-LDP-24DC/1X21AU	2903354
				Screw	RIF-1-RSC-LDP-24DC/2X21AU	2903346
Push-in	RIF-1-RPT-LDP-24DC/2X21AU	2903330				

Electromechanical relays — RIFLINE

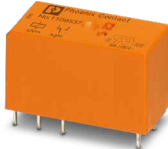
Type	Input voltage	Output current	Sets of contacts	Termination style	Description	Order no.
RIF-1 16 mm wide 75 mm tall Pin contacts	120 V AC	10 A	SPDT	Screw	RIF-1-RSC-LV-120AC/1X21	2903356
				Push-in	RIF-1-RPT-LV-120AC/1X21	2903340
		8 A	DPDT	Screw	RIF-1-RSC-LV-120AC/2X21	2903348
				Push-in	RIF-1-RPT-LV-120AC/2X21	2903332

Electromechanical ice-cube relays — RIFLINE


RIF-2 31 mm wide 75 mm tall Blade contacts	24 V DC	10 A	2PDT	Screw	RIF-2-RSC-LDP-24DC/2X21	2903326
				Push-in	RIF-2-RPT-LDP-24DC/2X21	2903315
		6 A	4PDT	Screw	RIF-2-RSC-LDP-24DC/4X21	2903320
				Push-in	RIF-2-RPT-LDP-24DC/4X21	2903308
	120 V AC	8.5 A	2PDT	Screw	RIF-2-RSC-LV-120AC/2X21	2903322
				Push-in	RIF-2-RPT-LV-120AC/2X21	2903311
		6 A	4PDT	Screw	RIF-2-RSC-LV-120AC/4X21	2903319
				Push-in	RIF-2-RPT-LV-120AC/4X21	2903305
RIF-3 40 mm wide Pin contacts	24 V DC	8.5 A	3PDT	Screw	RIF-3-RSC-LDP-24DC/3X21	2903300
				Push-in	RIF-3-RPT-LDP-24DC/3X21	2903294
	120 V AC	6 A	3PDT	Screw	RIF-3-RSC-LV-120AC/3X21	2903299
				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	Screw	RIF-4-RSC-LDP-24DC/3X21	2903288
				Push-in	RIF-4-RPT-LDP-24DC/3X21	2903278
	120 V AC	8 A	3PDT	Screw	RIF-4-RSC-LV-120AC/3X21	2903287
				Push-in	RIF-4-RPT-LV-120AC/3X21	2903277

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


Electromechanical ice-cube relays — ECOR Series

	Type	Input voltage	Output current	Sets of contacts	Description	Order no.
	ECOR 1 Relay plugs	12V DC	16A	1PDT	REL-MR-BL- 12DC/21HC	1109537
		24 V DC	16A	1PDT	REL-MR-BL- 24DC/21HC	2906285
		24 V AC	16A	1PDT	REL-MR-BL- 24AC/21HC	1109540
		115 V AC	16A	1PDT	REL-MR-BL-115AC/21HC	1109542


Accessories — ECOR 1

	Type	Description	Order no.
	Base (screw terminals)	ECOR-1-BSC3/2X21	2907518
	Bracket	ECOR-RH-1L	2907524
	LED (12-24 V AC)	LDP- 12- 24DC	2833657
	LED (120-230 V AC)	LV-120-230AC/110DC	2833738

Electromechanical ice-cube relays — ECOR Series

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



Signal Conditioners

Highly compact signal conditioners

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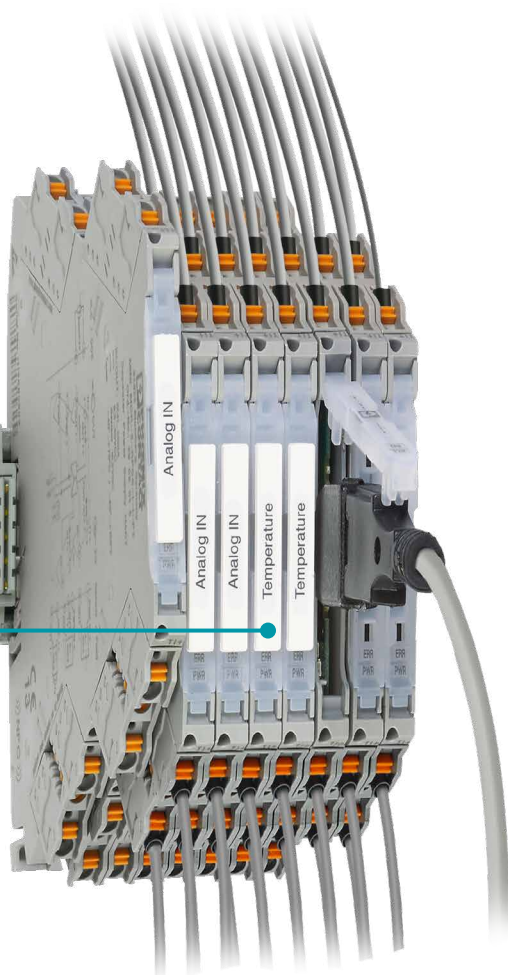
The 6-mm signal conditioners from the MINI Analog range offer the full spectrum of analog signal conditioning. They are also extremely efficient with regard to saving costs, space, and energy. The comprehensive approval package means they can be used in a range of areas. You benefit from saving up to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

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.



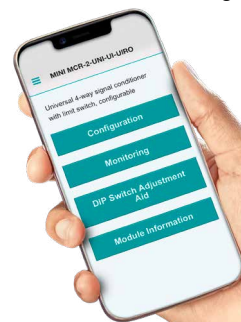
Easily accessible terminal points and FASTCON Pro plug-in connection terminal blocks




Measure signals during operation, without disconnecting the current loops

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




Fixed signal conversion and isolation

	Module power	Input signal	Output signal	Description	Order no.
	Line	0-10 V DC	Active 4-20 mA	0-10 V DC	MINI MCR-2-U-U
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

	Module power	Input signal	Output signal	Description	Order no.
	Line	Active/universal	Active/universal	Active/universal	MINI MCR-2-UI-UI
Active/universal			Active/universal/relay out	MINI MCR-2-UNI-UI-UIRO	2902026


Temperature signal conversion and isolation

	Module power	Input signal	Output signal	Description	Order no.	
	Line	Active/universal	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

	Module power	Input signal	Output signal	Description	Order no.	
	Loop	Active 4-20 mA	Active 4-20 mA	Passive 4-20 mA	MINI MCR-2-I-I-ILP	2901994
				Active 4-20 mA	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
Active 4-20 mA				MINI MCR-2-RPS-2I-2I-OLP	2906448	

Specialty signal conversion and isolation

	Module power	Input signal	Output signal	Description	Order no.	
	Line	Active 4-20 mA	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

	Module power	Input signal	Output signal	Description	Order no.
	Line	Active 4-20 mA	4-20 mA/HART	4-20 mA/HART	MINI MCR-2-RPSS-I-I



Industrial Networking and Security

The modern factory, driven by IIoT and big data, has given rise to increased network traffic and subsequent vulnerabilities and risks, both internal and external. Resilient network infrastructure starts with the correct selection of switches, cellular and wireless radios, and security appliances to maximize efficient and resilient communication, enable secure remote access, and prevent network breaches.



