



Power supplies and UPS

2019/2020



Power for superior system availability

Our 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 terms of their functionality and design to the demands of various different industries.

With our QUINT, TRIO, UNO, and STEP product ranges, you are ideally equipped to handle competitors on an international scale.



The comprehensive solution for your control cabinet

The QUINT POWER product range is a part of the COMPLETE line. COMPLETE line is a system comprising 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. Further information is available on pages 76 to 79.



COMPLETE line

Innovative technologies

With our innovative technologies, we are decisively shaping the latest trends and developments. Phoenix Contact Power Supplies plays a leading technological role in the field of industrial power supplies.

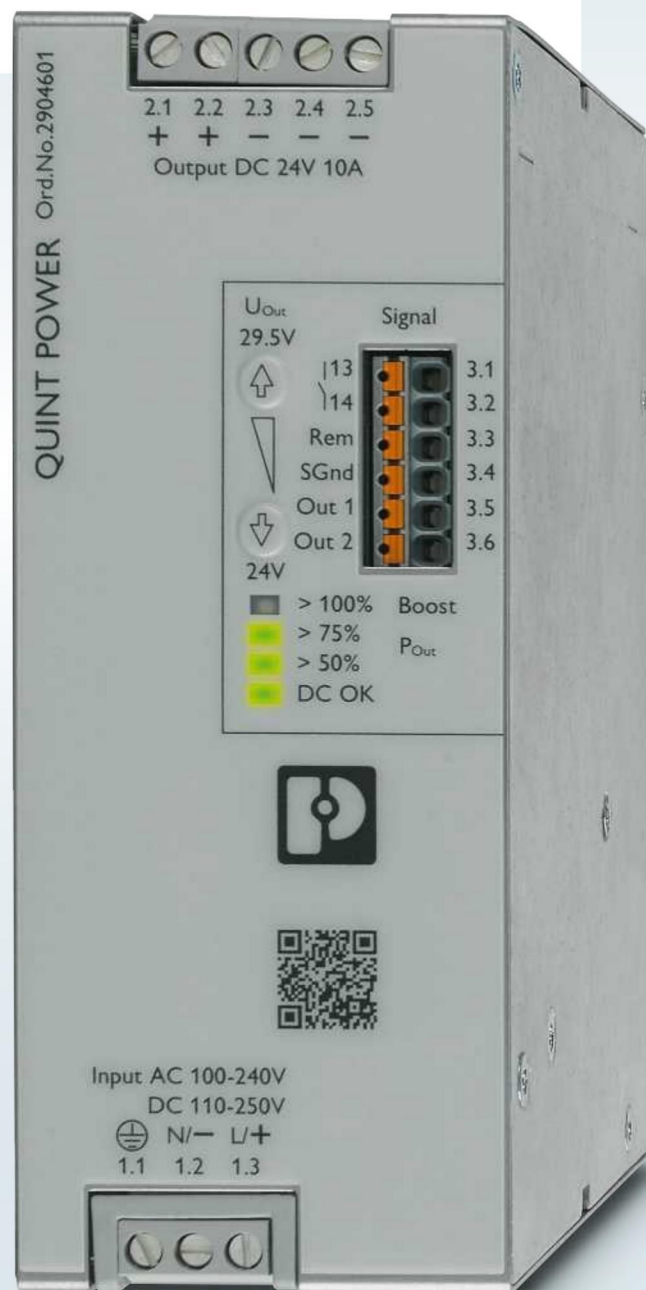
- SFB Technology reliably trips standard miniature circuit breakers
- ACB Technology doubles the service life of redundant power supply units
- IQ Technology monitors and optimizes the energy storage system of the uninterruptible power supplies



Power supplies with SFB Technology (Selective Fuse Breaking)

- 6 times the nominal current for 15 ms
- Reliably switches off faulty current paths in the event of a short circuit
- Key system parts remain in operation without any interruption

For more information, refer to page 10 onwards.



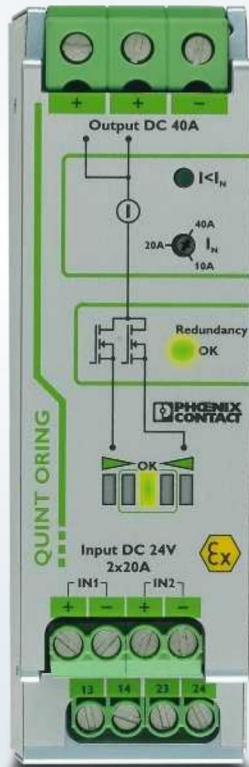
Auto Current Balancing Technology

Designed by PHOENIX CONTACT

Redundancy modules with ACB Technology (Auto Current Balancing)

- Even load distribution for redundant power supplies
- Lower thermal load on both power supplies
- Service life of the redundant solution is doubled

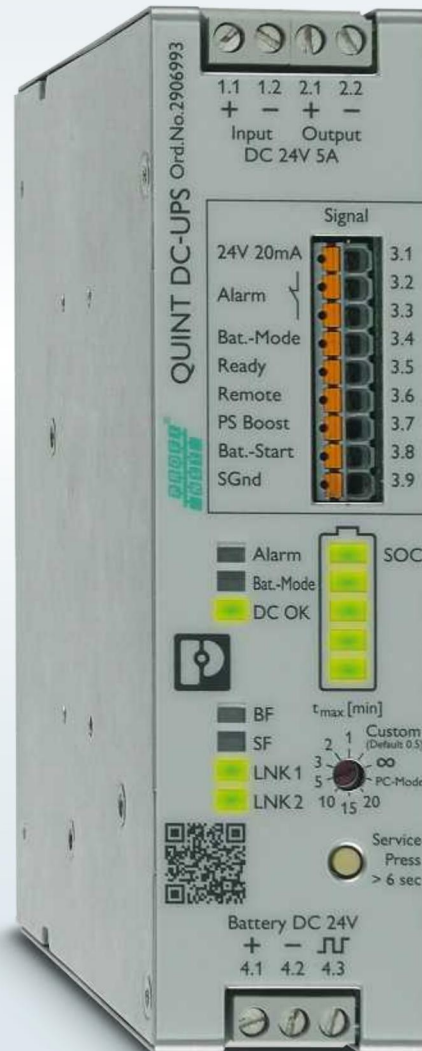
For more information, refer to page 34 onwards.



Uninterruptible power supplies for integration into industrial networks

- Battery management system (BMS) with IQ Technology
- Provides information on the remaining runtime, state of charge, and service life of the energy storage system
- Optimizes the charging characteristic for maximum service life
- Interfaces allow integration into any industrial network

For more information, refer to page 40 onwards.



Power supplies for every application

Our power supplies are used in a wide variety of sectors and industries. With their various functionalities, performance classes, and designs, they are the right partner for your application.

- QUINT POWER: Automotive industry, systems manufacturing, process industry, ship building
- TRIO POWER: Machine building
- UNO POWER: Electromobility
- STEP POWER: Urban infrastructure, building automation



PHOENIX CONTACT
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Power supplies – A comparison of your advantages

The product ranges differ with regard to their design, power, and functionality. Select the ideal solution based on your requirements:

- QUINT POWER – Powerful, space-saving, and with maximum functionality
- TRIO POWER – Robust with standard functionality
- UNO POWER – Compact with basic functionality
- STEP POWER – For distribution boards

Shared features and differences

The power supplies of all the product ranges increase system availability and can be used worldwide, thanks to their international approval package and their wide range input.

All power supplies feature a high degree of operational safety, can be connected in parallel, and can also be installed without problems in outdoor control cabinets.

	QUINT POWER		TRIO POWER	UNO POWER	STEP POWER
	With SFB Technology	<100 W			
Can be used worldwide, thanks to the wide range input and international approval package	•	•	•	•	•
Maximum operating time, thanks to high MTBF >500,000 h at +40°C	•	•	•	•	•
Can be switched in parallel for increased performance and redundancy	•	•	•	•	•
Outdoor installation permissible, thanks to wide temperature range of -25°C ... +70°C	•	•	•	•	•
Active function monitoring via switching output for remote diagnostics	•	•	•		
Three-phase devices continue to operate without errors, even if one phase fails permanently	•		•		
Reliable starting of high loads with the dynamic boost power reserve	•	•	•		
Easy system extension with the static boost power reserve	•	•*			
Magnetic tripping of miniature circuit breakers, thanks to SFB Technology	•				
Preventive function monitoring reports critical operating states before errors occur	•	•			
Can be configured individually	•				

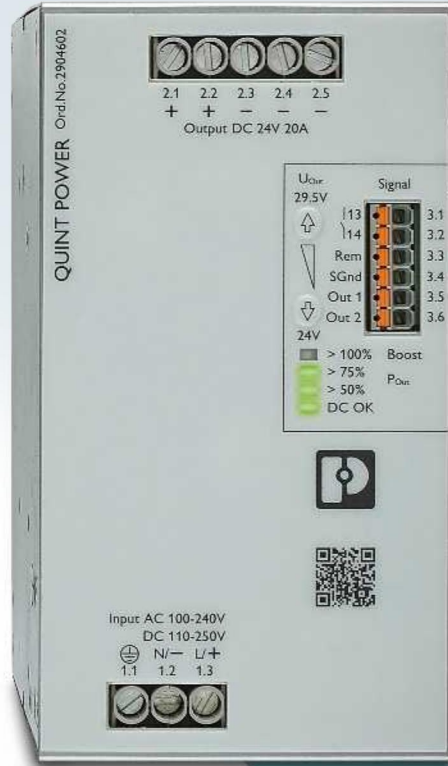
* Applies to the following devices: [2904597](#), [2904598](#), [2909575](#), [2909576](#), [2904605](#)



480 W 20 A



1000 W 40 A



1000 W 40 A

Power

Current

QUINT POWER power supplies

Maximum functionality

Our powerful QUINT POWER power supplies with SFB Technology are ideally suited for ensuring the maximum availability of your system. The power reserve enables the trouble-free starting of high loads as well as the easy extension of your system. The combination of SFB Technology, preventive function monitoring, and long service life

increase the availability of your application. The range of features of QUINT POWER power supplies is rounded off with the individual configuration of signaling thresholds and characteristic curves. Furthermore, they can be ordered preconfigured from a batch quantity of just 1.

i Web code: #1513



Your advantages

- ✓ SFB Technology selectively trips standard miniature circuit breakers. Connected loads continue to work without interruption
- ✓ Preventive function monitoring reports critical operating states before they occur
- ✓ Power reserve for easy system extension, thanks to static boost with sustained power of up to 125%, and ability to start heavy loads, thanks to dynamic boost with up to 200% for 5 seconds
- ✓ High level of immunity, thanks to integrated gas discharge tube, more than 20 ms mains buffering
- ✓ Robust design in a metal housing and a wide temperature range of -40°C to +70°C

SFB Technology

SFB Technology (Selective Fuse Breaking) trips standard miniature circuit breakers reliably and quickly with up to six times the nominal current for 15 ms. Faulty current paths are switched off selectively, the fault is located, and important system parts remain in operation.

