Power reliability

Protection, conversion, monitoring, and distribution

Cabinet Confidence

Your trusted partner for the control cabinet

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

NETWORKING

AUTOMATION AND CONTROL

SIGNAL SWITCHING AND CONDITIONING

CONNECTIVITY

SAFETY

SHOP FLOOR PRODUCTIVITY

LIMITED LIFETIME WARRANTY

BUILD WITH CONFIDENCE

Power reliability

Don't overlook the basics. Power touches every aspect of a control system, and logic platforms are dependent on proper power and protection. No matter how sophisticated your control system, a "line down" situation is only one power disturbance away.

True power reliability involves protection against surges and over-currents, conversion of AC to DC while providing redundancy and battery back-up, monitoring for faults, and distributing power to the end-devices. Combined, these four elements provide the foundation on which reliable control systems should be built.

Protection

Conversion

Monitoring

Distribution

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Protection

Surge and overcurrent protection for increased system reliability

Maximizing the reliability of systems to maintain uptime is more imperative than ever before. Applications that generate revenue and involve human safety demand operational integrity, and require protection from transient surges and overcurrent conditions that can interrupt such processes.

Surge protective devices and circuit breakers from Phoenix Contact address these critical needs through a wide range of products with industry-leading features to enable data-driven decisions.

These products go beyond providing your applications with the most reliable protection available, as they enable real-time feedback on system status. With Phoenix Contact surge and overcurrent protection, you can trust in the reliability of your systems.

Surge protection devices

Offering a wide range of world-class circuit protection, Phoenix Contact has the right product for any application. From first-in-class spark-gap technology to innovative 3-stage status indication, we can protect everything from data and signals to entire power systems.

Circuit breakers

Having the ability to remove a faulty circuit quickly is imperative to maintaining the uptime of your system. Phoenix Contact offers a wide variety of circuit protection products for short circuits and thermal overloads. Circuit breakers easily integrate protection into your control system, improving overall operational efficiency and system reliability.

Protection

Surge protection devices

When identifying the necessary surge protection for your application, it is important to consider the Circle of Protection (CoP). This concept allows you to define the application you want to protect, evaluate threats from each conductor, and decide on the appropriate types of surge protection. Threats from transients can be mitigated with the following four types of Surge Protection Devices (SPDs):

- Power SPDs – high-performance surge protection for power systems
- Data SPDs – loss-less surge protection for data and communication lines
- Signal SPDs – surge protection for analog and digital signals
- Coaxial SPDs – surge protection for wireless antennas and coaxial systems

Power SPDs

- ☑ UL Listed for easy integration into your systems
- ☑ Hot-swappable, pluggable design for easy maintenance
- ☑ Local and remote status indication to monitor the protection status
- ☑ 200 kA SCCR enables use in virtually any system
- ☑ Available for all standard U.S. voltage systems

Data SPDs

- ☑ Up to 10 Gbit/s without signal degradation
- ☑ PoE++ applications up to 72 W for high power applications
- ☑ Multiple connection styles to suit a variety of applications
- ☑ Protection on all modes to ensure protection on both data and power conductors

Signal SPDs

- ☑ World's thinnest SPD at 3.5 mm for high density requirements
- ☑ Unique 3-stage SPD health status indication
- ☑ Hot-swappable, pluggable design for easy maintenance
- ☑ Local and remote status indication to monitor protection status

Coaxial SPDs

- ☑ Multiple frequency ranges to suit the application
- ☑ Fine protection levels for the most sensitive equipment
- ☑ Variety of connection types to address different termination needs
- ☑ Maintenance-free with LAMDA/4 technology or replaceable GDT versions

Protection

Circuit breakers

Having the ability to remove a faulty circuit quickly is imperative to maintaining the uptime of your systems. Phoenix Contact offers a wide variety of circuit protection products designed to mitigate the effects of short circuit and thermal overload conditions.

These products are based on one of four different tripping technologies.

- Electronic – highly robust DC overcurrent protection
- Thermal – cost-effective thermal overload technology
- Thermal-magnetic – traditional breaker technology for general purpose applications
- Hydraulic-magnetic – rugged design for hazardous locations and harsh environments

Electronic

- ☑ UL 508 Listed for easy integration into your systems
- ☑ Programmable versions reduce inventory requirements
- ☑ Remote reset and on/off control enables easy automation of systems
- ☑ Power-dense, multi-channel versions save cabinet space
- ☑ NEC Class 2 and hazardous location (Class I, Division 2) approvals for demanding environments

Thermal

- ☑ UL 1077 Recognized supplementary protectors
- ☑ Highly compact design saves valuable cabinet space
- ☑ For use with a wide variety of terminal blocks
- ☑ Pluggable design enables easy modifications of breaker amperages
- ☑ Eliminates need for replaceable fuses
- ☑ Makes troubleshooting circuits easier
- ☑ Available for up to 250 V AC/65 V DC

Thermal-magnetic

- ☑ UL 489 Listed for branch circuit protection
- ☑ UL 508 Listed cuttable busbars for maximum flexibility
- ☑ Snap-action technology increases the lifespan of the product
- ☑ Trip-free design ensures safe operation of the breakers
- ☑ Accessory modules for auxiliary contacts, remote shunting, and alarm contacts

Hydraulic-magnetic

- ☑ UL 1077 Recognized supplementary protectors
- ☑ UL approved for 120 V AC/50 V DC AC Class I, Division 2 applications
- ☑ Available up to 15 A
- ☑ T-bus power distribution bus reduces wiring time
- ☑ Durable housing and wide temperature range allow for use in harsh environments

Common products for protection

Surge protection
A. What type of protection do you need? Power (24 V), loop (4/20 mA, 0-10 V), or discrete (binary 12 V, 24 V)?
B. Do you require a push-in, screw, RJ45, N-type, or D-SUB connection?
C. What is the voltage required?
D. Will you use direct or indirect signal ground?
E. Which design? Pluggable or non-pluggable?
F. With or without status monitoring?
G. Resulting Phoenix Contact part number