INDUSTRIAL NETWORKING AND SECURITY

- Unmanaged Switches
- Power Over Ethernet
- Managed Switches
- Remote Connectivity

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Networking



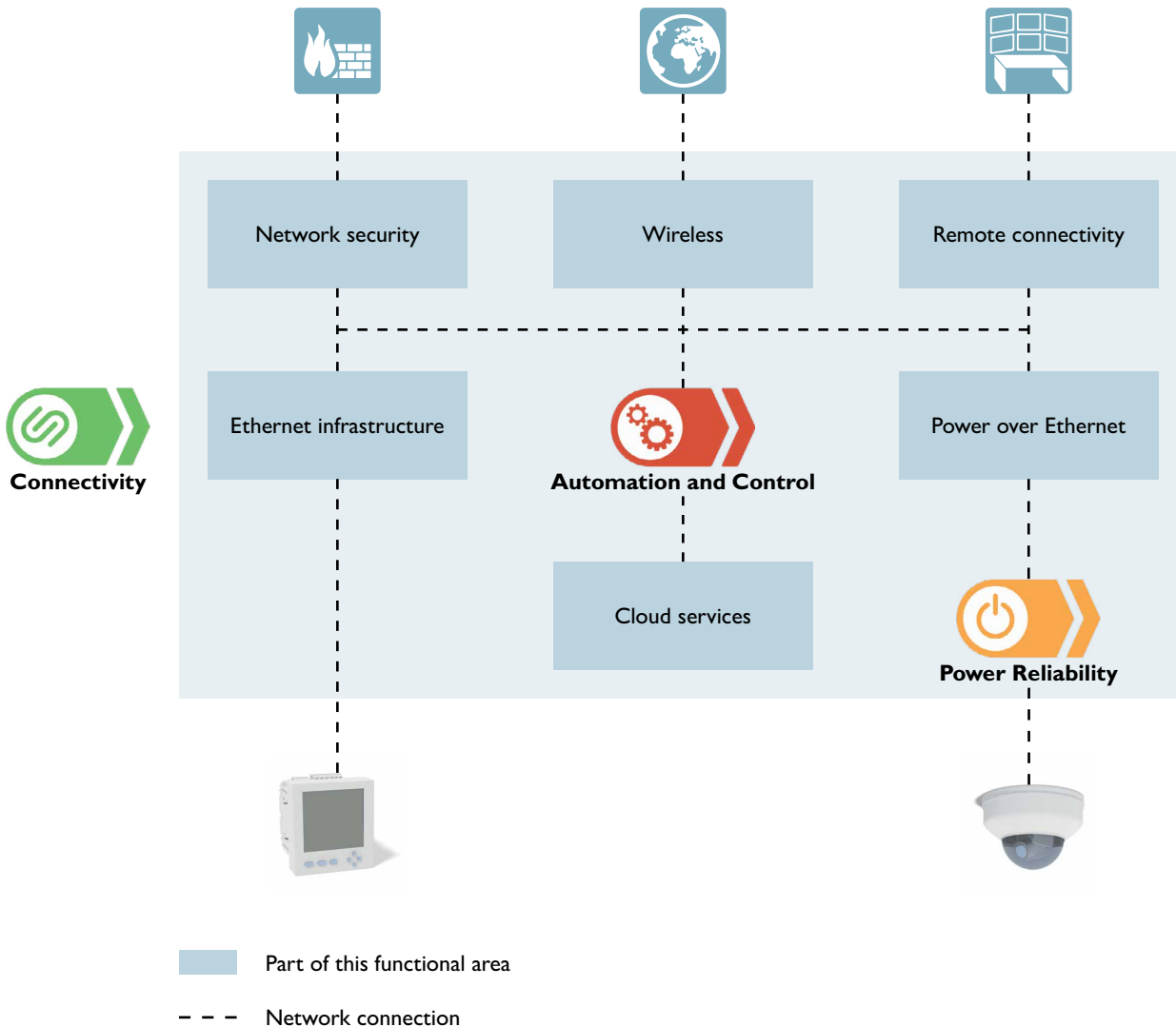
With the broad range of technologies supported by Phoenix Contact networking and security products, you can design and implement scalable, reliable, and high-functioning systems.

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.

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.

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

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 .





Unmanaged Ethernet Switches

FL SWITCH 1000N unmanaged switches

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Your advantages

- ✓ Cost-effective
- ✓ Simple
- ✓ Gigabit/Fast Ethernet speed
- ✓ Multiple fiber options

Switch 1000N

Class I Div 2	Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
X	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

X	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 — Class I, Div 2

✓	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


Switch 1100NT — Class I, Div 2

✓	5	—	5	10/100/1000 Mbps	FL SWITCH 1105NT	1085163
	8	—	8	10/100/1000 Mbps	FL SWITCH 1108NT	1085162

Accessories

	Type	Compatible products	Description	Order no.
	DIN-RAIL	FL SWITCH 1005N / FL SWITCH 1008N FL SWITCH 1105N / FL SWITCH 1108N	FL DIN-RAIL ADAPTER 22.5	1085485
		FL SWITCH 1016N	FL DIN-RAIL ADAPTER 40	1085484
	PANEL	FL SWITCH 1005N / FL SWITCH 1008N FL SWITCH 1105N / FL SWITCH 1108N	FL PANEL ADAPTER 22.5	1085488
		FL SWITCH 1016N	FL PANEL ADAPTER 40	1085486

Switch 1000NT — 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

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.