Designed by PHOENIX CONTACT

Can be configured individually

You can configure the power supplies easily and precisely using a PC or mobile device. For example, you can configure signaling thresholds and the output voltage, and adjust characteristic curves individually.



QUINT POWER Plus version – The power supply for maximum operational safety

The QUINT POWER Plus version with integrated decoupling MOSFET for 1+1 and n+1-redundancy provides symmetrical load distribution and maximizes system availability. Double overvoltage protection (OVP) switches the output off in the event of an error to protect the consumers against overvoltages.

The QUINT POWER Plus version satisfies the requirements in accordance with functional safety (SIL 3, HFT = 1 in accordance with IEC 61508 and IEC 61511), thus ensuring maximum operational safety. With a protective coating, and ATEX and IECEx approval in accordance with

the standards IEC 60079-0, IEC 60079-7, IEC 60079-11, and IEC 60079-15, it can also be used within potentially explosive areas of zone 2.

The new Plus version is rounded off with a wide temperature range of -40°C to +75°C for use under extreme ambient conditions.



Maximum protection for your system





For extreme operating conditions, use the ideally matched combination of PLUGTRAB SEC surge protection device and the powerful QUINT POWER power supply of the fourth generation.


However, should your fourth-generation QUINT POWER become damaged in the first five years following purchase despite the use of this combination, you will receive a free replacement.





Further information and conditions can be found on the Internet under Order Number [2907928](#) at www.phoenixcontact.com







Product overview QUINT POWER with SFB Technology

QUINT POWER with NFC Technology 1~					SFB TECHNOLOGY
					
Input	85 ... 264 V AC, 90 ... 350 V DC	85 ... 264 V AC, 90 ... 350 V DC	85 ... 264 V AC, 90 ... 350 V DC	85 ... 264 V AC, 90 ... 350 V DC	
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	70 x 130 x 125	120 x 130 x 140	
	24 V / 5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A New	
Type	QUINT4-PS/1AC/24DC/5	QUINT4-PS/1AC/24DC/10	QUINT4-PS/1AC/24DC/20	QUINT4-PS/1AC/24DC/40	
Order Number	2904600	2904601	2904602	2904603	
		12 V / 15 A			
Type		QUINT4-PS/1AC/12DC/15			
Order Number		2904608			
		48 V / 5 A	48 V / 10 A		
Type		QUINT4-PS/1AC/48DC/5	QUINT4-PS/1AC/48DC/10		
Order Number		2904610	2904611		

QUINT POWER with NFC Technology 1~ Plus version, with protective coating					SFB TECHNOLOGY
					
Input	85 ... 264 V AC, 90 ... 350 V DC				
W x H x D in mm	70 x 130 x 125				
	24 V / 20 A / + New				
Type	QUINT4-PS/1AC/24DC/20/+				
Order Number	2904617				

QUINT POWER with NFC Technology 3~					SFB TECHNOLOGY
					
Input	3 x 320 ... 550 V AC, 2 x 360 ... 550 V AC, +/- 300 V DC	3 x 320 ... 550 V AC, 2 x 360 ... 550 V AC, +/- 260 ... 300 V DC	3 x 320 ... 550 V AC, 2 x 360 ... 550 V AC, +/- 260 ... 300 V DC	3 x 320 ... 550 V AC, 2 x 360 ... 550 V AC, +/- 260 ... 300 V DC	
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	70 x 130 x 125	120 x 130 x 125	
	24 V / 5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A New	
Type	QUINT4-PS/3AC/24DC/5	QUINT4-PS/3AC/24DC/10	QUINT4-PS/3AC/24DC/20	QUINT4-PS/3AC/24DC/40	
Order Number	2904620	2904621	2904622	2904623	

QUINT POWER 1~ and 3~				SFB TECHNOLOGY
				
Input	85 ... 264 V AC, 90 ... 350 V DC	85 ... 264 V AC, 90 ... 350 V DC	85 ... 264 V AC, 90 ... 300 V DC	3 x 320 ... 575 V AC, 450 ... 800 V DC
W x H x D in mm	32 x 130 x 125	90 x 130 x 125	180 x 130 x 125	96 x 130 x 176
	24 V/3.5 A	12 V/20 A	48 V/20 A	48 V/20 A
Type	QUINT-PS/1AC/24DC/3.5	QUINT-PS/1AC/12DC/20	QUINT-PS/1AC/48DC/20	QUINT-PS/3AC/48DC/20
Order Number	2866747	2866721	2866695	2320827









QUINT POWER with SFB Technology for extreme environmental conditions

The PCB coating protects against dust, corrosive gases, and 100% humidity. Failures due to creepage currents and electrochemical migration caused by corrosion are also prevented. The components are protected within a wide temperature range of -40°C to +70°C.

DC/DC converters with the same properties can be found on page 26.

The QUINT S-ORING redundancy module for sensitive consumers, for example in process technology, with overvoltage protection (OVP) limits overvoltages to 28.8 V, and is also designed for extreme environmental conditions.



QUINT POWER 1~ and 3~, with protective coating				SFB TECHNOLOGY
	 	 	 	 
Input	Single-phase, 85 ... 264 V AC, 90 ... 430 V DC	Single-phase, 85 ... 264 V AC, 90 ... 430 V DC	Single-phase, 85 ... 264 V AC, 90 ... 430 V DC	Three-phase, 3 x 320 ... 575 V AC, 450 ... 800 V DC
W x H x D in mm	40 x 130 x 125	60 x 130 x 125	90 x 130 x 125	69 x 130 x 125
	1 AC/24 V/5 A/CO	1 AC/24 V/10 A/CO	1 AC/24 V/20 A/CO	3 AC/24 V/20 A/CO
Type	QUINT-PS/1AC/24DC/5/CO	QUINT-PS/1AC/24DC/10/CO	QUINT-PS/1AC/24DC/20/CO	QUINT-PS/3AC/24DC/20/CO
Order Number	2320908	2320911	2320898	2320924

QUINT POWER power supplies up to 100 W

Powerful and space-saving

For the first time, QUINT POWER provides maximum system availability in the smallest size in the power range of up to 100 W. Preventive function monitoring and exceptional power reserves are now also

available for applications in the low-power range. Furthermore, you can choose between Push-in and screw connection technology for these power supplies for the low-power range.




i Web code: #1513






Your advantages

- ✓ Startup of high loads, thanks to dynamic boost
- ✓ Preventive function monitoring reports critical operating states before errors occur
- ✓ High efficiency and long service life with low power dissipation and low heating
- ✓ Space savings in the control cabinet, thanks to a narrow, slim-line design

Product overview QUINT POWER power supplies up to 100 W

QUINT POWER, with Push-in connection, 1~			
			
Input	85 ... 264 V AC	85 ... 264 V AC	85 ... 264 V AC
W x H x D in mm	22.5 x 106 x 90	32 x 106 x 90	45 x 106 x 90
	24 V / 1.3 A	24 V / 2.5 A	24 V / 3.8 A
Type	QUINT4-PS/1AC/24DC/1.3/PT	QUINT4-PS/1AC/24DC/2.5/PT	QUINT4-PS/1AC/24DC/3.8/PT
Order Number	2909575	2909576	2909577
	12 V / 2.5 A New		12 V / 7.5 A New
Type	QUINT4-PS/1AC/12DC/2.5/PT		QUINT4-PS/1AC/12DC/7.5/PT
Order Number	2904605		2904607
	5 V / 5 A New		
Type	QUINT4-PS/1AC/5DC/5/PT		
Order Number	2904595		

QUINT POWER, with screw connection, 1~			
			
Input	85 ... 264 V AC	85 ... 264 V AC	85 ... 264 V AC
W x H x D in mm	22.5 x 99 x 90	32 x 99 x 90	45 x 99 x 90
	24 V / 1.3 A	24 V / 2.5 A	24 V / 3.8 A
Type	QUINT4-PS/1AC/24DC/1.3/SC	QUINT4-PS/1AC/24DC/2.5/SC	QUINT4-PS/1AC/24DC/3.8/SC
Order Number	2904597	2904598	2904599

MINI POWER

Modular electronics housings are used as standard for special voltages in measurement and control technology.