A. Protection	B. Connection	C. Voltage	D. Grounding	E. Design	F. Monitoring	Type description	G. Order #
Power SPDs (PLT-SEC series)							
Power	Screw	24 V AC/DC	Direct	Pluggable	With	PLT-SEC-T3-24-FM-UT	2907916
	Screw	120 V AC/150 V DC	Direct	Pluggable	With	PLT-SEC-T3-120-FM-UT	2907918
	Screw	240 V AC/DC	Direct	Pluggable	With	PLT-SEC-T3-230-FM-UT	2907919
Power SPDs (VAL-US series)							
Power	Screw	48 V DC	Direct	Pluggable	With	VAL-US-48/65/1+1V-FM	2910346
	Screw	120 V AC	Direct	Pluggable	With	VAL-US-120/65/1+1-FM	2910356
	Screw	120/240 V AC	Direct	Pluggable	With	VAL-US-120/65/2+1-FM	2910358
	Screw	120/208 V AC	Direct	Pluggable	With	VAL-US-120/40/3+1-FM	2910354
	Screw	120/208 V AC	Direct	Pluggable	With	VAL-US-120/65/3+1-FM	2910360
	Screw	277/480 V AC	Direct	Pluggable	With	VAL-US-277/40/3+1-FM	2910374
	Screw	277/480 V AC	Direct	Pluggable	With	VAL-US-277/80/3+1V-FM	2910379
	Screw	480 V AC	Direct	Pluggable	With	VAL-US-480D/30/3+0-FM	2910386
	Screw	600 V AC	Direct	Pluggable	With	VAL-US-600D/30/3+0-FM	2910391
Data SPDs (DT series)							
Discrete	RJ45	<3.3 V DC	Direct	Non-pluggable	Without	DT-LAN-CAT.6+	2881007
		12 V DC	Direct	Non-pluggable	Without	DT-UFB-485/BS	2920612
		185 V DC/130V AC	Direct	Non-pluggable	Without	DT-TELE-SHDSL	2801593
		185 V DC/130V AC	Direct	Non-pluggable	Without	DT-TELE-RJ45	2882925
	D-SUB	15 V DC/10V AC	Direct	Non-pluggable	Without	DT-UFB-V24/S-9-SB	2803069
		5.8 V DC	Direct	Non-pluggable	Without	DT-UFB-IB-RB0	2800056
Signal SPDs (PT-IQ series)							
-	Screw	24V DC	-	Pluggable	With	PT-IQ-PTB-UT	2800768
-	Push-in	24V DC	-	Pluggable	With	PT-IQ-PTB-PT	2801296
Discrete	Screw	24V DC	Direct	Pluggable	With	PT-IQ-2X2-24DC-UT	2800980
			Indirect	Pluggable	With	PT-IQ-2X2+F-24DC-UT	2800981
	Push-in	24V DC	Direct	Pluggable	With	PT-IQ-2X2-24DC-PT	2801263
			Indirect	Pluggable	With	PT-IQ-2X2+F-24DC-PT	2801264
Analog loop	Screw	24V DC	Direct	Pluggable	With	PT-IQ-4X1-24DC-UT	2800982
	Push-in	24V DC	Direct	Pluggable	With	PT-IQ-4X1-24DC-PT	2801271
			Direct	Pluggable	With	PT-IQ-4X1+F-24DC-PT	2801272
Signal SPDs (TTC series)							
Analog loop	Screw	24 V DC	Indirect	Pluggable	With	TTC-6P-1X2-F-M-24DC-UT-I	2906781
	Screw	24 V DC	Direct	Non-pluggable	With	TTC-6-1X2-24DC-UT	2906798
	Push-in	24 V DC	Indirect	Pluggable	With	TTC-6P-1X2-F-M-24DC-PT-I	2906790
	Push-in	24 V DC	Direct	Non-pluggable	With	TTC-6-1X2-24DC-PT	2906804
Discrete	Screw	24 V DC	Indirect	Pluggable	With	TTC-6P-2X1-F-M-24DC-UT-I	2906784
	Screw	24 V DC	Direct	Non-pluggable	With	TTC-6-2X1-24DC-UT	2906799
	Push-in	24 V DC	Indirect	Pluggable	With	TTC-6P-2X1-F-M-24DC-PT-I	2906794
	Push-in	24 V DC	Direct	Non-pluggable	With	TTC-6-2X1-24DC-PT	2906805
Coaxial SPDs (CN series)							
Discrete	N-type	<55 Vp Core-ground	Direct	Non-pluggable	Without	CN-LAMBDA/4-0.47-BB	2800021
		<18 Vp Core-ground	Direct	Non-pluggable	Without	CN-LAMBDA/4-2.25-BB	2801057
		<11 Vp Core-ground	Direct	Non-pluggable	Without	CN-LAMBDA/4-5.9-BB	2838490
		280 DC	Direct	Non-pluggable	Without	CN-UB-280DC-3-BB	2801050

Power SPDs

Data and signal SPDs

Electronic CBs

Thermal-magnetic CBs

Circuit breakers	
A. UL approval?	**D. What voltage rating is required?**
B. How many poles are required?	**E. What ampere rating is required?**
C. What trip curve characteristic is required?	**F. Resulting Phoenix Contact part number**

A. UL	B. # of poles	C. Trip curve	D. Voltage rating	E. Ampere rating	Type description	F. Order #
Electronic (CBM, CBMC, and PTCB series)						
UL 2367 and UL 508	1 (x8)	Electronic	24V DC	0.5-10	CBM E8 24DC/0.5-10A NO-R	2905744
	1 (x4)		24V DC	1-10	CBMC E4 24DC/1-10A NO	2906032
	1 (x4)		24V DC	1-10	CBMC E4 24DC/1-10A IOL	2910411
	1 (x4)		24V DC	1-4	CBMC E4 24DC/1-4A NO	2906031
	1 (x4)		24V DC	1-4	CBMC E4 24DC/1-4A+ IOL	2910410
	1		24V DC	1-3	PTCB E1 24DC/1-3A NO	2909909
	1		24V DC	1-8	PTCB E1 24DC/1-8A NO	2908262
	1		24V DC	3	PTCB E1 24DC/3A NO	2909904
	1		24V DC	6	PTCB E1 24DC/6A NO	2909908
Thermal (TCP series)						
UL 1077	1	Thermal	250V AC/72V DC	0.5	TCP 0,5A	0712152
			250V AC/72V DC	1	TCP 1A	0712194
			250V AC/72V DC	2	TCP 2A	0712217
			250V AC/72V DC	3	TCP 3A	0712233
			250V AC/72V DC	4	TCP 4A	0712259
			250V AC/72V DC	6	TCP 6A	0712275
			250V AC/72V DC	10	TCP 10A	0712314
Thermal-magnetic (TMC 7 and TMC 8 series)						
UL 1077	1	B	277V AC/60V DC	5	TMC 71B 05A	1019912
			277V AC/60V DC	10	TMC 71B 10A	1019916
			277V AC/60V DC	30	TMC 71B 30A	1019923
		C	277V AC/60V DC	1	TMC 71C 01A	1019972
			277V AC/60V DC	2	TMC 71C 02A	1019973
			277V AC/60V DC	3	TMC 71C 03A	1019974
			277V AC/60V DC	4	TMC 71C 04A	1019975
			277V AC/60V DC	5	TMC 71C 05A	1019976
			277V AC/60V DC	10	TMC 71C 10A	1019980
			277V AC/60V DC	15	TMC 71C 15A	1019983
			277V AC/60V DC	20	TMC 71C 20A	1019985
		D	277V AC/60V DC	5	TMC 71D 05A	1020041
			277V AC/60V DC	10	TMC 71D 10A	1020045
			277V AC/60V DC	25	TMC 71D 25A	1020053
UL 1077	2	C	277V AC/125V DC	10	TMC 72C 10A	1020002
UL 1077	3	C	277V AC	15	TMC 73C 15A	1020026
UL 489	1	B	277V AC/60V DC	5	TMC 81B 05A	2907482
			277V AC/60V DC	10	TMC 81B 10A	2907487
			277V AC/60V DC	30	TMC 81B 30A	2907494
		C	277V AC/60V DC	1	TMC 81C 01A	2907558
			277V AC/60V DC	2	TMC 81C 02A	2907559
			277V AC/60V DC	3	TMC 81C 03A	2907560
			277V AC/60V DC	4	TMC 81C 04A	2907561
			277V AC/60V DC	5	TMC 81C 05A	2907562
			277V AC/60V DC	6	TMC 81C 06A	2907563
			277V AC/60V DC	10	TMC 81C 10A	2907566
			277V AC/60V DC	15	TMC 81C 15A	2907571
			277V AC/60V DC	20	TMC 81C 20A	2907573
			277V AC/60V DC	40	TMC 81C 40A	2907578
		D	277V AC/60V DC	2	TMC 81D 02A	2907627
			277V AC/60V DC	5	TMC 81D 05A	2907630
			277V AC/60V DC	10	TMC 81D 10A	2907634
			277V AC/60V DC	25	TMC 81D 25A	2907641
UL 489	2	C	277V AC/125V DC	10	TMC 82C 10A	2907591
		D	277V AC/125V DC	2	TMC 82D 02A	2907652
UL 489	3	C	277V AC	15	TMC 83C 15A	2907618
Hydraulic-magnetic (HMC series)						
UL 1077	1	Multi-frequency short time delay	120V AC/50V DC	5	HMC 11 120AC 5A C1D2	2907194
			120V AC/50V DC	7.5	HMC 11 120AC 7.5A C1D2	2907195
			120V AC/50V DC	10	HMC 11 120AC 10A C1D2	2907196
			120V AC/50V DC	15	HMC 11 120AC 15A C1D2	2907197
		DC short time delay	50V DC	20	HMC 11 50DC 20A C1D2	2907199

Conversion

Power for superior system availability

Phoenix Contact's POWER products supply your applications with leading technology and high quality. Power supplies, DC/DC converters, redundancy modules, and uninterruptible power supplies are optimally tailored in design and functionality to the requirements of various industries.