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PoE


	Copper ports	Specialty ports	Total ports	Speed	Description	Order no.
	8	10/100/1000 Mbps PoE+	8	10/100/1000 Mbps	FL SWITCH 1000-8POE-GT	1102079
	4	10/100/1000 Mbps PoE+	4	10/100/1000 Mbps	FL SWITCH 1001-4POE-GT	1102077
	4	10/100 Mbps PoE+	4	10/100 Mbps	FL SWITCH 1001T-4POE	2891064
	4	10/100/1000 Mbps PoE+	4	10/100/1000 Mbps	FL SWITCH 1001T-4POE-GT	1026937

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	15/30 W	Electrical isolation in the power supply unit	IEEE 802.3 af	FL PSE 2TX	2891013
					IEEE 802.3 af/at (PoE+)	INJ 1000	2703005
	0 °C ... +60 °C	60 W	Electrical isolation in the power supply unit	Prepared for PoE bt (PoE++)	INJ 1010	2703007	
					IEEE 802.3 af/at (PoE+)	INJ 1000-T	2703006
					Prepared for PoE bt (PoE++)	INJ 1010-T	2703008
					IEEE 802.3 af/at (PoE+)	INJ 1100-T	2703009
-40 °C ... +75 °C	60 W	Electrical isolation in the power supply unit, surge protection and shield current diagnostics	Prepared for PoE bt (PoE++)	INJ 1010-T	2703008		
				IEEE 802.3 af/at (PoE+)	INJ 1100-T	2703009	

Patch panels

	Connection method	Type	Shielding	Cable shield connection	Description	Order no.
RJ45/RJ45	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

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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	—	—	10/100 Mbps	RSTP, Ethernet I/P, extended multicast filtering and Profinet class A	FL SWITCH 2005	2702323
	8 x RJ45	—	—			FL SWITCH 2008	2702324
	16 x RJ45	—	—			FL SWITCH 2016	2702903
	5 x RJ45	—	—	10/100/1000 Mbps		FL SWITCH 2105	2702665
	8 x RJ45	—	—			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	—	—	10/100 Mbps	RSTP, Ethernet I/P, extended multicast filtering and Profinet class A	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	—			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	—			FL SWITCH 2206-2FX SM ST	2702333
	6 x RJ45	2 x SFX	—			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	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	—	—	10/100 Mbps	PROFINET (preset), PROFINET status LEDs	FL SWITCH 2208 PN	1044024
	6 x RJ45	2 x SFX	—			FL SWITCH 2206-2SFX-PN	1044028
	16 x RJ45	—	—			FL SWITCH 2216 PN	1044029
	14 x RJ45	2 x SFX	—			FL SWITCH 2214-2SFX PN	1044030
	8 x RJ45	—	—	10/100/1000 Mbps		FL SWITCH 2308 PN	1009220
	6 x RJ45	2 x SFP	—			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.

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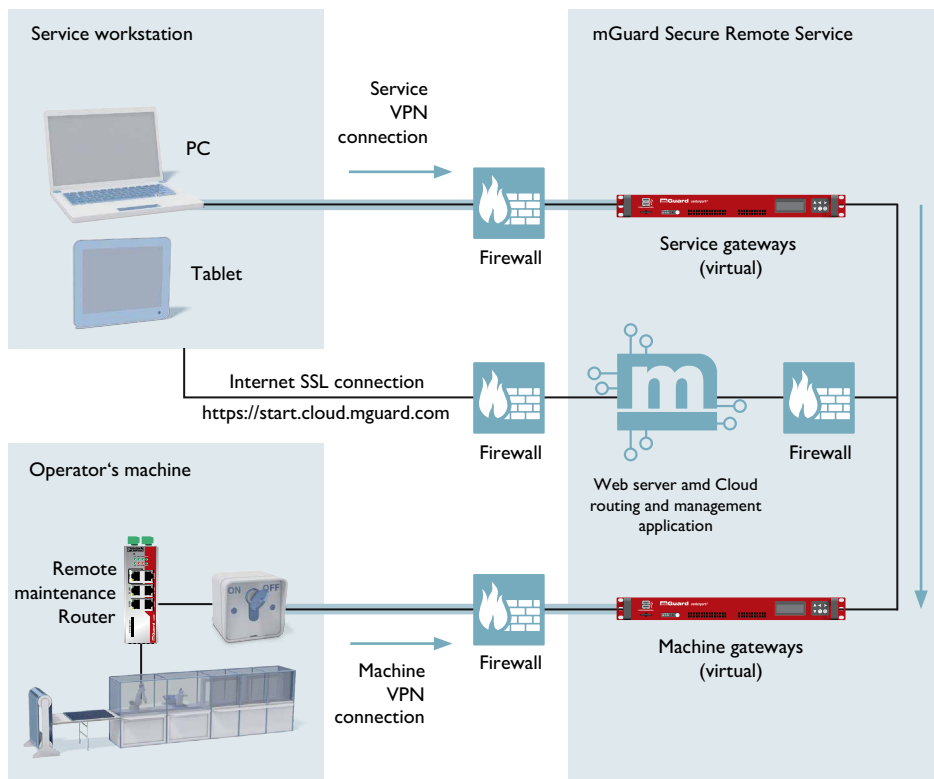


mGuard					
Notes	mGuard Secure Cloud	Routing/NAT	Configurable Firewall	Description	Order no.
Remote access gateway with 1 LAN and 1 WAN port	✓	✗	✗	CLOUD CLIENT 1001T-TX/TX	1221706
Remote access gateway with a cellular connection	✓	✗	✗	TC CLOUD CLIENT 1002-4G ATT	2702888
Gigabit router supporting NAT and a simple firewall with 1 LAN and 1 WAN port	✗	✓	✓	FL MGUARD 1102	1153079
Gigabit router supporting NAT and a simple firewall with 4 LAN and 1 WAN port	✗	✓	✓	FL MGUARD 1105	1153078
Router with VPN/Remote access, NAT and a fully featured firewall with 1 LAN and 1 WAN port	✓	✓	✓	FL MGUARD RS2000 TX/TX VPN	2700642
Cellular Router with VPN/Remote access, NAT and a fully featured firewall	✓	✓	✓	TC MGUARD RS2000 4G ATT VPN	1010464
Router with VPN/Remote access, NAT and a fully featured firewall with 1 LAN and 1 WAN port	✓	✓	✓	FL MGUARD RS4000 TX/TX VPN	2200515
Cellular Router with VPN/Remote access, NAT and a fully featured firewall with 4 LAN, 1 WAN and 1 DMZ port. Can fallback from WAN to cellular	✓	✓	✓	TC MGUARD RS4000 4G ATT VPN	1010463
Industrial LTE 4G router, 2 Ethernet interfaces, firewall, NAT, IPsec and OpenVPN support	✓	✓	✓	TC ROUTER 3002T-4G ATT	2702533

Cloud-based Remote Maintenance

Intelligent service concepts with the mGuard Secure Cloud

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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



Automation and Control

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 AND CONTROL

- PLCnext Control
- I/O Systems
- Industrial PCs and HMIs

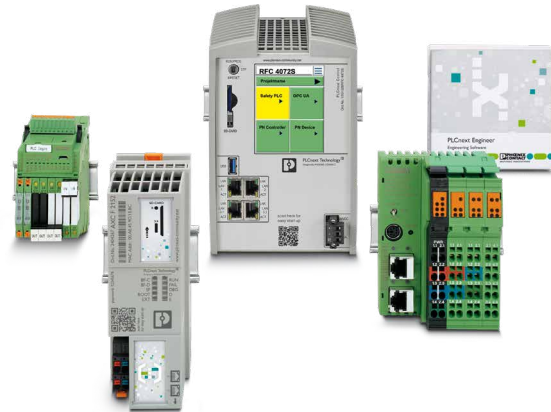
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Programmable controllers

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.