 Web code: #1985



Input: 85 ... 264 V AC, 90 ... 350 V DC
 MINI-PS-100-240AC/5DC/3
 Order Number: 2938714



Input: 85 ... 264 V AC, 90 ... 350 V DC
 MINI-PS-100-240AC/2x15DC/1
 Order Number: 2938743

TRIO POWER power supplies

Robust with standard functionality

The TRIO POWER power supplies are characterized by standard functionality, high quality, and reliability. They are ideally suited for use in machine building. All of the functions and the space-saving design are tailored to the stringent demands in

this area. The power supply units, which feature an extremely robust electrical and mechanical design, ensure the reliable supply of all consumers, even under harsh ambient conditions.





 Web code: #0497







Your advantages

- ✓ Very cost-effective, thanks to time-saving, tool-free Push-in connection, and thanks to a slim design
- ✓ Reliable startup of high loads, thanks to the dynamic power reserve, with 150% of the nominal current for a maximum of five seconds
- ✓ Electrically robust, thanks to high electric strength
- ✓ Mechanically robust, thanks to high vibration and shock resistance

Product overview TRIO POWER power supplies

TRIO POWER with Push-in connection, 1~				
				
Input	85 ... 264 V AC, 99 ... 275 V DC	85 ... 264 V AC, 99 ... 275 V DC	85 ... 264 V AC, 99 ... 275 V DC	85 ... 264 V AC, 99 ... 275 V DC
W x H x D in mm	30 x 130 x 115	35 x 130 x 115	42 x 130 x 160	68 x 130 x 160
	24 V / 3 A / C2LPS*	24 V / 5 A	24 V / 10 A	24 V / 20 A
Type	TRIO-PS-2G/ 1AC/24DC/3/C2LPS	TRIO-PS-2G/ 1AC/24DC/5	TRIO-PS-2G/ 1AC/24DC/10	TRIO-PS-2G/ 1AC/24DC/20
Order Number	2903147	2903148	2903149	2903151
		24 V / 5 A / B+D	24 V / 10 A / B+D	
Type		TRIO-PS-2G/ 1AC/24DC/5/B+D	TRIO-PS-2G/ 1AC/24DC/10/B+D	
Order Number		2903144	2903145	
	12 V / 5 A / C2LPS*	12 V / 10 A		
Type	TRIO-PS-2G/ 1AC/12DC/5/C2LPS	TRIO-PS-2G/ 1AC/12DC/10		
Order Number	2903157	2903158		
			48 V / 5 A	48 V / 10 A
Type			TRIO-PS-2G/1AC/48DC/5	TRIO-PS-2G/1AC/48DC/10
Order Number			2903159	2903160

TRIO POWER with Push-in connection, 3~				
				
Input	3 x 320 ... 575 V AC, 2 x 360 ... 575 V AC	3 x 320 ... 575 V AC, 2 x 360 ... 575 V AC	3 x 320 ... 575 V AC, 2 x 360 ... 575 V AC	3 x 320 ... 575 V AC
W x H x D in mm	35 x 130 x 115	42 x 130 x 160	65 x 130 x 160	110 x 130 x 160
	24 V / 5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A
Type	TRIO-PS-2G/3AC/24DC/5	TRIO-PS-2G/3AC/24DC/10	TRIO-PS-2G/3AC/24DC/20	TRIO-PS-2G/3AC/24DC/40
Order Number	2903153	2903154	2903155	2903156

* NEC Class 2 output, certified in accordance with UL 1310 / Limited Power Source (LPS) in accordance with UL 60950-1

Robust with IP67 degree of protection

The new TRIO POWER power supplies with IP67 degree of protection are ideally suited for installation in the field. Thanks to its weather-resistant design, you can also use the device in harsh ambient conditions.

 Web code: #2177



Input: 100 V AC ... 240 V AC
TRIO-PS-IP67/1AC/24DC/20
Order Number: 1039830



Input: 3 x 400 V AC ... 500 V AC
TRIO-PS-IP67/3AC/24DC/20
Order Number: 1039829

TRIO CrossPowerSystem power supplies

The DIN rail with built-in power distribution

The new TRIO POWER power supply for the CrossPowerSystem power distribution board is ideally suited for use in machine building. All functions and the space-saving design are tailored to the stringent demands in this area.

Tool-free mounting and automatic contacting via convenient snap-on connections enable easy startup.

 **Web code: #2178**

The Push-in connection enables quick and easy connection of a 24 V DC control voltage.




Connection side of the power distribution board

Your advantages

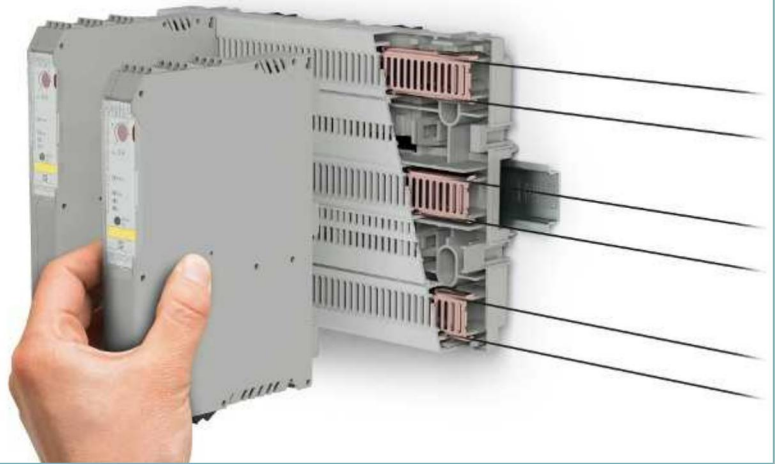
- ✓ Push-in connection enables the quick and easy snap-on connection of a 24 V DC control voltage
- ✓ Rapid startup: tool-free mounting and automatic contacting in just one step (CrossPowerSystem)
- ✓ Reliable startup of high loads with dynamic boost
- ✓ Electrically robust, thanks to high electric strength
- ✓ Maximum flexibility, thanks to the wide temperature range of -25°C ... +70°C and device startup at -40°C

Product overview TRIO CROSS POWER power supplies

TRIO CROSS POWER 3~		
		
Input	3 x 400 ... 500 V AC	
W x H x D in mm	36 x 160 x 159	
	24 V / 5 A	New
Type	EM-CPS-PS/3AC/24DC/5	
Order Number	1064922	

The perfect combination of two partners

Time is money – this is particularly true in the construction of machines and systems. Thanks to the combination of power distribution and switching devices, mounting on the power distribution board is now even faster. Furthermore, the integrated reverse pole protection prevents errors and ensures even simpler startup.



CONTACTRON with CrossPowerSystem

You can now reduce your wiring costs with the new TRIO CROSS POWER power supply. This can be used to supply power to all hybrid motor starters on the board at the same time.

Furthermore, to generate motor-relevant data for system monitoring, simply use the network-capable solution alongside the classic motor starters via IO-Link.



Power supplies

Device circuit breakers – Suitable for all applications

Increase the availability of your system by safeguarding the output voltage of your power supply. Protect your system effectively against overload and short-circuit currents at the same time.

The complete portfolio of electronic circuit breakers also provides intelligent protection. Take advantage of the easiest handling and simple product selection.

i Web code: #1646






i Web code: #1645








Your advantages






- ✓ The ideal device protection for any requirement, thanks to the comprehensive portfolio
- ✓ System statuses perfectly controlled, thanks to intelligent analysis and fault signaling
- ✓ Easy startup, thanks to tool-free connection technology and intuitive operation






Product overview Device circuit breakers

Multi-channel electronic circuit breakers					
 Web code: #1646					
	4-channel	8-channel	4-channel	4-channel	
	Nominal current	0.5 ... 10 A	0.5 ... 10 A	1 ... 4 A*	1 ... 10 A
	Type	CBM E4 24DC/0.5-10A NO-R	CBM E8 24DC/0.5-10A NO-R	CBMC E4 24DC/1-4A NO	CBMC E4 24DC/1-10A NO
	Order Number	2905743	2905744	2906031	2906032

Single-channel electronic circuit breakers					
 Web code: #1645					
	Single-channel	Single-channel	Single-channel	Single-channel	
	Nominal current	1 ... 3 A*	1 ... 8 A	2 A*	6 A
	Type	PTCB E1 24DC/1-3A NO	PTCB E1 24DC/1-8A NO	PTCB E1 24DC/2A NO	PTCB E1 24DC/6A NO
	Order Number	2909909	2908262	2909903	2909908

* NEC Class 2 outputs, in accordance with UL 1310

Single-channel electronic circuit breakers					
 Web code: #1645					
	Single-channel	Single-channel	Single-channel	Base element / Push-in connection	
	Nominal current	1 A	6 A	10 A	
	Type	CB E1 24DC/1A NO P	CB E1 24DC/6A NO P	CB E1 24DC/10A NO P	CB 1/6-2/4 PT-BE
	Order Number	2800901	2800905	2800907	2800929

Thermomagnetic device circuit breakers					
 Web code: #1647					
	F1	SFB	M1	Base element / screw connection	
	Nominal current	0.5 A	6 A	16 A	
	Type	CB TM1 0.5A F1 P	CB TM1 6A SFB P	CB TM1 16A M1 P	CB 1/10-1/10 UT-BE
	Order Number	2800857	2800841	2800856	2801305

UNO POWER power supplies

Compact with basic functionality

Thanks to their high power density, UNO POWER power supplies are the ideal solution, particularly in compact control cabinets. The efficient technology with low no-load losses and high efficiencies in a small housing covers loads from 25 W to 480 W.