With our QUINT, TRIO, and UNO product ranges, you are equipped to choose a basic, standard, or critical device for your application. These products have attributes and price points to fit any application.

AC/DC power supplies, DC/DC converters, redundancy modules, and uninterruptible power supplies are the heart of the control cabinet and must be reliably maintained. Phoenix Contact designs these power solutions to meet all the levels of form, feature, and functionality an application may require.

AC/DC power supplies

Our power supplies can be used in the widest range of areas and industries. With various functionalities, performance classes, and designs, they are the perfect partner for your application.

DC/DC converters

DC/DC converters prevent faults in your application. Even in the case of long cable lengths, the load is always supplied with a controlled DC voltage. DC/DC converters not only convert voltage, but also isolate, amplify, and regulate voltage within the control cabinet.

Redundancy modules

In applications with the highest demands regarding operational reliability, redundant power supply solutions are necessary. They prevent failure of a power supply unit leading to a loss of redundancy.

Uninterruptible power supplies and battery backup

Mains interruptions can have serious consequences. You can rely on our uninterruptible power supplies for power security. We offer both DC and AC uninterruptible power supplies (UPS) and various battery backup solutions that can be used in the event of mains failures.

Conversion

Power supplies

A comparison of the advantages

The product ranges differ with regard to their design, power, and functionality. Select the ideal solution based on your requirements. Our goal is to ensure the maximum availability of your system.

- QUINT POWER – powerful with critical functionality
- TRIO POWER – robust with standard functionality
- UNO POWER – compact with basic functionality

QUINT POWER – Powerful with critical functionality

- ☑ Rugged design for critical applications
- ☑ Permanent power boost of up to 125 percent
- ☑ Dynamic power boost to start heavy loads
- ☑ Advanced monitoring capabilities
- ☑ Breaker tripping pulse to avoid oversizing
- ☑ Coordinated surge protection on the input

TRIO POWER – Robust with standard functionality

- ☑ Slim design for space savings
- ☑ Dynamic power boost to start heavy loads
- ☑ Tool-free push-in connection for easy installation
- ☑ Relay contacts and voltage potentiometer
- ☑ Robust design for standard applications
- ☑ High vibration and shock resistance

UNO POWER – Compact with basic functionality

- ☑ Compact form factor for space savings
- ☑ Cost-effective options
- ☑ Ideal for basic applications up to 480 W
- ☑ Wide range of products from 5 V DC to 48 V DC
- ☑ High energy efficiency to reduce power dissipation
- ☑ Wide temperature range for use in most environments

Conversion

DC/DC converters

DC/DC converters alter the voltage level. They regenerate the voltage at the end of long cables or create electrically isolated independent supply systems.

DC/DC converters are the control cabinet problem solvers. They can convert voltage from one level to another. DC/DC converters can also amplify, regulate, and isolate voltage to eliminate noise and other unexpected complications within an application.

- DC/DC converters with selective fuse breaking technology
- DC/DC converters with conformal coating with additional hazardous location approvals
- DC/DC converters for low power applications
- DC/DC converters for solar applications

QUINT POWER – DC/DC converters

- ☑ Uses galvanic isolation to increase reliability
- ☑ Permanent power boost of up to 125 percent
- ☑ Breaker tripping pulse to avoid oversizing
- ☑ Remote monitoring for critical applications
- ☑ Monitors the input voltage for battery applications

QUINT POWER DC/DC converters with protective coating

- ☑ Conformally-coated PCB for extreme environments
- ☑ Resistant to corrosive gases, debris, and moisture
- ☑ Equivalent benefits of the QUINT DC/DC converters
- ☑ Meets ATEX, IECEx, and Class I Division 2 approvals
- ☑ Meets medical standard IEC 60601, 2 x MOOP

Low power and specialized DC/DC converters

Low-power DC/DC converters

- ☑ Suitable for low power applications with current options up to 2 A
- ☑ Lower voltage conversion and isolation

Specialized DC/DC converters

- ☑ Converts high voltage to a safe low voltage for specialized applications
- ☑ Wide input voltage ranging from 300 V DC … 1650 V DC
- ☑ UL 1751 and UL 62109 certified for simplified system approval

Conversion

Redundancy modules

A dependable redundant system decouples a parallel connection of two power supplies with an active redundancy module. Decoupling the power supplies ensures that a fault on one power supply will not affect the other power supply. Phoenix Contact provides many options for a reliable redundant power system including:

- QUINT ORING – decouples, monitors, and controls
- QUINT S-ORING – decouples and monitors
- Basic diode modules – decouples

ACB TECHNOLOGY

QUINT ORING

- ☑ Active decoupling with MOSFETs ensuring low energy losses
- ☑ Monitors the voltage, wiring, and load current
- ☑ Uses Auto Current Balancing to maintain load sharing

QUINT S-ORING

- ☑ Single-channel redundancy to maintain a redundant system
- ☑ Active decoupling with MOSFETs ensuring low energy losses
- ☑ Facilitates a design for SIL3 requirements

Diodes

- ☑ Simple decoupling with diodes
- ☑ QUINT, TRIO, and UNO options available for easy selection
- ☑ QUINT options are approved for hazardous locations

Monitored
Non-monitored

Conversion

Uninterruptible power supplies

Mains interruptions can have serious consequences. Don’t take any risks. Rely on our uninterruptible power supplies. Phoenix Contact provides the DC and AC UPS solutions for optimum system availability, even in the event of a mains failure.

- DC battery backup options
- AC battery backup options

QUINT UPS for DC applications

- ☑ IQ technology provides the state of health and charge of the battery
- ☑ Permanent power boost of up to 125 percent
- ☑ Remote battery start function
- ☑ Powerful battery charging circuit allows for fast battery charging
- ☑ Easy monitoring, configuring, and remote shutdown

Integrated industrial Ethernet protocols

- PROFINET
- EtherNet/IP™
- EtherCAT®
- Modbus TCP/IP

QUINT UPS for AC applications

- ☑ Delivers a pure sine wave
- ☑ Offline and online options available
- ☑ Fan-free heat dissipation via convection cooling
- ☑ Multiple diagnostic outputs for system monitoring
- ☑ Remote battery start function
- ☑ USB interface for connection to industrial PCs and controllers

Conversion

Energy storage

Energy storage devices provide quality and reliability. With a variety of energy storage options for our modular system of uninterruptible power supplies, you will always have the ideal solution for your system. When connected with our intelligent UPS, energy storage devices are automatically detected, allowing for fast and easy installation. The energy storage system communicates with the UPS allowing for continuous monitoring and predictive maintenance. Our various energy storage alternatives offer a wide range of different features and benefits.