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 the 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.



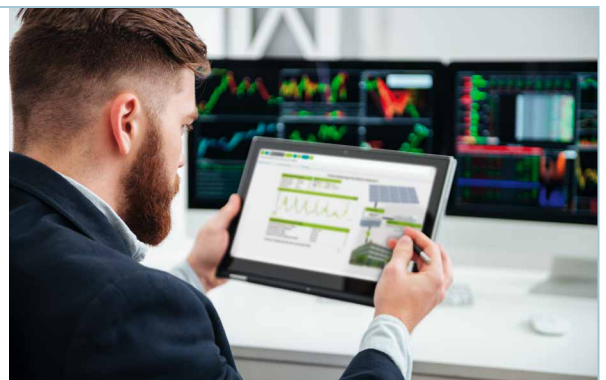
Linux

- ✓ 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



Basic PLCnext Control
AXC F 1152
Order no. 1151412

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 1x 800 MHz	8	16	No	PROFINET, MODBUS TCP, EtherNet/IP, OPCUA	Basic	AXC F 1152	1151412
	Arm® Cortex®-A9 2x 800 MHz	32	64	Yes		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
	32GB expansion SD card	SD FLASH 32GB PLCNEX MEMORY LIC	1151111
Software	Engineering software for IEC 61131-1 programming	PLCNEXT ENGINEER	1046008

*Please note: When adding a left hand extension module, additional accessories are required. 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 Controller	EPC 1502	1185416
Edge Controller	EPC 1522	1185423









The I/O Modular System

		
Smart Elements (SE)	Axioline F	Axioline P
<ul style="list-style-type: none"> • Compact • No configuration 	<ul style="list-style-type: none"> • Robust and Fast • XC versions available (-40°C ... +70°C) • Variety of approvals 	<ul style="list-style-type: none"> • Hot swappable and redundant • Modular block design

Bus Couplers





Network connection				
	Function description	Type	Description	Order no.
	Bus coupler for Modbus TCP		AXL F BK ETH	2688459
	Bus coupler for EtherCAT®		AXL F BK EC	2688899
	Bus coupler for EtherNet/IP™		AXL F BK EIP EF	2702782
	Bus coupler for PROFINET®		AXL F BK PN TPS	2403869
	Axioline PLC conforming to IEC 61131, programmed with PC WORX		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 24V 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

	DI Digital input	Type	Description	Order no.
	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 35 mm 	8 digital inputs, 8 digital outputs, 1-wire	AXL F DI8/1 DO8/1 1H	2701916

Acquiring analog data

	AI Analog input	Type	Description	Order no.
	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 4 to 8 channels • 54 mm and 35 mm design width 	4 analog outputs, current/voltage
8 analog outputs, current/voltage	AXL F AO8 1F			2688080

Special function modules

	FKT Special function modules	Type	Description	Order no.
	<ul style="list-style-type: none"> • 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



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.

Scan the QR code to learn more online



Edge IPCs

- ✓ BL2 1500 series
- ✓ Ultra-compact form factor
- ✓ Rugged, fan-less, all metal design
- ✓ Options for TPM 2.0, Wi-Fi, etc.
- ✓ DIN rail mounting



Scan the QR code to learn more online



Box IPCs

- ✓ BL2 BPC and VL3 BPC series
- ✓ Compact dimensions
- ✓ Rugged, fan-less, all metal design
- ✓ Various performance classes
- ✓ Various mounting options

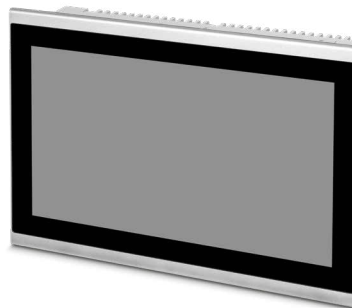


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Panel PCs

- ✓ BL2 PPC and VL3 PPC series
- ✓ Resistive or capacitive touch screen
- ✓ 15" to 21.5" screen sizes
- ✓ Various performance classes
- ✓ Panel mounting



Scan the QR code to learn more online



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



View the e-paper online now



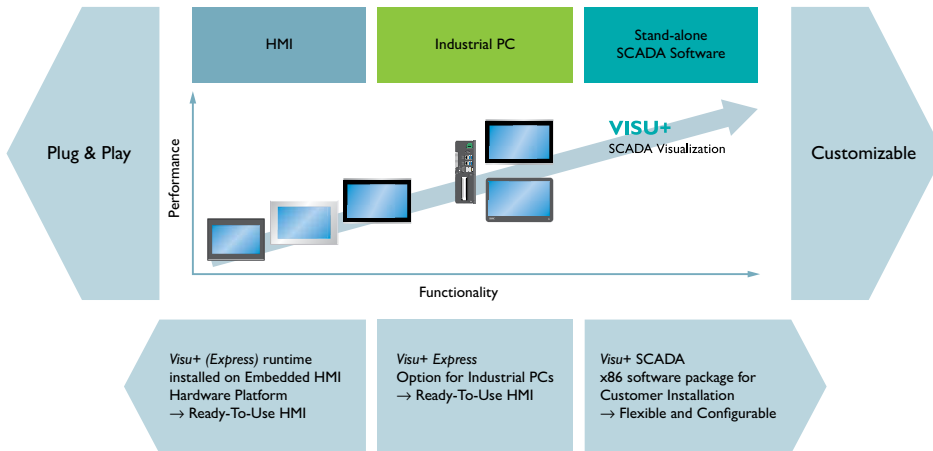
HMI

Robust, scalable, and reliable HMI panels

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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.