This range of a total of 18 devices covers output voltages of 5 to 48 V DC and includes six designs. The UNO UPS uninterruptible power supply and the UNO DIODE redundancy module suitable for the power supply units are also available.




i Web code: #1512






Your advantages

- ✓ Maximum energy efficiency, thanks to high efficiency of up to 94% and thanks to extremely low idling losses of less than 0.3 W
- ✓ Particularly compact, thanks to high power density
- ✓ Outdoor installation possible with a wide temperature range of -25°C to +70°C

Product overview UNO POWER power supplies

UNO POWER 1~			
			
Input	85 ... 264 V AC	85 ... 264 V AC	85 ... 264 V AC
W x H x D in mm	22.5 x 90 x 84	35 x 90 x 84	55 x 90 x 84
	24 V / 30 W	24 V / 60 W	24 V / 100 W
Type	UNO-PS/1AC/24DC/30W	UNO-PS/1AC/24DC/60W	UNO-PS/1AC/24DC/100W
Order Number	2902991	2902992	2902993
			24 V / 100 W / H New
Type			UNO-PS/1AC/24DC/100W/H
Order Number			1088851
			24 V / 90 W / C2LPS*
Type			UNO-PS/1AC/24DC/90W/C2LPS
Order Number			2902994
		48 V / 60 W	48 V / 100 W
Type		UNO-PS/1AC/48DC/60W	UNO-PS/1AC/48DC/100W
Order Number		2902995	2902996
	15 V / 30 W	15 V / 55 W	15 V / 100 W
Type	UNO-PS/1AC/15DC/30W	UNO-PS/1AC/15DC/55W	UNO-PS/1AC/15DC/100W
Order Number	2903000	2903001	2903002
	12 V / 30 W	12 V / 55 W	12 V / 100 W
Type	UNO-PS/1AC/12DC/30W	UNO-PS/1AC/12DC/55W	UNO-PS/1AC/12DC/100W
Order Number	2902998	2902999	2902997
		12 V / 55 W / H New	
Type		UNO-PS/1AC/12DC/55W/H	
Order Number		1088850	
	5 V / 25 W	5 V / 40 W	
Type	UNO-PS/1AC/5DC/25W	UNO-PS/1AC/5DC/40W	
Order Number	2904374	2904375	

UNO POWER 1~			UNO POWER 2~
			
Input	85 ... 264 V AC	85 ... 264 V AC	264 ... 575 V AC
W x H x D in mm	37 x 130 x 125	45 x 130 x 125	55 x 90 x 84
	24 V / 150 W	24 V / 240 W	24 V / 90 W / C2LPS*
Type	UNO-PS/1AC/24DC/150W	UNO-PS/1AC/24DC/240W	UNO-PS/2AC/24DC/90W/C2LPS
Order Number	2904376	2904372	2904371
			24 V / 480 W New
Type			UNO2-PS/1AC/24DC/480W
Order Number			2910105

* NEC Class 2 output, certified in accordance with UL 1310 / Limited Power Source (LPS) in accordance with UL 60950-1

STEP POWER power supplies

Ideal for distribution boards

The STEP POWER power supplies have been specifically developed for building automation applications. They are ideally suited for distribution boards and shallow control panels. Thanks to their low no-load losses and high degree of efficiency, they achieve

maximum power efficiency in their class. The STEP UPS uninterruptible power supply and the STEP DIODE redundancy module suitable for the power supply units are also available.




i Web code: #1930







Your advantages

- ✓ Flexible assembly: snap onto the DIN rail or screw on a level surface
- ✓ Reliable power supply, thanks to a high MTBF of >500,000 h at +40°C, and U/I characteristic curve for the supply of capacitive loads
- ✓ Outdoor installation possible, thanks to the wide temperature range of -25°C to +70°C
- ✓ Save energy, thanks to maximum energy efficiency and incredibly low no-load losses

Product overview STEP POWER power supplies

	STEP POWER 1~			
		 Shallow design		
Input	85 ... 264 V AC, 95 ... 250 V DC	85 ... 264 V AC, 95 ... 250 V DC	85 ... 264 V AC, 95 ... 250 V DC	85 ... 264 V AC, 95 ... 250 V DC
W x H x D in mm	18 x 90 x 61	36 x 90 x 43	36 x 90 x 61	54 x 90 x 61
	24 V / 0.5 A	24 V / 0.75 A FL	24 V / 0.75 A	24 V / 1.75 A
Type	STEP-PS/1AC/24DC/0.5	STEP-PS/1AC/24DC/0.75/FL	STEP-PS/1AC/24DC/0.75	STEP-PS/1AC/24DC/1.75
Order Number	2868596	2868622	2868635	2868648
	12 V / 1 A	12 V / 1.5 A FL	12 V / 1.5 A	12 V / 3 A
Type	STEP-PS/1AC/12DC/1	STEP-PS/1AC/12DC/1.5/FL	STEP-PS/1AC/12DC/1.5	STEP-PS/1AC/12DC/3
Order Number	2868538	2868554	2868567	2868570
	5 V / 2 A			
Type	STEP-PS/1AC/5DC/2			
Order Number	2320513			

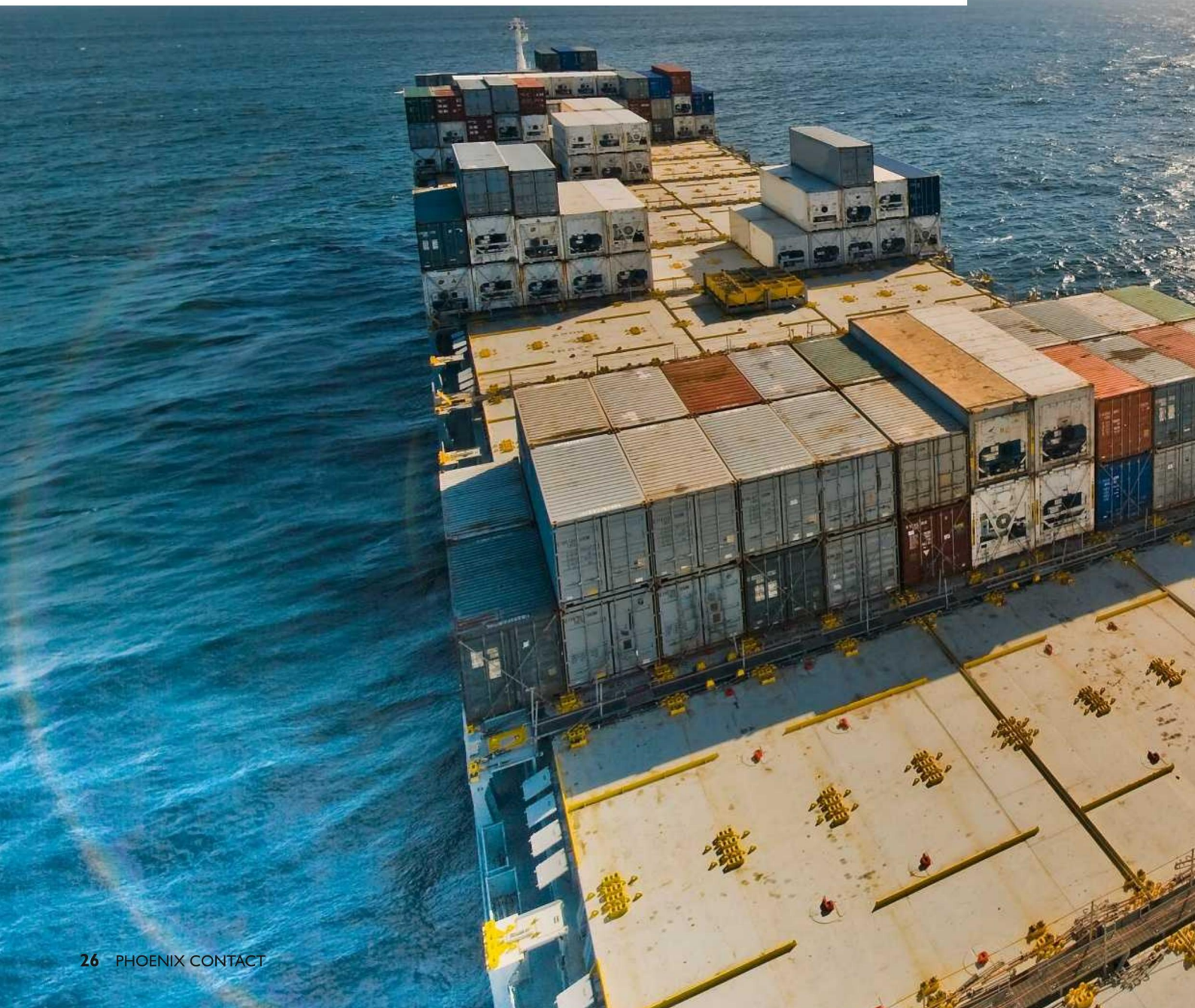
	STEP POWER 1~		STEP for 48 V AC	STEP for 277 V AC
				
Input	85 ... 264 V AC, 95 ... 250 V DC	85 ... 264 V AC, 95 ... 250 V DC	43 ... 52 V AC, 60 ... 80 V DC	85 ... 305 V AC, 95 ... 250 V DC
W x H x D in mm	72 x 90 x 61	90 x 90 x 61	18 x 90 x 61	90 x 90 x 61
	24 V / 2.5 A	24 V / 4.2 A	48 V AC / 24 V DC / 0.5 A	277 V AC / 24 V DC / 3.5 A
Type	STEP-PS/1AC/24DC/2.5	STEP-PS/1AC/24DC/4.2	STEP-PS/48AC/24DC/0.5	STEP-PS/277AC/24DC/3.5
Order Number	2868651	2868664	2868716	2904945
	15 V / 4 A	24 V / 100 W / C2LPS*		
Type	STEP-PS/1AC/15DC/4	STEP-PS/1AC/24DC/3.8/C2LPS		
Order Number	2868619	2868677		
	12 V / 5 A	48 V / 2 A		
Type	STEP-PS/1AC/12DC/5	STEP-PS/1AC/48DC/2		
Order Number	2868583	2868680		
	5 V / 6.5 A			
Type	STEP-PS/1AC/5DC/6.5			
Order Number	2868541			