- VRLA batteries for maximum buffer times
- VRLA-WTR batteries for use in extreme temperatures
- LI-ION batteries for a long service life
- CAP modules for maximum service life and minimal maintenance

VRLA batteries

- ☑ Cost-effective valve regulated lead acid (VRLA) storage modules
- ☑ Tool-free battery replacement
- ☑ Batteries can be hot-swappable
- ☑ Options ranging from 1.3 Ah to 38 Ah

VRLA-WTR

- ☑ Valve regulated lead acid storage modules with a wide temperature range
- ☑ Operating temperature ranging from -25°C … 60°C
- ☑ Industrial mounting bracket available
- ☑ Options ranging from 13 Ah to 26 Ah

LI-ION

- ☑ Lithium iron phosphate technology
- ☑ Operating temperature ranging from -20 °C … 58 °C
- ☑ Provides a long service life with long buffer times
- ☑ Options ranging from 120 Wh to 924 Wh

CAP modules

- ☑ Maintenance-free electrolytic capacitors
- ☑ Operating temperature ranging from -40 °C … 60 °C
- ☑ High MTBF and short recharging times
- ☑ QUINT CAP modules are ideal for buffering sensitive devices during a short duration power loss

Common products for conversion

AC/DC power supplies	
A. Do you need a single-phase or a three-phase power supply?	D. Does the power supply need Class I, Division 2 rating?
B. What is the output DC voltage?	E. Type description
C. What is your output current? (amps)	F. Resulting Phoenix Contact part number

A. Phase	B. Output voltage	C. Output current	D. Class I, Div. 2	E. Type description	F. Order #
Single phase	5 V DC	5A	Yes	UNO-PS/1AC/5DC/25W	2904374
		8A	Yes	UNO-PS/1AC/5DC/40W	2904375
	12 V DC	2.5A	Yes	UNO-PS/1AC/12DC/30W	2902998
		4.6A	Yes	UNO-PS/1AC/12DC/55W	2902999
		8.3A	Yes	UNO-PS/1AC/12DC/100W	2902997
		10A	Yes	TRIO-PS-2G/1AC/12DC/10	2903158
		20A	Yes	QUINT-PS/1AC/12DC/20	2866721
	24 V DC	1.25A	Yes	UNO-PS/1AC/24DC/30W	2902991
		1.3A	Yes	QUINT4-PS/1AC/24DC/1.3/PT	2909575
		1.3A	Yes	QUINT4-PS/1AC/24DC/1.3/SC	2904597
		2.5A	Yes	UNO-PS/1AC/24DC/60W	2902992
		2.5A	Yes	QUINT4-PS/1AC/24DC/2.5/PT	2909576
		2.5A	Yes	QUINT4-PS/1AC/24DC/2.5/SC	2904598
		3.75A	Yes	UNO-PS/1AC/24DC/90W/C2LPS	2902994
		3.8A	Yes	QUINT4-PS/1AC/24DC/3.8/PT	2909577
		3.8A	Yes	QUINT4-PS/1AC/24DC/3.8/SC	2904599
		4.2A	Yes	UNO-PS/1AC/24DC/100W	2902993
		5A	Yes	QUINT4-PS/1AC/24DC/5	2904600
		5A	Yes	TRIO-PS-2G/1AC/24DC/5	2903148
		10A	Yes	QUINT4-PS/1AC/24DC/10	2904601
		10A	Yes	TRIO-PS-2G/1AC/24DC/10	2903149
		20A	Yes	UNO2-PS/1AC/24DC/480W	2910105
		20A	Yes	QUINT4-PS/1AC/24DC/20	2904602
		20A	Yes	QUINT4-PS/1AC/24DC/20/+	2904617
		40A	Yes	QUINT4-PS/1AC/24DC/40	2904603
	48 V DC	1.25A	Yes	UNO-PS/1AC/48DC/60W	2902995
		5A	Yes	QUINT-PS/1AC/48DC/5	2866679
		5A	Yes	TRIO-PS-2G/1AC/48DC/5	2903159
		10A	Yes	QUINT4-PS/1AC/48DC/10	2904611
		10A	Yes	TRIO-PS-2G/1AC/48DC/10	2903160
		20A	Yes	QUINT-PS/1AC/48DC/20	2866695
Three phase	24 V DC	5A	Yes	QUINT4-PS/3AC/24DC/5	2904620
		5A	Yes	TRIO-PS-2G/3AC/24DC/5	2903153
		10A	Yes	QUINT4-PS/3AC/24DC/10	2904621
		10A	Yes	TRIO-PS-2G/3AC/24DC/10	2903154
		20A	Yes	QUINT4-PS/3AC/24DC/20	2904622
		40A	Yes	QUINT4-PS/3AC/24DC/40	2904623
	48 V DC	20A	Yes	QUINT-PS/3AC/48DC/20	2320827

DC/DC converters	
A. What is the input DC voltage?	D. Does the power supply need Class I, Division 2 rating?
B. What is the output?	E. Type description
C. What is your output current? (amps)	F. Resulting Phoenix Contact part number

A. Input voltage	B. Output voltage	C. Output current	D. Class I, Div. 2	E. Type description	F. Order #
12 V DC	12 V DC	8A	Yes	QUINT-PS/12DC/12DC/8	2905007
12 V DC	24 V DC	5A	Yes	QUINT-PS/12DC/24DC/5	2320131
24 V DC	12 V DC	8A	Yes	QUINT4-PS/24DC/12DC/8/PT	2910122
24 V DC	24 V DC	5A	Yes	QUINT4-PS/24DC/24DC/5/PT	2910119
		5A	Yes	QUINT4-PS/24DC/24DC/5/SC	1046800
		10A	Yes	QUINT4-PS/24DC/24DC/10/PT	2910120
		10A	Yes	QUINT4-PS/24DC/24DC/10/SC	1046803
		20A	Yes	QUINT4-PS/24DC/24DC/20/PT	2910121
		20A	Yes	QUINT4-PS/24DC/24DC/20/SC	1046805
24 V DC	48 V DC	5A	Yes	QUINT4-PS/24DC/48DC/5/PT	2910123
48 V DC	24 V DC	5A	Yes	QUINT4-PS/48DC/24DC/5/PT	2910125
48 V DC	48 V DC	5A	Yes	QUINT4-PS/48DC/48DC/5/PT	2910128
60 … 72 V DC	24 V DC	10A	Yes	QUINT-PS/60-72DC/24DC/10	2905009

Redundancy modules	
A. What is the input DC voltage?	**D. Does the power supply need Class I, Division 2 rating?**
B. What is the output DC voltage?	**E. Type description**
C. What is your output current? (amps)	**F. Resulting Phoenix Contact part number**

A. Input voltage	B. Output voltage	C. Output current	D. Class I, Div. 2	E. Type description	F. Order #
12…24 V DC	12…24 V DC	2 x 20 A/1 x 40 A	Yes	QUINT4-DIODE/12-24DC/2x20/1x40	2907719
48 V DC	48 V DC			QUINT4-DIODE/48DC/2x20/1x40	2907720
12…24 V DC	12…24 V DC	1 x 40 A	Yes	QUINT4-S-ORING/12-24DC/1X40	2907752
				QUINT4-S-ORING/12-24DC/1X40/+	2907753
24 V DC	24 V DC	2 x 10 A/1 x 20 A	Yes	QUINT-ORING/24DC/2x10/1x20	2320173
		2 x 20 A/1 x 40 A	Yes	QUINT-ORING/24DC/2x20/1x40	2320186
		2 x 40 A/1 x 80 A	Yes	QUINT-ORING/24DC/2X40/1X80	2902879