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 WVP 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				BWP 2070W	1060632
		10.2	1240x600		500				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							TP 6121-WXPS	1190420

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

Functional Safety

Machine safety means more than regulations. Proper implementation includes increased productivity, uptime, and profitability. Enact safety measures without limiting production machine flexibility or production cells. Adaptable cabinet configurations with integrated safety give you the freedom to add or reorganize machines dynamically.



FUNCTIONAL SAFETY

- Machine Safety
- Process Safety
- Power Safety

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more online





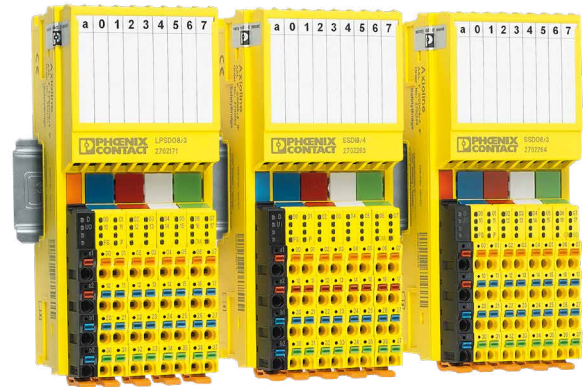
Inputs

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 to 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

Scan the QR code to learn more online



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.

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 axes per module.

PSR-M-B1 and PSR-M-B2 base modules

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

All modules are also available with screw connection

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

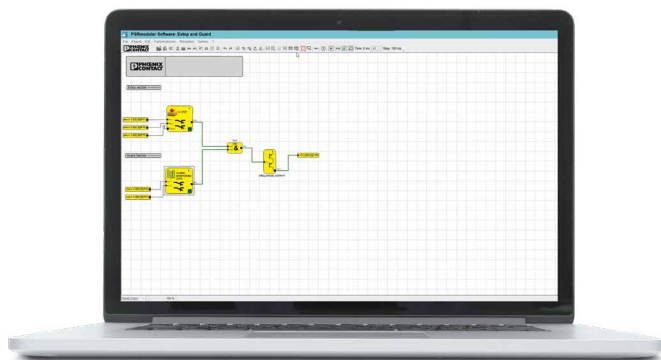
Type	Inputs	Outputs	Description	Order no.
Digital IN/OUT	8 digital	4x or 2 pairs	PSR-M-EF1-SDI8-SDO4-DO4-PI	1104889
Digital IN/OUT	8 digital	2 pairs	PSR-M-EF8-SDI8-SDO2-DO2-PI	1105523
Digital IN	16 digital	—	PSR-M-EF2-SDI16-PI	1104887
Digital OUT	—	4 pairs	PSR-M-EF4-SDO4-DO4-PI	1104868
Digital OUT	—	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



PSRmodular — Free Configuration Software

Intuitive configuration without programming knowledge.

Use the free PSRmodular configuration software to configure the modular safety system. No programming knowledge is required in order to use the configuration software. This is because you create the safety logic graphically using drag and drop, and can flexibly adapt the safety functions as you wish. The integrated simulation allows you to perform a full function test of the safety logic once created, without any hardware. All function blocks have been certified by TÜV.



Scan the QR code to download PSRmodular free today!

Safety Relays

PSRclassic conventional safety relays

The PSRclassic safety relays have a long proven track record. Thanks to the 2-channel wiring and force-guided contacts, you can reliably switch functions such as two-hand controllers or light grids. Screw or spring connection technology and status LEDs ensure fast wiring of contacts and easy diagnostics.

Scan the QR code to learn more online




Your advantages

- ✓ A large selection of safety relays for safety functions such as emergency stops, light grids, safety doors, two-hand functions, and much more
- ✓ Reliable, thanks to force-guided contacts
- ✓ Fast installation and startup with user-friendly connection technology
- ✓ One function, one device
- ✓ Highest levels of safety with PLe and SIL 3

Machine safety


















As a machine builder, you are familiar with the dynamics and requirements of your market. Functional safety is playing an increasingly significant role. Standards and directives make an important contribution here. With our PSR safety relays, you are able to create new safety concepts that provide many advantages.

PSRclassic safety relay

 Most popular!	Details	Connection type	Description	Order no.
	Safety relay for emergency stop and safety door and light grid monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849	Screw	PSR-SCP- 24UC/ESL4/3X1/1X2/B	2981059







Safety Relays

PSRclassic — Conventional safety relays for machine building																
Type	Applications							Output contacts				Safety approvals		Connection technology		
																
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-ESAM4/3X1-B Voltage variants	●	●	—	—	—	—	A/M	3	—	1	—	e	3	1396559	—	
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 ³⁾ 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



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 acknowledgment via A1	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-571.04		GL	Width in mm	Screw connection
	Classic, safe coupling relays for failsafe controllers:				Visual via LED	Active error acknowledgment via A1	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-571.04	GL	Width in mm	Screw connection	Push-in connection
PSR-FSP 24 V DC	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

PSRclassic — Classic safe coupling relays for universal applications

Type	Applications	Output contacts			Safety approvals		Input voltage		Connection technology	
					PL in accordance with EN ISO 13849-1	SILCL in accordance with EN 62061	24 V AC/DC	120 V AC/DC	Screw connection	Spring-cage connection
	Coupling relays for universal applications				PL in accordance with EN ISO 13849-1	SILCL in accordance with EN 62061	24 V AC/DC	2963747	2963970	
PSR-URM		5	2	—	c	1	120 V AC/DC	2981402	2981415	

¹⁾ Depending on the application up to PL e / SILCL 3 possible



Shop Floor Productivity

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.