* NEC Class 2 output, certified in accordance with UL 1310 / Limited Power Source (LPS) in accordance with UL 60950-1

DC/DC converters For a regulated DC voltage

Avoid disturbances in your application by using DC/DC converters. The load is always supplied with a regulated DC voltage, even with long cable lengths. Phoenix Contact provides:

- DC/DC converters with SFB Technology and for extreme demands
- DC/DC converters for control technology
- DC/DC converters for photovoltaic applications





PHOENIX CONTACT 27



RSP Supply - 1-888-532-2706 - <https://www.RSPSupply.com>
See the product details here

QUINT DC/DC converters

Adapt voltages

QUINT DC/DC converters change the voltage level and regenerate the voltage at the end of long cables. Furthermore, the electrical isolation ensures the establishment of independent supply systems. The SFB Technology, preventive function

monitoring, long service life, and IECEx approval maximize the availability of your application. For the first time, signaling thresholds and characteristic curves can be individually adapted. Furthermore, you can

choose the connection technology for the new generation.

i Web code: #0152








SFB
TECHNOLOGY

Your advantages

- ✓ Most powerful output side: easy system expansion, reliable startup of high loads, and miniature circuit breaker tripping
- ✓ Startup of high loads, thanks to dynamic boost of up to 200% for 5 s
- ✓ Most comprehensive signaling: preventive function monitoring reports critical operating states before errors occur
- ✓ Free selection between Push-in and screw connection
- ✓ Available preconfigured: from a batch quantity of just 1

Product overview QUINT DC/DC converters

QUINT DC/DC converters with NFC Technology, Push-in connection		SFB TECHNOLOGY	
			
Input	18 ... 32 V DC	18 ... 32 V DC	30 ... 60 V DC
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	36 x 130 x 125
	24 V / 24 V / 5 A New	24 V / 24 V / 10 A New	48 V / 24 V / 5 A New
Type	QUINT4-PS/24DC/24DC/5	QUINT4-PS/24DC/24DC/10	QUINT4-PS/48C/24DC/5
Order Number	2910119	2910120	2910125
	24 V / 12 V / 8 A New		
Type	QUINT4-PS/24DC/12DC/8		
Order Number	2910122		

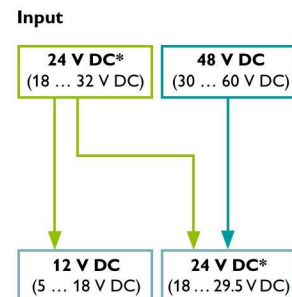
QUINT DC/DC converters with NFC Technology, screw connection		SFB TECHNOLOGY	
			
Input	18 ... 32 V DC	18 ... 32 V DC	
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	
	24 V / 24 V / 5 A New	24 V / 24 V / 10 A New	
Type	QUINT4-PS/24DC/24DC/5	QUINT4-PS/24DC/24DC/10	
Order Number	1046800	1046803	

QUINT POWER voltage levels

The fourth generation of the DC/DC converters of the QUINT range are suitable for powers with currents up to 10 A.






Thanks to the large input voltage range, all common input and output voltages in the performance classes of up to 240 W are covered.







The IECEx approvals enable use in all industries, including the process industry.







* During operation from 14 ... 32 V DC

Product overview QUINT DC/DC converters

QUINT DC/DC converters				
				
Input	9 ... 18 V DC	18 ... 32 V DC	30 ... 60 V DC	18 ... 32 V DC
W x H x D in mm	32 x 130 x 125	48 x 130 x 125	48 x 130 x 125	82 x 130 x 125
	12 V/24 V/5	24 V/48 V/5	48 V/48 V/5	24 V/24 V/20
Type	QUINT-PS/12DC/24DC/5	QUINT-PS/24DC/48DC/5	QUINT-PS/48DC/48DC/5	QUINT-PS/24DC/24DC/20
Order Number	2320131	2320128	2905008	2320102
	12 V/12 V/8			
Type	QUINT-PS/12DC/12DC/8			
Order Number	2905007			

QUINT DC/DC converters			... with protective coating	
				
Input	42 ... 96 V DC	67.2 ... 154 V DC	42 ... 96 V DC	67.2 ... 154 V DC
W x H x D in mm	48 x 130 x 125	48 x 130 x 125	48 x 130 x 125	48 x 130 x 125
	60 ... 72 V/24 V/10	96 ... 110 V/24 V/10	60 ... 72 V/24 V/10/CO	96 ... 110 V/24 V/10/CO
Type	QUINT-PS/ 60-72 DC/24DC/10	QUINT-PS/ 69-110 DC/24DC/10	QUINT-PS/ 60-72 DC/24DC/10/CO	QUINT-PS/ 69-110 DC/24DC/10/CO
Order Number	2905009	29050010	2905011	29050012

QUINT DC/DC converters, with protective coating				
				
Input	18 ... 32 V DC	18 ... 32 V DC	18 ... 32 V DC	
W x H x D in mm	32 x 130 x 125	48 x 130 x 125	82 x 130 x 125	
	24 V/24 V/5/CO	24 V/24 V/10/CO	24 V/24 V/20/CO	
Type	QUINT-PS/48DC/48DC/5	QUINT-PS/48DC/48DC/5	QUINT-PS/48DC/48DC/5	
Order Number	2320542	2320555	2320568	

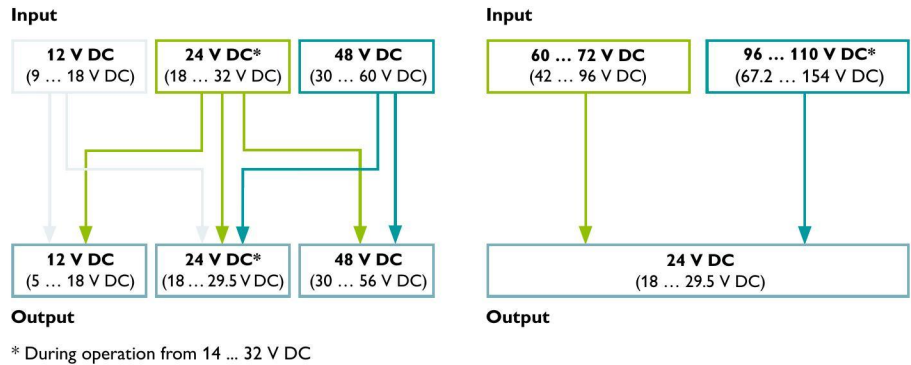
Product overview MINI DC/DC converters

QUINT POWER voltage levels

The third generation of the QUINT DC/DC converters is suitable for high powers with currents up to 20 A.

Thanks to the large input voltage range, all common input and output voltages in the performance classes of up to 480 W are covered. The IECEx approvals for certain devices enable use in all industries, including the process industry.

QUINT DC/DC converters with a wide-range input are ideally suited, for example, for railway applications and in energy generation.



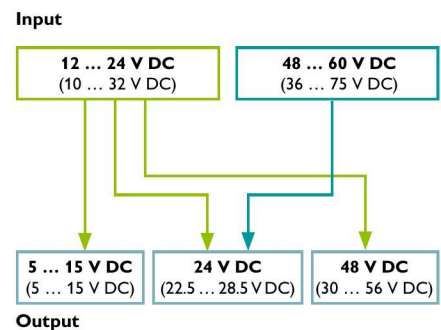
	MINI DC/DC converters			Accessories*
Input	10 ... 32 V DC	10 ... 32 V DC	36 ... 75 V DC / 10 ... 32 V DC	Single-phase, 10 ... 42 V AC
W x H x D in mm	22.5 x 99 x 107	22.5 x 99 x 107	22.5 x 99 x 107	22.5 x 99 x 107
	12 ... 24 V / 24 V / 1 A	12 ... 24 V / 5 ... 15 V / 2 A	48 ... 60 V / 24 V / 1 A	10 ... 42 V AC / 15 ... 60 V DC / 3 A*
Type	MINI-PS-12-24DC/24DC/1	MINI-PS-12-24DC/5-15DC/2	MINI-PS-48-60DC/24DC/1	MINI-PS-10-42AC/15-60DC/3
Order Number	2866284	2320018	2866271	2320199
	12 ... 24 V / 48 V / 0.7 A		12 ... 24 V / 48 V / 0.7 A	
Type	MINI-PS-12-24DC/48DC/0.7		MINI-PS-12-24DC/48DC/0.7	
Order Number	2320021		2320021	

* AC power terminal for connection upstream of MINI DC/DC converters; the AC voltage of a transformer is rectified and filtered.

MINI POWER voltage levels

The DC/DC converters of the MINI POWER range are suitable for low powers. They are available for voltages from 10 to 75 V DC. They supply currents between 0.7 and 2 A. An LED and an active switching output monitor the output voltage.

MINI DC/DC converters are particularly suitable for measurement and control technology.