DC UPS	
A. What is the input DC voltage?	**D. Does the power supply need Class I, Division 2 rating?**
B. What is the output DC voltage and output current?	**E. Type description**
C. What industrial network are you working with?	**F. Resulting Phoenix Contact part number**

A. Input voltage	B. Output voltage and current	C. Industrial network	D. Class I, Div. 2	E. Type description	F. Order #
24 V DC	24V DC/5 A	PROFINET	Yes	QUINT4-UPS/24DC/24DC/5/PN	2906993
	24V DC/10 A	PROFINET	Yes	QUINT4-UPS/ 24DC/ 24DC/10/PN	2907068
	24V DC/20 A	PROFINET	Yes	QUINT4-UPS/ 24DC/ 24DC/20/PN	2907073
	24V DC/5 A	EtherNet/IP - ModbusTCP/IP	Yes	QUINT4-UPS/ 24DC/ 24DC/5/EIP	2906994
	24V DC/10 A	EtherNet/IP - ModbusTCP/IP	Yes	QUINT4-UPS/ 24DC/ 24DC/10/EIP	2907069
	24V DC/20 A	EtherNet/IP - ModbusTCP/IP	Yes	QUINT4-UPS/ 24DC/ 24DC/20/EIP	2907074
	24V DC/5 A	EtherCAT	Yes	QUINT4-UPS/ 24DC/ 24DC/5/EC	2906996
	24V DC/10 A	EtherCAT	Yes	QUINT4-UPS/ 24DC/ 24DC/10/EC	2907070
	24V DC/20 A	EtherCAT	Yes	QUINT4-UPS/ 24DC/ 24DC/20/EC	2907076
	24V DC/5 A	USB	Yes	QUINT4-UPS/ 24DC/ 24DC/5/USB	2906991
	24V DC/10 A	USB	Yes	QUINT4-UPS/ 24DC/ 24DC/10/USB	2907067
	24V DC/20 A	USB	Yes	QUINT4-UPS/ 24DC/ 24DC/20/USB	2907072
	24V DC/5 A	No interface	Yes	QUINT4-UPS/ 24DC/ 24DC/5	2906990
	24V DC/10 A	No interface	Yes	QUINT4-UPS/ 24DC/ 24DC/10	2907066
	24V DC/20 A	No interface	Yes	QUINT4-UPS/ 24DC/ 24DC/20	2907071

Batteries	
A. What is the input DC voltage?	**E. Does the power supply need Class I, Division 2 rating?**
B. How many watt hours or amp hours does your application need?	**F. Type description**
C. What energy storage type are you looking for?	**G. Resulting Phoenix Contact part number**
D. What industrial network can the battery work with?	

A. Input voltage	B. Wh, Ah, or A/Kj	C. Energy storage type	D. Industrial network compatibility	E. Class I, Div. 2	F. Type description	G. Order #
24 V DC	1.3 Ah	VRLA	All	Yes	UPS-BAT/VRLA/24DC/1.3AH	2320296
	7.2 Ah	VRLA	All	Yes	UPS-BAT/VRLA/24DC/7.2AH	2320319
	12 Ah	VRLA	All	Yes	UPS-BAT/VRLA/24DC/12AH	2320322
	13 Ah	VRLA-WTR	All	Yes	UPS-BAT/VRLA-WTR/24DC/13AH	2320416
	26 Ah	VRLA-WTR	All	Yes	UPS-BAT/VRLA-WTR/24DC/26AH	2320429
	120 Wh	LI-ION	All	Yes	UPS-BAT/LI-ION/24DC/120WH	2320351
	924 Wh	LI-ION	All	Yes	UPS-BAT/LI-ION/24DC/924WH	2908232
	10 A/10 kJ	CAP	No interfaced UPS	Yes	UPS-CAP/24DC/10A/10KJ	2320377
	20 A/20 kJ	CAP	No interfaced UPS	Yes	UPS-CAP/24DC/20A/20KJ	2320380

AC/DC power supplies

DC/DC converters

Redundancy modules

UPS and battery backup

Monitoring

System reliability. User accountability. Process efficiency.

Just-in-time maintenance starts with machine health data. Energy efficiency improvement relies on identifying waste. However, it is impossible to know what is happening or what can be improved within a machine if it is not being monitored. Basic monitoring provides a greater edge in maintaining an efficient, reliable system with minimal downtime.

Goodbye reactive maintenance, hello just-in-time services! Phoenix Contact's energy monitoring products provide insights into your equipment's state of health and power consumption trends, empowering you to make informed maintenance and operational decisions.

Voltage transducers

Voltage is a good indicator of overall power system health. Voltage touches every component in a system – applying the incorrect voltage can result in severe equipment damage, improperly charged batteries, or even burned up electrical motors. Easily convert up to 660 V AC to standard analog signals.

Current transducers

Current can be used to readily detect the state of health of processes or individual pieces of equipment. Each end-device is designed to consume a nominal amount of current. Device failure can be detected preeminently by observing changes in current draw over time.

Energy meters

Within industrial systems, power consumption gives granular details that can be missed by monitoring voltage or current alone. Monitoring power has several benefits in addition to helping to predict failures; power thresholds can detect clogged filters, overloaded motors, and more.

Monitoring relays

Monitoring relays offer a unique packaged solution to protect against undesirable conditions. Sometimes, a simple threshold switch is all that is needed to protect against or detect an undesirable condition. Spot heater and lighting failures, prevent brown-out voltage damage, and ensure proper three-phase motor rotation, all with self-contained monitoring relays.

Monitoring

Voltage and current transducers

Transducers tackle the difficult task of measuring high currents and voltages, allowing you to incorporate these measurements into a control system using standard analog signals. By building up a network of voltage and current sensors, system and machine health can be continuously monitored for fault conditions.

- Voltage transducers – analog measurement of AC and DC voltages
- Current transducers – analog measurement of AC, DC, and distorted currents
- Fixed and programmable range modules – solutions for both precise and universal applications

AC/DC voltage transducers

- ☑ AC and DC solutions
- ☑ Bidirectional output signals for DC applications
- ☑ Multiple input ranges for higher precision
- ☑ ZERO/SPAN adjustment +/-20 percent
- ☑ Up to 660 V measuring capability

AC/DC current transducers

- ☑ Customizable input/output ranges
- ☑ Available alarm contacts
- ☑ Can be ordered pre-configured
- ☑ Compact devices up to 55 A
- ☑ DIN rail- or direct-mount devices up to 600 A

AC current transducers

- ☑ Measure sinusoidal and distorted currents
- ☑ Easily retrofit existing conductors
- ☑ Convert 0-1 A/0-5 A AC current transformers to analog outputs
- ☑ Compact devices up to 16 A
- ☑ DIN rail- or direct-mount devices up to 400 A

Retrofit solutions for AC current

- ☑ Touch-safe Rogowski principle of operation
- ☑ Flexible and compact coil allows for easy retrofitting
- ☑ Direct connection to EMpro meters
- ☑ Optional 0-1A AC or analog output transducers
- ☑ Tool-free installation with unique bus bar clamp
- ☑ One part covers ranges from 0-100 A to 0-10,000 A AC

Monitoring

Energy meters and monitoring relays

Energy meters combine the measurement of current and voltage to offer more complex insights into system operations. Monitoring relays offer prepackaged solutions to protect against undesirable conditions within systems.