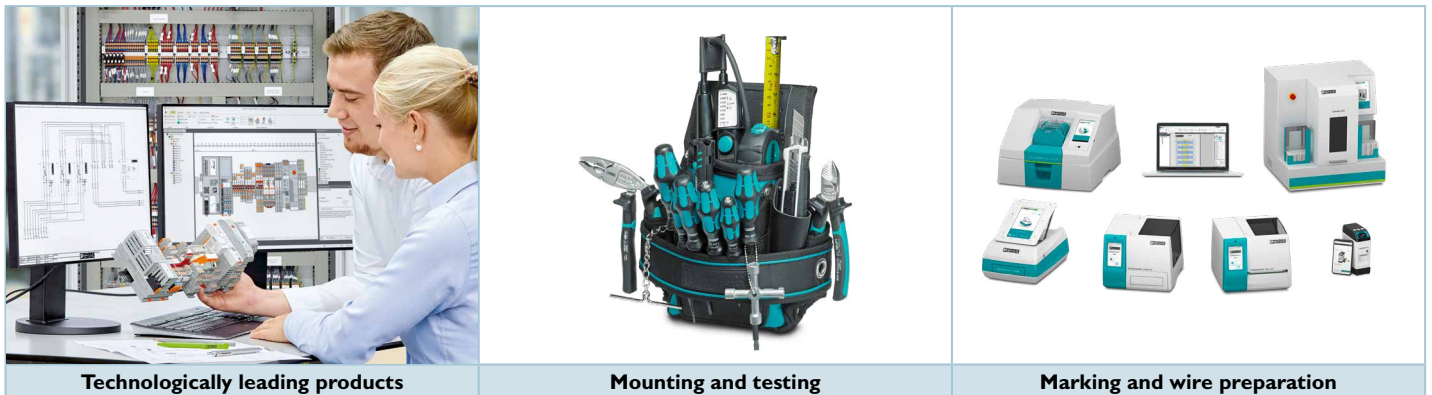
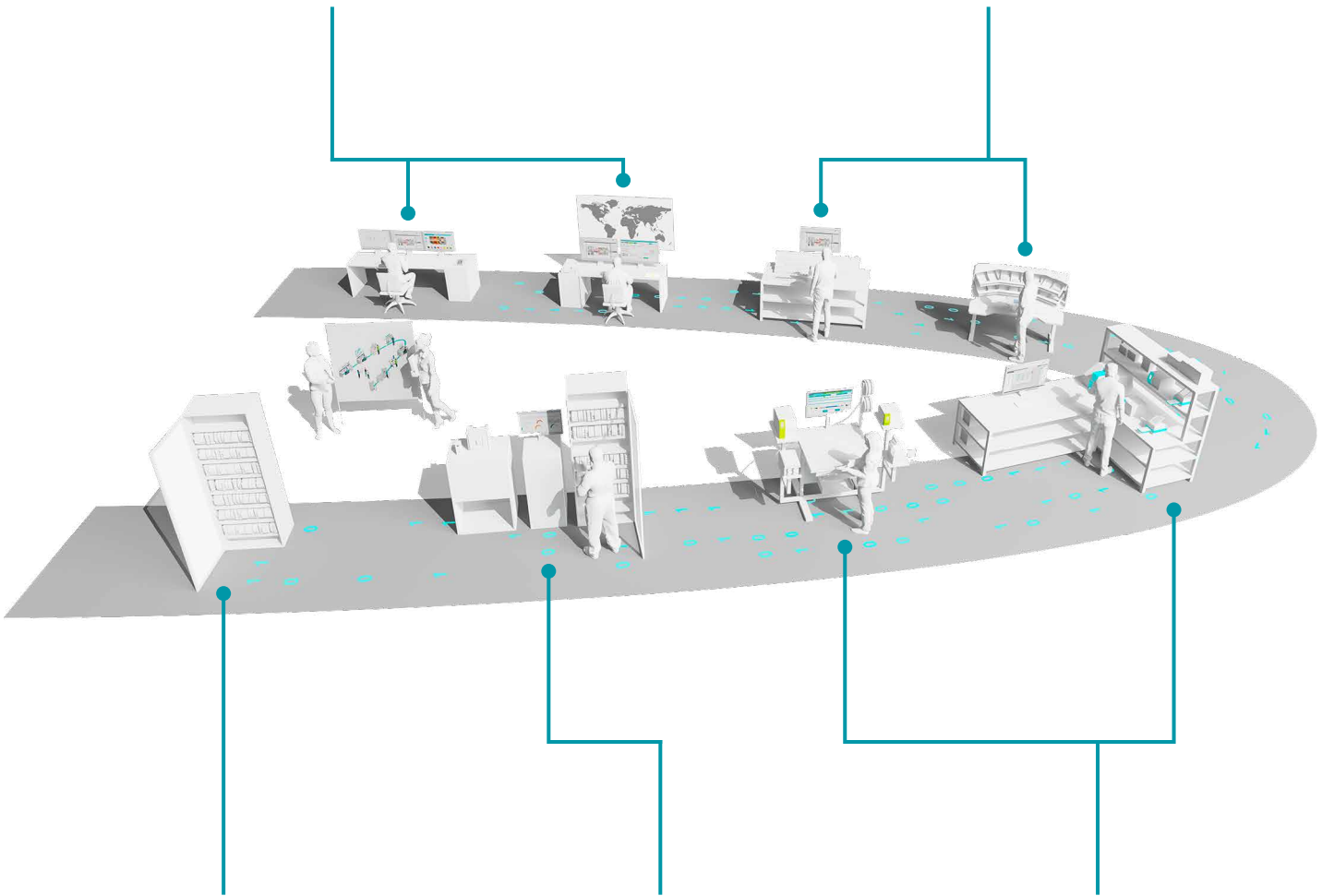
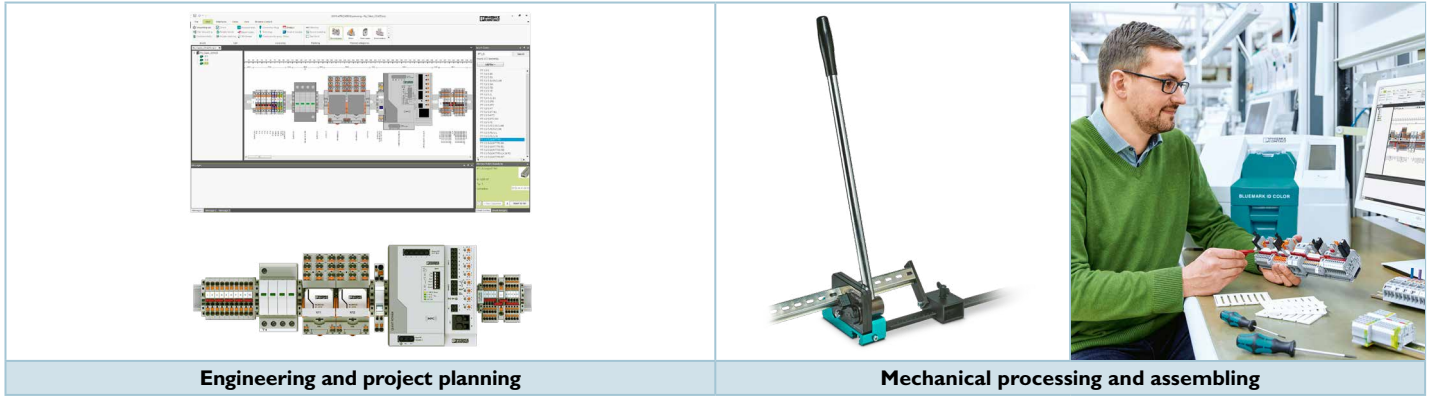
SHOP FLOOR PRODUCTIVITY