UNO DC/DC converters

For direct supply

Supply your control cabinet directly from the photovoltaic system with the DC/DC converters of the UNO POWER range. The Combiner Box is supplied directly from the PV panel, thanks to the direct connection to string voltages of up to 1000 V DC. You thus

save additional installation costs and increase system efficiency. In a further expansion stage, the signal line can be replaced by a wireless connection.


i Web code: #0152

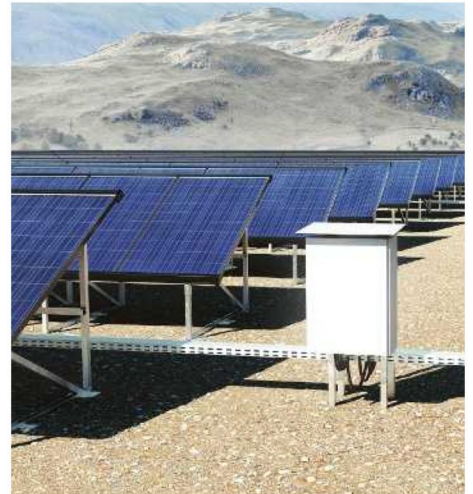


Your advantages

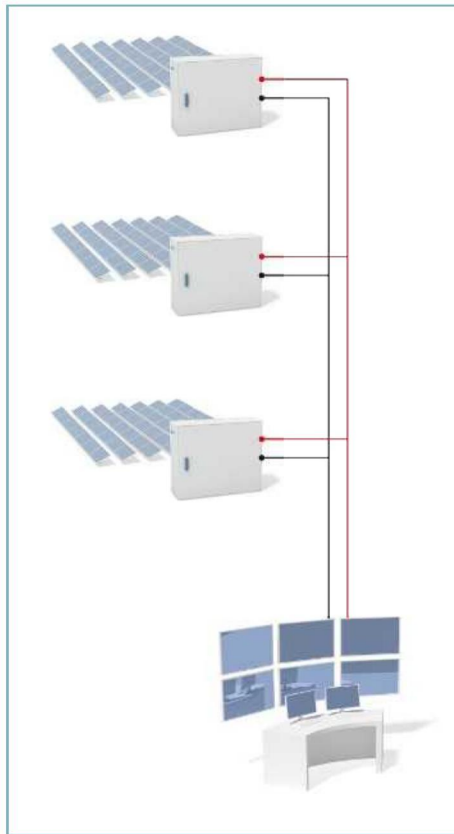
- ✓ Wide input voltage range of 300 V DC ... 1000 V DC
- ✓ Direct field installation possible, an AC connection is no longer necessary
- ✓ Simplified approval of the overall system, thanks to UL 1741 certification for the DC/DC converter
- ✓ Low space requirement in the control box, thanks to compact design and high degree of efficiency
- ✓ Simplified startup, thanks to LED function monitoring

Product overview UNO DC/DC converters

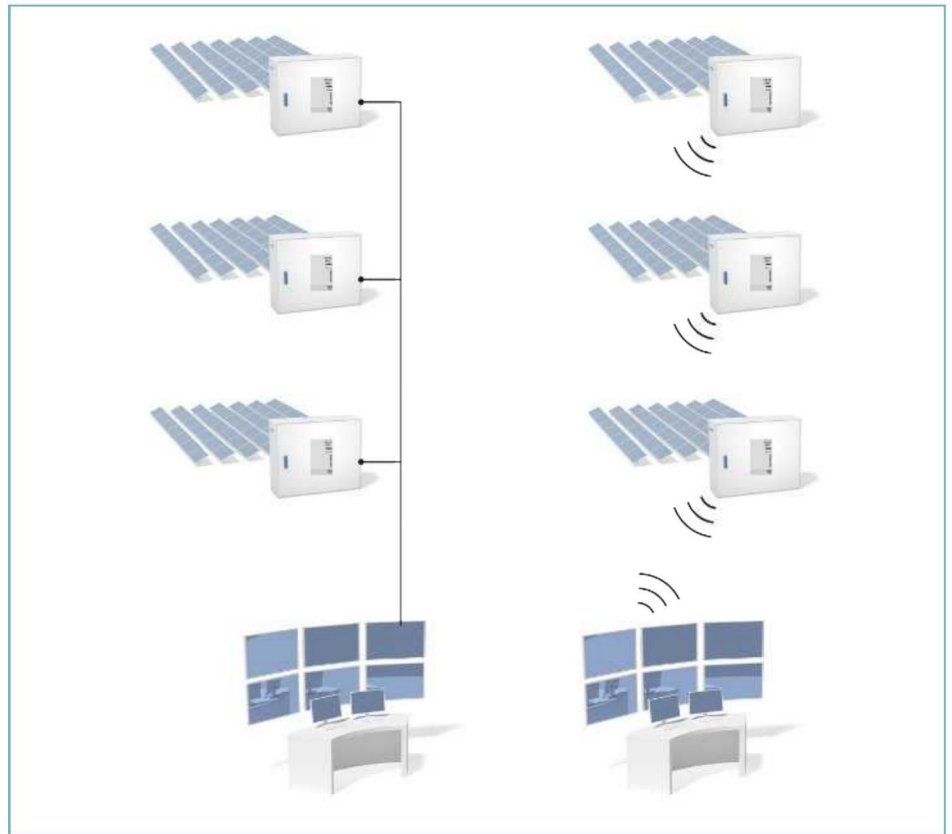
UNO DC/DC converters	
	
Input	350 ... 900 V DC
W x H x D in mm	55 x 90 x 84
	350 ... 900 DC / 24 DC / 60 W
Type	UNO-PS/350-900DC/24DC/60W
Order Number	2906300



Connection options for Combiner Boxes in photovoltaic systems



In the application shown, the Combiner Box is connected to a supply line (red, e.g. 230 V AC) and a signal line (black). Laying the lines involves significant installation costs.



UNO POWER devices allow direct connection to string voltages of up to 1000 V DC. This means that the Combiner Box is supplied directly from the photovoltaic panel, and additional installation costs are not incurred.

In a further expansion stage, the signal line can be replaced by a wireless connection.

Redundancy modules

Redundant power supply solutions are necessary in applications with the highest demands on operational safety. They ensure that the failure of one power supply unit does not result in system downtime.

A redundant system is the result of the parallel connection of two power supply units that are decoupled from one another. This decoupling via an active redundancy module or a simple diode ensures the high availability and productivity of your system.





Redundancy modules

QUINT SINGLE-ORING active redundancy modules

The QUINT S-ORING ensures superior system availability and maximum operational safety. Supply networks are decoupled and lines are disconnected continuously while they are routed to the load. In combination with the fourth generation of

the QUINT POWER power supplies, the input voltage and decoupling section are monitored continuously. The Plus version and the VP version with protective circuit and overvoltage protection protect sensitive loads.

Overvoltages are limited to <28.8 V or <30 V respectively.

 **Web code: #1513**



Your advantages

- ✓ Consistent redundancy through to the consumer
- ✓ Constant monitoring of input voltage and decoupling path
- ✓ Save energy by decoupling with MOSFET
- ✓ Protection against overvoltages at the output
- ✓ Protective coating with ATEX and IECEx approval for extreme environmental conditions

QUINT ORING active redundancy modules with ACB Technology

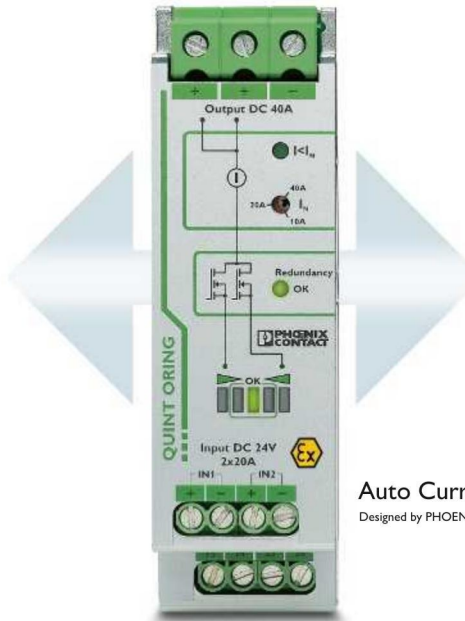
The ACB Technology (Auto Current Balancing) of the QUINT ORING modules extends the service life of redundantly operated power supplies by evenly utilizing the power supply units.

The three QUINT ORING modules feature preventive monitoring. The input voltage, output current, and decoupling path are monitored continuously, such that a loss of redundancy can be reported early on. Two positive output terminals ensure consistent redundancy through to the consumer. The installed MOSFETS reduce the power dissipation to the extent that energy savings of around 70% are achieved. Overvoltage protection limits surge voltages to 32 V.

As a result of asymmetries, the load is often supplied by just one power supply unit, while the other power supply unit runs in no-load operation. This results in a thermal load on the working power supply unit and therefore rapid aging.

The ACB Technology of the QUINT ORING modules ensures the symmetrical loading of the power supplies. The input voltage difference between the power supplies is continuously determined and automatically compensated up to a deviation of 300 mV. The load current is therefore distributed fully symmetrically. Thanks to the use of modern MOSFET technology, the

**50%
Power**



**50%
Power**

Auto Current Balancing Technology[®]
Designed by PHOENIX CONTACT

resulting thermal load is reduced by up to 70%. This lower level of power dissipation ensures that all the control cabinet components stay cooler and the service life of devices in the redundant system is doubled.

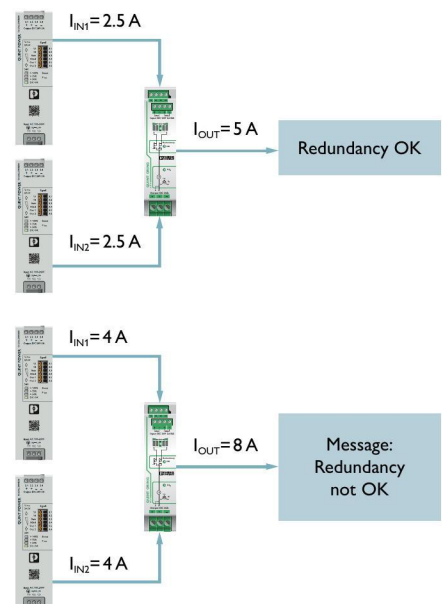
Detect and avoid critical states

The QUINT ORING modules monitor the load current and generate a warning as soon as a set value is exceeded. If the user connects additional loads to a redundant power supply as part of a system extension, this can result in the loss of redundancy. This is illustrated in the example scenario described below.