- Energy meters – measure, communicate, and display AC energy data
- Electronic motor managers – turn energy data into actionable, just-in-time maintenance events
- Voltage and current monitoring relays – monitor DC, single phase, and three phase systems
- Additional monitoring relays – detection of tank levels, power factor, and energy usage thresholds

Energy meters

- ☑ Simple user experience with 3-step installation wizard
- ☑ Powerful webserver with data logging and visualization
- ☑ Intregrated MODBUS TCP/IP and REST API on every meter
- ☑ Optional Ethernet/IP, PROFINET and MODBUS RTU communications
- ☑ Panel-mount and DIN rail-mount options
- ☑ Measure AC parameters such as voltage, current, power, energy, harmonics, and more

Electronic motor managers

- ☑ Turn motors into sensors – avoid additional costs
- ☑ Power consumption can predict maintenance needs
- ☑ Instantly detect overloads, underloads, and failures
- ☑ Freely-configurable warning and alarm thresholds
- ☑ Schedule maintenance events only when needed

Compact monitoring relays

- ☑ Compact housings with available PT connection
- ☑ Implementation of essential functions
- ☑ Monitor voltage, current, and phases
- ☑ Line-powered modules
- ☑ Cost-effective solutions for serial production

Multi-function monitoring relays

- ☑ Wide-range power supplies for global applications
- ☑ Multi-function modules reduce inventory needs
- ☑ Customizable thresholds and delay times
- ☑ Protect a variety of systems
- ☑ Monitor voltage, current, phases, temperature, level, power, and power-factor

Common products for monitoring

Transducers
A. What is being measured?
B. Is it AC or DC?
C. What is the measuring range?
D. What is the desired output?
E. Resulting Phoenix Contact part number

A. Voltage	B. AC or DC	C. Measuring range	D. Output	Type-description	E. Order #
	AC	0 … 24/36/54/80/120/170/250/370/550 V AC	0-10 V/4-20 mA	MACX MCR-VAC	2906239
	DC	± 0 … 24/36/54/80/120/170/250/370/550 V DC	0-10V/4-20 mA (unipolar mode)	MACX MCR-VDC	2906242
	DC	0 … 1500 V DC	2-10 V	SCK-M-U-1500V	2903591
A. Current	AC/DC	0 … 1/5/10 A AC/DC	0-10 V/4-20 mA	MCR-S-1-5-UI-DCI-NC	2814715
		0 … 12.5/20/55 A AC/DC	0-10 V/4-20 mA	MCR-S10-50-UI-DCI-NC	2814728
		0 … 100 A AC/DC	0-10 V	MCR-SL-CUC-100-U	2308108
		0 … 100 A AC/DC	4-20 mA	MCR-SL-CUC-100-I	2308027
		0 … 200 A AC/DC	0-10 V	MCR-SL-CUC-200-U	2308205
		0 … 200 A AC/DC	4-20 mA	MCR-SL-CUC-200-I	2308030
		0 … 300 A AC/DC	0-10 V	MCR-SL-CUC-300-U	2308302
		0 … 300 A AC/DC	4-20 mA	MCR-SL-CUC-300-I	2308043
		0 … 400 A AC/DC	4-20 mA	MCR-SL-CUC-400-I	2308072
		0 … 500 A AC/DC	4-20 mA	MCR-SL-CUC-500-I	2308085
		0 … 600 A AC/DC	4-20 mA	MCR-SL-CUC-600-I	2308098
	AC	0 … 1/5 AC	4-20 mA	MACX MCR-SL-CAC 5-I	2810612
		0 … 5/12 A AC	4-20 mA	MACX MCR-SL-CAC 12-I-UP	2810638
		0 … 50/75/100 A AC	0-10 V	MCR-SL-S-100-U	2813457
		0 … 50/75/100 A AC	4-20 mA	MCR-SL-S-100-I-LP	2813486
		0 … 100/150/200 A AC	0-10 V	MCR-SL-S-200-U	2813460
		0 … 100/150/200 A AC	4-20 mA	MCR-SL-S-200-I-LP	2813499

Monitoring relays
A. What is being monitored?
B. Is it AC or DC?
C. What is the desired function?
D. What is the measuring range?
E. Resulting Phoenix Contact part number

A. Application	B. AC or DC	C. Function	D. Measuring range	Type-description	E. Order #
Voltage	AC/DC	Undervoltage, window	0 … 24 V AC/DC, 0 … 230 V AC	EMD-BL-V-230	2903523
		Undervoltage	0 … 30/60/300 V AC/DC	EMD-SL-V-UV-300	2866035
		Undervoltage, overvoltage, window	0 … 30/60/300 V AC/DC	EMD-FL-V-300	2866048
3 Φ voltage	AC	Window, phase sequence	280 … 519 V AC	EMD-BL-3V-400	2903525
		Undervoltage, phase monitoring	161 … 299 V AC	EMD-FL-3V-230	2885773
		Undervoltage, phase monitoring	280 … 520 V AC	EMD-FL-3V-400	2866064
		Phase sequence, phase failure, asymmetry	187 … 519 V AC	EMD-BL-PH-480	2903527
		Undervoltage, phase sequence, phase failure	177 … 794 V AC	EMD-SL-PH-690	2905597
Current	AC/DC	Undercurrent	0 … 100 mA/ 0 … 1 A/0 … 10A	EMD-SL-C-UC-10	2867937
		Overcurrent	0 … 100 mA/ 0 … 1 A/0 … 10A	EMD-SL-C-OC-10	2866019
		Overcurrent, undercurrent, window	0 … 100 mA/ 0 … 1 A/0 … 10A	EMD-FL-C-10	2866022
3 Φ power	AC	Underload, overload, window	0 … 12 A/0 … 480 V AC	EMD-FL-RP-480	2900177
3 Φ power factor	AC	Underload, overload, window	0 … 10 A/40 … 415 V AC	EMD-FL-PF-400	2885809
Motor temperature	-	Winding temperature threshold	Up to 6 PTCs	EMD-SL-PTC	2866093

Voltage transducers

Current transducers

Energy meters

Rogowski coils

Rogowski coil kits	
A. Range	**D. What is the desired signal lead length**
B. What is the desired output?	**E. Resulting Phoenix Contact part number**
C. What is the desired coil diameter?	

A. Range	B. Output	C. Coil diameter	D. Signal lead length	Type-description	E. Order #
DIP-selectable: 0 … 100 A AC 0 … 250 A AC 0 … 400 A AC 0 … 630 A AC 0 … 1000 A AC 0 … 1500 A AC 0 … 2000 A AC 0 … 4000 A AC	0 … 10 V/4 … 20 mA	3.75"	3 meters	PACT RCP-4000A-UIRO-D95	2906231
		5.5"		PACT RCP-4000A-UIRO-D140	2906232
		7"		PACT RCP-4000A-UIRO-D190	2906233
	0 … 1 A AC (True CT output)	3.75"	3 meters	PACT RCP-4000A-1A-D95	2904921
		5.5"		PACT RCP-4000A-1A-D140	2904922
		7"		PACT RCP-4000A-1A-D190	2904923
	0 … 1 A AC (True CT output)	3.75"	5 meters	PACT RCP-4000A-1A-D95-5M	2910325
		3.75"	10 meters	PACT RCP-4000A-1A-D95-10M	2910326
		5.5"		PACT-RCP-4000A-1A-D140-10M	1033483
		7"		PACT RCP-4000A-1A-D190-10M	2910327

Single Rogowski coils	
A. Range	**C. What is the desired signal lead length?**
B. What is the desired coil diameter?	**D. Resulting Phoenix Contact part number**