- Printers and Marking Materials
- Installation
- Cable Management
- Accessories

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Efficiency in Cabinet Building





Printers

The advantages of our industrial printers

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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
- ✓ THERMOMARK PRIME: Flexible areas of application with more than 600 different marking materials for marking a wide range of applications
- ✓ 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	Manual feed	Desktop and portable	THERMOMARK PRIME	5148888
	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
			250	WMS 3,2 (60X5)R	0800364
	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
60 x 16 / 2.36 x 0.63		2000	WMS 9,5 (30X16)RL	0804267	
		250	WMS 9,5 (60X16)R	0800368	
		1000	WMS 9,5 (60X16)RL	0803105	

Wrap around labels

	< 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 300m	THERMOMARK-RIBBON 110-TC	0801371
	Standard ink ribbon heat shrink materials - ROLL PRINTER Length 300m	THERMOMARK-RIBBON 110-WMSU	0801358
	Standard ink ribbon for all thermal marking (not heat shrink) ROLL PRINTER Length 300m	THERMOMARK-RIBBON 110	5145384
	Standard ink ribbon for all thermal marking - CARD PRINTER Length 70m	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	1.8m / 5.9ft	Black on White	MM-WMS 3,2 (EX5)R C1 WH/BK	0803923
		1.8m / 5.9ft	Black on White	MM-WMS 4,8 (EX9)R C1 WH/BK	0803924
		1.8m / 5.9ft	Black on White	MM-WMS 6,4 (EX10)R C1 WH/BK	0803925
		1.8m / 5.9ft	Black on White	MM-WMS 9,5 (EX16)R C1 WH/BK	0803926
		1.8m / 5.9ft	Black on Yellow	MM-WMS 3,2 (EX5)R C1 YE/BK	1116139
		1.8m / 5.9ft	Black on Yellow	MM-WMS 4,8 (EX9)R C1 YE/BK	1116140
		1.8m / 5.9ft	Black on Yellow	MM-WMS 6,4 (EX10)R C1 YE/BK	1116141
		1.8m / 5.9ft	Black on Yellow	MM-WMS 9,5 (EX16)R C1 YE/BK	1116142
Wrap around labels					
	THERMOMARK GO.K and THERMOMARK GO	6.5m / 21.3ft	Black on White	MM-WML 3 (EX10)R C1 WH/BK	0803931
		6.5m	Black on White	MM-WML 5 (EX10)R C1 WH/BK	0803932
Nylon cloth labels					
	THERMOMARK GO.K and THERMOMARK GO	6m	Black on White	MM-EMLC (EX12)R C1 WH/BK	0803934
		6m	Black on White	MM-EMLC (EX18)R C1 WH/BK	0803936
Flexible vinyl labels					
	THERMOMARK GO.K and THERMOMARK GO	8m	Black on White	MM-EMLF (EX10)R C1 WH/BK	0803937
		8m	Black on White	MM-EMLF (EX12)R C1 WH/BK	0803938
		8m	Black on White	MM-EMLF (EX18)R C1 WH/BK	0803939
		8m	Black on White	MM-EMLF (EX24)R C1 WH/BK	0803940
Polyester device labels					
	THERMOMARK GO.K and THERMOMARK GO	8m	Black on White	MM-EML (EX10)R C1 WH/BK	0803970
		8m	Black on White	MM-EML (EX12)R C1 WH/BK	0803971
		8m	Black on White	MM-EML (EX18)R C1 WH/BK	0803972
		8m	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 mm ²	CUTFOX 12	1212128
	Cable-cutting tool	Up to 50 mm ² 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 mm ² or 28-14AWG	Standard	WIREFOX 2.5	1212368
	Self-adjusting stripping tool	0.1 - 4 mm ² or 28 - 12 AWG	Special insulation, e.g. PTFE	WIREFOX 4	1212156
	Self-adjusting stripping tool	0.02 - 10 mm ² or 34 - 8 AWG	Standard	WIREFOX 10	1212150
	Strips sensor/actuator cables	4.4 - 7 mm ² or 12 - 8 AWG	SAC cables	WIREFOX SAC	1212623
	Strips multi-conductor cables	max insulation 1mm 2.5-11mm 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 mm ² or 24 - 10 AWG	Square	CRIMPFOX CENTRUS 6S	1213144
		Hex	CRIMPFOX CENTRUS 6H	1213146
	0.14 - 10 mm ² or 24 - 8 AWG	Square	CRIMPFOX CENTRUS 10S	1213154
		Hex	CRIMPFOX CENTRUS 10H	1213156
	0.25 - 6 mm ² or 22 - 10 AWG	Trapezoid	CRIMPFOX 6	1212034
	10 - 25 mm ² or 6 - 4 AWG	Trapezoid	CRIMPFOX 25R	1212039
	0.14-10mm ² 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 mm ² or 20 - 14 AWG	CRIMPFOX 4in1 set	1200102
	Cut, strip, and crimp	0.5 - 2.5 mm ² or 20 - 14 AWG	CRIMPFOX 4in1	1200101
	Ferrule carrier	0.5 - 2.5 mm ² or 20 - 14 AWG	CRIMPFOX 4in1/MAG	1200103
	50-ferrule strip - white	0.5 mm ² or 20 AWG	AI 0,5-8 WH S1	1200104
	50-ferrule strip - gray	0.75 mm ² or 18 AWG	AI 0,75-8 GY S1	1200105
	50-ferrule strip - red	1.0 mm ² or 18 AWG	AI 1,0-8 RD S1	1200106
	50-ferrule strip - black	1.5 mm ² or 16 AWG	AI 1,5-8 BK S1	1200107
	50-ferrule strip - blue	2.5 mm ² or 14 AWG	AI 2,5-8 BU S1	1200108