Two redundant power supplies each with 5 A nominal current supply a controller with the 5 A required.

If an additional load of 3 A is connected, this can be supplied by the power reserve of the power supply. The required current of 8 A is provided without a voltage dip.

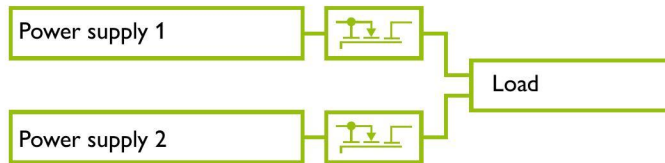
However there is no longer any redundancy: if one of the two power supplies fails, the second device is no longer able to provide 8 A. The LED immediately warns the system operator that there is no longer any redundancy.



Product overview Active redundancy modules

Decoupling and monitoring

Active, single-channel redundancy module for the separate structuring of a redundant system. In combination with the new QUINT POWER power supplies, your system is monitored continuously.



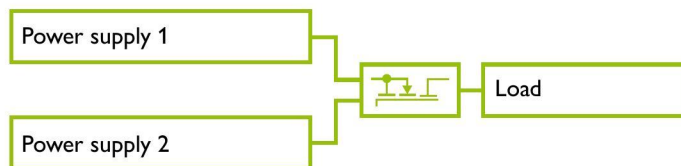
QUINT S-ORING			
Input	12 ... 24 V DC	12 ... 24 V DC	12 ... 24 V DC
W x H x D in mm	32 x 130 x 125	32 x 130 x 125	32 x 130 x 125
	12 ... 24 V / 1 x 40 A	12 ... 24 V / 1 x 40 A / VP*	12 ... 24 V / 1 x 40 A / +**
Type	QUINT4-S-ORING/12-24DC/1x40	QUINT4-S-ORING/12-24DC/1x40/VP	QUINT4-S-ORING/12-24DC/1x40/+
Order Number	2907752	1043418	2907753

* Overvoltages arising are limited to 30 V

** Overvoltages arising are limited to 28.8 V

Decoupling, monitoring, and control

Active redundancy module for decoupling power supplies. With monitoring of the input voltage, wiring, and load current.

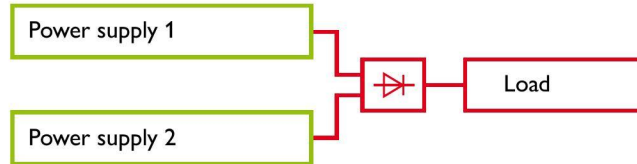






QUINT ORING			Auto Current Balancing Technology ¹² Designed by PHOENIX CONTACT
Input	18 ... 28 V DC	18 ... 28 V DC	18 ... 28 V DC
W x H x D in mm	32 x 130 x 125	38 x 130 x 125	66 x 130 x 125
	24 V / 2 x 10 A / 1 x 20 A	24 V / 2 x 20 A / 1 x 40 A	24 V / 2 x 40 A / 1 x 80 A
Type	QUINT-ORING/24DC/2x10/1x20	QUINT-ORING/24DC/2x20/1x40	QUINT-ORING/24DC/2x40/1x80
Order Number	2320173	2320186	2902879





Product overview Diodes



Decoupling via diodes

Simple decoupling via diodes.



QUINT DIODE		
	 	 
Input	10 ... 30 V DC	30 ... 56 V DC
W x H x D in mm	50 x 130 x 125	50 x 130 x 125
	12 ... 24 V/2 x 20 A/1 x 40	48 V/2 x 20 A/1 x 40
Type	QUINT4-DIODE/12-24DC/2x20/1x40	QUINT4-DIODE/48DC/2x20/1x40
Order Number	2907719	2907720

	TRIO DIODE		UNO DIODE	STEP DIODE
				
Input	10 ... 30 V DC	10 ... 30 V DC	4.5 ... 30 V DC	4.5 ... 30 V DC
W x H x D in mm	35 x 130 x 115	41 x 130 x 115	22.5 x 90 x 84	18 x 90 x 61
	12 ... 24 V/2 x 10 A/1 x 20	12 ... 24 V/2 x 20 A/1 x 40	5 ... 24 V/2 x 10 A/1 x 20 A	5 ... 24 V/2 x 5 A/1 x 10 A
Type	TRIO2-DIODE/12-24DC/2x10/1x20	TRIO2-DIODE/12-24DC/2x20/1x40	UNO-DIODE/5-24DC/2x10/1x20	STEP-DIODE/5-24DC/2x5/1x10
Order Number	2907380	2907379	2905489	2868606

 Monitored
 Not monitored

Uninterruptible power supplies

Mains interruptions can have serious consequences. Do not take any risks. You can rely on our uninterruptible power supplies.

We provide the following solutions for optimum system availability, even in the event of a mains failure:

- DC and AC UPS modules with communication interfaces
- UPS modules with integrated power supply or energy storage system
- Comprehensive selection of energy storage systems



Uninterruptible power supplies

IQ Technology for an intelligent UPS system

Superior system availability, thanks to IQ Technology:

- You know the state of charge and remaining runtime of your energy storage system
- You will be warned of pending failures at an early stage, making it possible to plan servicing
- You can maximize the service life of the energy storage system
- All relevant information is available to you on your IPC and superordinate controllers

 Web code: #0154

The first intelligent QUINT DC UPS for integration into established industrial networks

Interfaces

The QUINT DC UPS can be easily integrated into the following existing industrial networks via various interfaces:

- PROFINET
- EtherNet/IP™
- EtherCAT®

All network technologies, devices with USB interface, and devices without an interface are available in all four performance classes (5 A, 10 A, 20 A, and 40 A).

2-port switch

Our QUINT DC UPS has a 2-port switch. The device can therefore be integrated flexibly into existing industrial networks.

Extended load management

The extended load management system consists of the following functions:

- Energy monitoring – Monitoring of input and output voltages and the associated currents
- PC shutdown function – Reliable shutdown of your IPC in the event of a mains failure without data loss, and automatic restart of the IPC when the power returns
- Cold-start function – UPS startup even without mains power

Function blocks

So that the QUINT DC UPS can be started up quickly, we include the corresponding function blocks for the following engineering environments:

- PLCnext
- TIA Portal
- Studio 5000
- TwinCAT



Device descriptions

If the appropriate function block for your application is not available, you can create your own custom function blocks using our device descriptions.



Intelligent charging

Adapts the charging current and thereby ensures the fastest possible recharging and availability.

Intelligent battery management SOC (State of Charge)

Describes the current state of charge and the remaining energy storage life.

Intelligent battery management SOH (State of Health)

Reports on the life remaining for the energy storage device, and warns of pending failures in good time.

Intelligent battery control

Detects the connected battery type and maximizes its remaining service life via an optimally adapted charging characteristic.

IQ Technology
Designed by PHOENIX CONTACT

PROFINET
EtherNet/IP

EtherCAT

Interfaces

Easy integration into industrial networks:

- PROFINET
- EtherNet/IP™
- EtherCAT®
- USB

Uninterruptible power supplies

Intelligence in any combination

Create your own individual QUINT DC UPS solution – tailored to your application.

1. Choose your power supply
2. Choose your UPS module
3. Choose your energy storage system

Intelligence for superior system availability

Task

Supply an industrial PC consistently with 24 V DC.

Previous solution

One UPS with 3.4 Ah buffers 24 V DC / 5 A for 20 minutes under optimum conditions.

Can the energy storage system actually bridge this time? The state of charge, performance, and remaining runtime of the energy storage system are unknown.

Solution with QUINT UPS

The intelligent QUINT UPS determines all relevant energy storage system states. This ensures the crucial transparency required to guarantee the stability of the supply and optimum use of the energy storage system at all times.

The intelligent battery management detects the current state of charge of the connected energy storage and uses this to calculate the remaining runtime available.

The QUINT UPS indicates whether the remaining buffer time is actually 20 minutes. As soon as an adjustable threshold value is reached, a warning message is sent via signal contact, via software, or directly to superordinate controllers.