A. Range	B. Coil diameter	C. Signal lead length	Type-description	D. Order #
0 … 10,000 A AC	3.75"	3 meters	PACT RCP-D95	2904890
	5.5"		PACT RCP-D140	2904891
	7"		PACT RCP-D190	2904892
	3.75"	5 meters	PACT RCP-D95-5M	2910322
	3.75"	10 meters	PACT RCP-D95-10M	2910323
	5.5"		PACT-RCP-D140-10M	1033482
	7"		PACT RCP-D190-10M	2910324

Energy meters	
A. What is the current measurement input type?	**C. What is the desired communications interface?**
B. Will the meter be panel-mounted, DIN rail-mounted with display, or DIN rail-mounted without display?	**D. What is the meter power supply voltage?**
	E. Resulting Phoenix Contact part number

A. Current input	B. Mounting/ style	C. Power supply voltage	D. Communications	Type-description	E. Part number
Current transformer	Panel mount	80 … 480 V AC / 120V … 300 V DC	Modbus TCP + REST API	EEM-MA770	2907945
			Modbus RTU + Modbus TCP + REST API	EEM-MA770-R	2907944
			EtherNet/IP + Modbus TCP + REST API	EEM-MA770-EIP	2907953
			PROFINET + Modbus TCP + REST API	EEM-MA770-PN	2907946
		18 … 30 V DC	Modbus TCP + REST API	EEM-MA770-24DC	1127052
	DIN mount w/display	80 … 480 V AC / 120V … 300 V DC	Modbus TCP + REST API	EEM-MA370	2907983
			Modbus RTU + Modbus TCP + REST API	EEM-MA370-R	2907980
		18 … 30 V DC	Modbus TCP + REST API	EEM-MA370-24DC	1127059
	DIN mount w/o display	80 … 480 V AC / 120V … 300 V DC	Modbus TCP + REST API	EEM-MB370	2907954
			EtherNet/IP + Modbus TCP + REST API	EEM-MB370-EIP	2907971
			PROFINET + Modbus TCP + REST API	EEM-MB370-PN	2907984
		18 … 30 V DC	Modbus TCP + REST API	EEM-MB370-24DC	1127061
Direct Rogowski connection	Panel mount	80 … 480 V AC / 120V … 300 V DC	Modbus TCP + REST API	EEM-MA771	2908286
			Modbus RTU + Modbus TCP + REST API	EEM-MA771-R	2908285
			EtherNet/IP + Modbus TCP + REST API	EEM-MA771-EIP	2908302
			PROFINET + Modbus TCP + REST API	EEM-MA771-PN	2908301
		18 … 30 V DC	Modbus TCP + REST API	EEM-MA771-24DC	1127060
	DIN mount w/ display	80 … 480 V AC / 120V … 300 V DC	Modbus TCP + REST API	EEM-MA371	2908307
			Modbus RTU + Modbus TCP + REST API	EEM-MA371-R	2907985
		18 … 30 V DC	Modbus TCP + REST API	EEM-MA371-24DC	1127058
	DIN mount w/o display	80 … 480 V AC / 120V … 300 V DC	Modbus TCP + REST API	EEM-MB371	2907955
			EtherNet/IP + Modbus TCP + REST API	EEM-MB371-EIP	2907976
			PROFINET + Modbus TCP + REST API	EEM-MB371-PN	2908308
		18 … 30 V DC	Modbus TCP + REST API	EEM-MB371-24DC	1127055

Distribution

Fundamental reliability starts with quality connections

It is often said that one should never overlook the basics. When it comes to electrical connections, it couldn't be more true. Every wire in a control system has a purpose – every connection counts. Phoenix Contact is proud to offer a wide variety of high-quality power distribution solutions, all built around the industry's most robust connection technologies.

Founded in 1923, Phoenix Contact developed the first terminal block in 1928, which became fully patented in 1935. This was definitively the world's first modular, rail-mounted terminal block. Since that time, our expertise and innovation have continued to grow into the industry's broadest range of connectivity solutions offered today.

Terminal blocks

Streamline inventory and simplify assembly with the CLIPLINE Complete modular terminal block system. No matter which of the five connection technologies is utilized, accessories are universal and can be used on any and every terminal block that is a member of the CLIPLINE Complete family.

Modular power distribution

Power distribution with no bridging required. Prepackaged power distribution blocks with modular designs allow for a wide range of customization. PTFIX distribution blocks are offered in multiple sizes and configurations for DIN rail- and direct-mounting.

Power distribution modules

Single part number solutions for fast and easy distribution of two potentials. Save time, DIN rail space, and inventory hassle with VIP power distribution modules. Offered in 8-, 12-, 16-, and 24-circuit varieties.

DIN rail outlets

Convenience outlets provide power where it's needed. Whether it's powering a laptop, cellular devices, or tools, machine service is simplified and safer when an outlet is furnished. The product range offers GFI duplex, vertical or horizontal DIN rail mountable, or single and duplex direct or DIN rail mount, specified marking areas, and screw or push-in connection technology.

Distribution

Terminal block solutions

For nearly 100 years, Phoenix Contact has been a leading global innovator and manufacturer of terminal block solutions. We are proud to offer a complete terminal block portfolio with virtually endless opportunities for customization. Thanks to 5 available connection technologies, universal accessories, and a wide variety of sizes and terminal arrangements, the right terminal block is always available.

- Modular terminal blocks – inventor and market leader of terminal block solutions
- Push-in terminal (PT) – innovative technology now available in over 10,000 parts
- High productivity – full line of marking solutions and simplified accessories for streamlined marking, planning, and installation

CLIPLINE Complete

- ☑ Universal accessories
- ☑ Modular design
- ☑ Wide variety of configurations and colors
- ☑ 5 available connection technologies:
  - Screw (UT)
  - Push-in (PT)
  - Spring (ST)
  - Bolt (RT)
  - Insulation displacement (QTC)

PT Push-in Technology

- ☑ Push-in Technology, designed by Phoenix Contact
- ☑ Tool-free installation
- ☑ 50% less insertion force, 50% faster to wire
- ☑ Consistent torque-free and vibration-proof connections
- ☑ Wire retention like no other: Performs at 5 times the required IEC pull-out rating
- ☑ Select terminal blocks available in both top and side entry connection styles

FBS insertion bridging

- ☑ Tool-free installation
- ☑ Dual-bridging channels
- ☑ Skip bridges for distributing two potentials
- ☑ Step bridges for feed-in and distribution blocks
- ☑ Compatible with all CLIPLINE Complete terminal blocks

Fuse terminal blocks

- ☑ Fixed and removable fuse holders
- ☑ Available blown-fuse indicator LED
- ☑ Wide range of sizes and styles
- ☑ Simple power distribution using FBS bridging
- ☑ Optional plug-in circuit breaker modules
- ☑ Multi-level blocks reduce required space

Distribution

Power distribution modules and solutions

Time is money and multiple part numbers are a hassle. Simplify power distribution with power distribution modules. Power distribution modules are pre-packaged solutions that are designed to save space, time, and part number requirements, all while allowing you to be more productive and your connections to be more reliable.