Cable Ducts for Clear Cable Routing

Cable ducts													
Nominal size (in)	Desc./size in mm	Gray order no.	White order no.	Blue order no.	HF - Gray order no.	HF - Blue order no.	Nominal size (in)	Desc./size in mm	Gray order no.	White order no.	Blue order no.	HF - Gray order no.	HF - Blue order no.
1/2 x 1/2	No cross						2 x 1	<u>CD 60</u> <u>X 40</u>	<u>3240190</u>	<u>3240628</u>	<u>3240313</u>	<u>3240352</u>	<u>3240594</u>
1/2 x 1	<u>CD 25</u> <u>X 25</u>	<u>3240187</u>	<u>3240616</u>	<u>3240301</u>	<u>3240340</u>	<u>3240582</u>	2 x 1-1/2	CD 60 X 40	3240190	3240628	3240313	3240352	3240594
1/2 x 2	<u>CD 25</u> <u>X 60</u>	<u>3240191</u>	<u>3240618</u>	<u>3240303</u>	<u>3240342</u>	<u>3240584</u>	2 x 2	CD 60 X 60	3240193	3240629	3240314	3240353	3240595
1/2 x 4	<u>CD 30 X</u> <u>100</u>	<u>3240283</u>	<u>3240623</u>	<u>3240308</u>	<u>3240347</u>	<u>3240589</u>	2 x 3	CD 60 X 80	3240199	3240630	3240315	3240354	3240596
3/4 x 3/4	<u>CD 25</u> <u>X 25</u>	<u>3240187</u>	<u>3240616</u>	<u>3240301</u>	<u>3240340</u>	<u>3240582</u>	2 x 4	CD 60 X 100	3240263	3240631	3240316	3240355	3240597
3/4 x 1	<u>CD 25</u> <u>X 25</u>	<u>3240187</u>	<u>3240616</u>	<u>3240301</u>	<u>3240340</u>	<u>3240582</u>	2 x 5	<u>CD 60 X</u> <u>100</u>	<u>3240263</u>	<u>3240631</u>	<u>3240316</u>	<u>3240355</u>	<u>3240597</u>
3/4 x 1-1/2	<u>CD 25</u> <u>X 40</u>	<u>3240188</u>	<u>3240617</u>	<u>3240302</u>	<u>3240341</u>	<u>3240583</u>	2-1/2 x 3	<u>CD 60</u> <u>X 80</u>	<u>3240199</u>	<u>3240630</u>	<u>3240315</u>	<u>3240354</u>	<u>3240596</u>
3/4 x 2	CD 25 X 60	3240191	3240618	3240303	3240342	<u>3240584</u>	3 x 1	CD 80 X 25	3240281	3240632	3240317	3240356	3240598
1 x 1	CD 25 X 25	3240187	3240616	3240301	3240340	3240582	3 x 1-1/2	CD 80 X 40	3240335	3240633	3240318	3240357	3240599
1 x 1-1/2	CD 25 X 40	3240188	3240617	3240302	3240341	3240583	3 x 2	CD 80 X 60	3240194	3240634	3240319	3240358	3240600
1 x 1-1/2	CD 30 X 40	3240278	3240620	3240305	3240344	3240586	3 x 3	CD 80 X 80	3240200	3240635	3240320	3240359	3240601
1 x 2	CD 25 X 60	3240191	3240618	3240303	3240342	3240584	3 x 4	CD 80 X 100	3240264	3240636	3240321	3240360	3240602
1 x 2	CD 30 X 60	3240280	3240621	3240306	3240345	3240587	3 x 5	<u>CD 80 X</u> <u>100</u>	<u>3240264</u>	<u>3240636</u>	<u>3240321</u>	<u>3240360</u>	<u>3240360</u>
1 x 3	CD 25 X 80	3240197	3240619	3240304	3240343	3240585	4 x 1-1/2	CD 100 X 40	3240279	3240637	3240322	3240361	3240603
1 x 3	CD 30 X 80	3240282	3240622	3240307	3240346	3240588	4 x 2	CD 100 X 60	3240195	3240638	3240323	3240362	3240604
1 x 4	CD 30 X 100	3240283	3240623	3240308	3240347	3240589	4 x 3	CD 100 X 80	3240201	3240639	3240324	3240363	3240605
1-1/2 x 1	<u>CD 40</u> <u>X 40</u>	<u>3240189</u>	<u>3240624</u>	<u>3240309</u>	<u>3240348</u>	<u>3240590</u>	4 x 4	CD 100 X 100	3240205	3240640	3240325	3240364	3240606
1-1/2 x 1-1/2	CD 40 X 40	3240189	3240624	3240309	3240348	3240590	4 x 5	<u>CD 100 X</u> <u>100</u>	<u>3240205</u>	<u>3240640</u>	<u>3240325</u>	<u>3240364</u>	<u>3240606</u>
1-1/2 x 2	CD 40 X 60	3240192	3240625	3240310	3240349	3240591	5 x 2	CD 120 X 60	3240196	3240641	3240326	3240365	3240607
1-1/2 x 3	CD 40 X 80	3240198	3240626	3240311	3240350	3240592	5 x 3	CD 120 X 80	3240202	3240642	3240327	3240366	3240608
1-1/2 x 4	CD 40 x 100	3240294	3240627	3240312	3240351	3240593	TYPE: Narrow slot style * <u>Underlined</u> parts are crossed to closest size. HF = Halogen free						


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
		✓	PLD E 409 W 350 MS	1319573


Accessories

	Optional door Switch	Description	Order no.
		PLD E 400-DS-3,0/0,6	1318672


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.


Push-in connection single socket outlets

	Description	Order no.
	EO-AB/PT/15	0804165
	EO-AB/PT/LED/15	0804168
	EO-AB/PT/LED/S/15	0804174
	EO-AB/PT/S/15	0804173


Screw connection single socket outlets

	Description	Order no.
	EO-AB/UT/15	0804152
	EO-AB/UT/LED/20	0804509
	EO-AB/UT/LED/S/15	0804160
	EO-AB/UT/S/15	0804159

Double-socket outlets






	Description	Order no.
	EM-DUO 120/15	5600461
	EM-DUO 120/20	5600525
	EM-DUO 120/15/IG	5601677
	EM-DUO 120/15/SPD	5601283
	EM-DUO 120/15/SPD/AUX	5604063
	EM-DUO 120/15/V/H	5604747
	EM-DUO 120/20/V/H	5604776

Double-socket GFI outlets


	Description	Order no.
	EM-DUO 120/20/GFI	5602519
	EM-DUO 120/20/GFI/AUX	5603049
	EM-DUO 120/20/GFI/V/H	5604777
	EM-DUO120/20/GFI/AUX/NO	5602192
	EM-DUO/120/15/GFI	5600462
	EM-DUO 120/15/GFI/AUX	5600639
	EM-DUO 120/15/GFI/V/H	5604775

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

Notes

A large grid of small dots, intended for taking notes. The grid consists of approximately 25 columns and 40 rows of dots, covering most of the page area below the 'Notes' header.





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](https://www.phoenixcontact.ca)

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