- Simplified power distribution – reduced component counts and installation times
- Wide range of products – solutions for systems of all sizes and power requirements
- Installation flexibility – multiple mounting options, including DIN rail, direct-mount, and adhesive-mount

PTFIX

- ☑ Ready-to-use blocks require no bridging
- ☑ Available with or without feed-in terminal
- ☑ Supports up to 8 AWG wire
- ☑ DIN rail, direct, or adhesive mounting
- ☑ Space savings of up to 50 percent
- ☑ Available in 11 colors

PTFIX Modular

- ☑ Fully-customizable solution
- ☑ Mix and match feed-thru blocks with power distribution blocks
- ☑ Available in 11 colors
- ☑ Replaces standard terminal block solutions with a smaller footprint and fewer required parts

VIP power distribution modules

- ☑ Single part number solution
- ☑ Distribute 2 potentials
- ☑ 8-, 12-, 16-, and 24-circuit varieties
- ☑ Compact footprint
- ☑ Reduces installation time up to 47 percent

DIN rail outlets

- ☑ Single and duplex outlets
- ☑ GFCI outlets available
- ☑ Domestic and global plug types
- ☑ Surface or DIN rail-mounting provides simple installation
- ☑ Easily distribute 120 V AC for plug-connected loads
- ☑ Provides convenience for service and maintenance
- ☑ Designated marking areas
- ☑ Screw or push-in connection technology

Common products for distribution

PTFIX						
A. What mounting method is preferred?						
B. What wire size(s) and ratings are needed?						
C. How many connection points?						
D. Resulting Phoenix Contact part number						
A. Mounting method	**B. Wire range of terminals**		**B. UL ratings**	**C. # of terminal points**	**Description**	**D. Order #**
	Taps	**Feed-in**				
Direct mounting w/flange	26-14 AWG	-	15 A/300 V	6	PTFIX 6X1.5 GY	3002757
Direct mounting w/flange	26-14 AWG	-	15 A/300 V	12	PTFIX 12X1.5 GY	3002758
Direct mounting w/flange	26-14 AWG	-	15 A/300 V	18	PTFIX 18X1.5 GY	3002760
35mm DIN rail	26-12 AWG	-	20 A/300 V	6	PTFIX 6X2.5-NS35A GY	3273132
35mm DIN rail	26-12 AWG	-	20 A/300 V	12	PTFIX 12X2.5-NS35A GY	3273154
35mm DIN rail	26-12 AWG	-	20 A/300 V	18	PTFIX 18X2.5-NS35A GY	3273176
35mm DIN rail, vertical	26-12 AWG	-	20 A/300 V	6	PTFIX 6X2.5-NS35 GY	3273000
35mm DIN rail, vertical	26-12 AWG	-	20 A/300 V	12	PTFIX 12X2.5-NS35 GY	3273022
35mm DIN rail, vertical	26-12 AWG	-	20 A/300 V	18	PTFIX 18X2.5-NS35 GY	3273044
35mm DIN rail	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	6	PTFIX 6/6X2.5-NS35A GY	3273198
35mm DIN rail	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	12	PTFIX 6/12X2.5-NS35A GY	3273220
35mm DIN rail	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	18	PTFIX 6/18X2.5-NS35A GY	3273242
35mm DIN rail, vertical	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	6	PTFIX 6/6X2.5-NS35 GY	3273066
35mm DIN rail, vertical	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	12	PTFIX 6/12X2.5-NS35 GY	3273088
35mm DIN rail, vertical	26-12 AWG	20-8 AWG	20 A (Taps), 50 A (Feed-in)/ 300 V	18	PTFIX 6/18X2.5-NS35 GY	3273110
Note: PTFIX is available in 11 colors and multiple mounting options. For a full overview of PTFIX, visit **www.phoenixcontact.com/PTFIX**						

DIN-mounted receptacles				
A. Single or duplex outlet?				
B. Standard or GFCI protection?				
C. Feed-thru or stand-alone?				
D. Resulting Phoenix Contact part number				
A. Single or duplex	**B. Standard or GFCI**	**C. Feed-thru or stand-alone**	**Type-description**	**D. Order #**
15 A Single	Standard	Stand-alone	EO-AB/UT/LED/15	0804155
			EO-AB/PT/LED/15	0804168
		Feed-thru	EMG 30-SD/US/15A	5604253
15 A Duplex	Standard	Stand-alone	EM-DUO 120/15	5600461
	GFCI	Stand-alone	EM-DUO 120/15/GFI	5600462
		Feed-thru	EM-DUO 120/15/GFI/AUX	5600639
20 A Duplex	Standard	Stand-alone	EM-DUO 120/20	5600525
	GFCI	Stand-alone	EM-DUO 120/20/GFI	5602519
		Feed-thru	EM-DUO 120/20/GFI/AUX	5603049

VIP power distribution modules (PDMs)				
A. PT or screw?				
B. Number of circuits?				
C. Fusing required?				
D. Resulting Phoenix Contact part number				
A. Termination type	**B. Number of circuits**	**C. Fusing**	**Type-description**	**D. Order #**
Screw terminal	8	No	VIP-2/SC/PDM-2/16	2315256
	12	No	VIP-2/SC/PDM-2/24	2315269
	16	No	VIP-2/SC/PDM-2/32	2315272
	32	No	VIP-2/SC/PDM-2/48	2903717
PT Push-in terminal	8	No	VIP-3/PT/PDM-2/16	2903797
	8	Yes	VIP-2/PT/PDM-2/16/FU 6.3A	2903603
	12	No	VIP-3/PT/PDM-2/24	2903798
	16	No	VIP-3/PT/PDM-2/32	2903799
	24	No	VIP-3/PT/PDM-2/48	2903800

Terminal blocks

PTFIX

PDMs

DIN rail outlets

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

A. Push-in Technology (PT)

B. AWG	C. I_max	D. Connections	Description	E. Order #	F. Cover	G. Bridge (2-pos.)	H. Screwdriver	H. Terminal marking
26-12	20	2	PTV 2.5	1078960	1079914	3030161	1204517	828744
	20	3	PTV 2.5-TWIN	1078966	1079916			
	20	4	PTV 2.5-QUATTRO	1078999	1079917			
	/	2	PTV 2.5-PE	1078963	1079914			
26-12	20	2	PT 2.5	3209510	3030417	3030161	1204517	0828744
	-		PT 2.5-PE	3209536				
	20	3	PT 2.5-TWIN	3209549	3030488			
	20	4	PT 2.5-QUATTRO	3209578	3030514			
	20		PTTB 2.5	3210567	3211634			
	-		PTTB 2.5-PE	3210596				
24-10	30	2	PT 4	3211757	3030420	3030336	1204517	0828746
	-		PT 4-PE	3211766				
	6.3		PT 4-HESI (5X20 FUSE)	3211861				
	6.3		PT 4-HESILED 24 (5X20 FUSE)	3211903				
	30	3	PT 4-TWIN	3211771	3208977			
	30	4	PT 4-QUATTRO	3211797	3208979			
	28		PTTB 4	3211786	3030462			
	-		PTTB 4-PE	3211854				

* 18 AWG max, using plastic insulated ferrule. See UL file for use group rating

A. Screw clamp (UT)

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			
	20		UTTB 2.5	3044636	3047293			
	-		UTTB 2.5-PE	3044665	3047293			
	20	6	UT 2.5-3L	3214259	3214314			
	-		UT 2.5-3PE	3214275				
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	4	UT 4-QUATTRO	3044571	3047170			
	30		UTTB 4	3044814	3047293			
	-		UTTB4-PE	3044759				
26-8	50	2	UT-6	3044131	3047028	3030284	1205066	0828740
	-		UT6-PE	3044157				

A. Spring cage (ST)

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

A. Insulation displacement (IDC)

24-16	10	2	QTC 1.5	3205019	3205161	3030161	1204517	0828744
	10	4	QTC 1.5-QUATTRO	3205077	3205174			
20-14	15	2	QTC 2.5	3206416	3206568	3030336	1204517	0828746
	15	4	QTC 2.5-QUATTRO	3206446	3206449			
	6.3	2	QTC 2.5-HESILED 24 (5X20 FUSE)	3050374	3206571			

A. Bolt connection (RT)

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

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