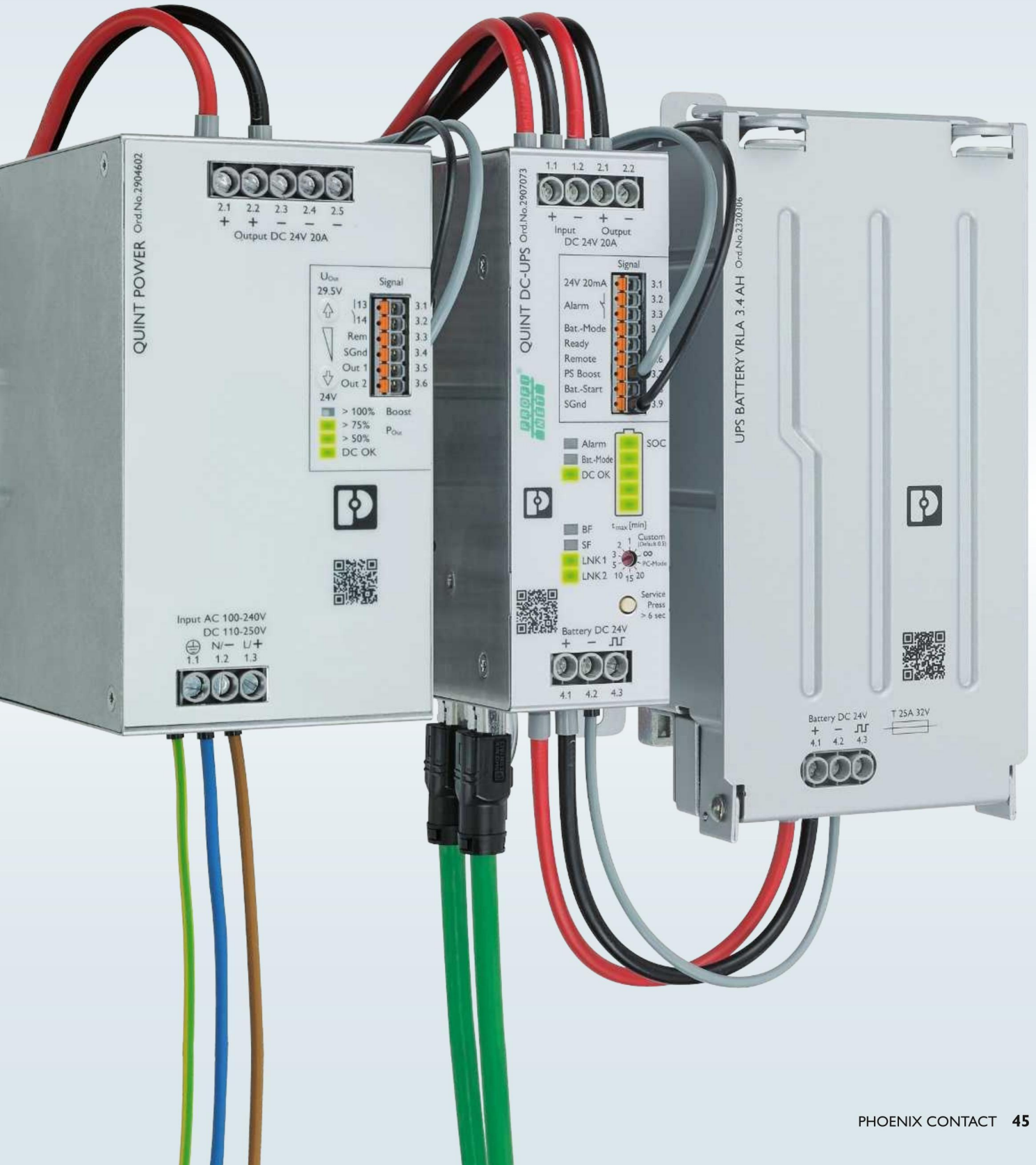
Power supply



UPS module



Energy storage system



Uninterruptible power supplies

QUINT UPS for DC and AC applications

The QUINT UPS for 24 V DC with output currents of 5 to 40 A is suitable for mains interruptions that last for up to several hours.

The QUINT UPS for AC applications delivers a pure sine curve at the output. The sine wave generated in battery operation is synchronized to the grid previously used for supply. Only one energy storage system is required to safeguard your system.

IQ Technology
Designed by PHOENIX CONTACT

i Web code: #1992

Substantial power reserve

- For mains and battery operation
- Power Boost static power reserve
- SFB Technology (Selective Fuse Breaking – for details on SFB Technology, refer to page 10)

Adaptive current management

- For fast recharging and high energy storage system availability



Easy integration into industrial networks thanks to interfaces

- PROFINET
- EtherNet/IP™
- EtherCAT®
- USB

Comprehensive signaling and configuration

- Floating relay contacts
- Signal contacts

Convection cooling

- Fan-free heat dissipation

Startup from the energy storage system

- Even without power supply input

Can be switched in parallel

- For redundancy and increased performance

i Web code: #1988

Optimum use of the buffer time and preventive monitoring of the energy storage system

- Intelligent battery management

Seamless transition, thanks to online topology

- Classification in accordance with EN 62040-3: VFI-SS-111

USB interface

- For connection to industrial PCs and controllers



Uninterruptible power supplies

Energy storage systems for QUINT UPS

With the energy storage systems for our modular system of uninterruptible power supplies, you will always have the optimum solution for your system.

- UPS-CAP for maximum service life
- UPS-BAT/LI-ION for a long service life
- UPS-BAT/VRLA-WTR for use in extreme ambient temperatures
- UPS-BAT/VRLA for maximum buffer times



Your advantages

- ✓ Fast installation, thanks to automatic detection of the energy storage and tool-free replacement during operation
- ✓ Maximum availability, thanks to constant communication with the QUINT UPS for continuous monitoring and intelligent management
- ✓ Extremely long service life, thanks to the optimum charging characteristic, depending on the technology and ambient conditions
- ✓ Immediate availability: all energy storage systems leave our warehouse fully charged

UPS-BAT/VRLA... (Valve Regulated Lead Acid)

- Maximum buffer times
- Lead AGM technology (Absorbent Glass Mat)

Type	Typical buffer time	Temperature	Service life at +20°C	Service life at +50°C	Charging cycles at +20°C	Weight (standardized)
UPS-CAP...	<5 min	-40°C ... +60°C	>20 years	5 years	>500,000	0.4 kg
UPS-BAT/LI-ION...	>40 min	-20°C ... +58°C	15 years	2 years	7,000	0.45 kg
UPS-BAT/VRLA-WTR...	>5 h	-25°C ... +60°C	12 years	1.5 years	300	1.3 kg
UPS-BAT/VRLA...	>8 h	0°C ... +40°C	6 ... 9 years	1 year	250	1 kg

 Particularly good product characteristics



UPS-BAT/VRLA-WTR...
(Valve Regulated Lead Acid /
Wide Temperature Range)

- Maximum buffer times at extreme temperatures
- Pure lead AGM technology (Absorbent Glass Mat)



UPS-BAT/LI-ION...

- Long service life with long buffer times
- Lithium iron phosphate technology

UPS-CAP (capacitor)

- Maximum service life
- Maintenance-free double-layer capacitors

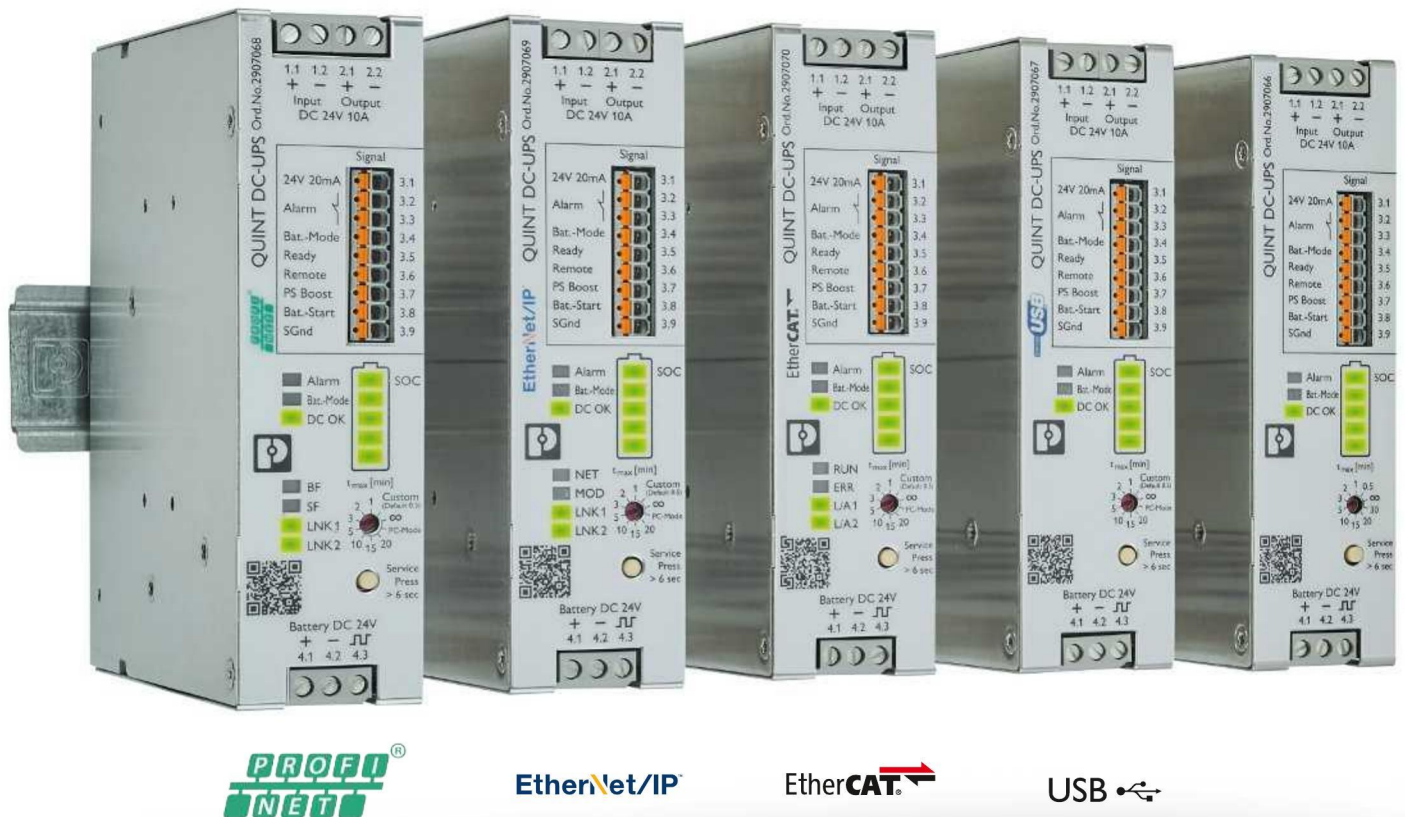
Uninterruptible power supplies

QUINT DC UPS with IQ Technology – For industrial networks

The first intelligent UPS with integrated Ethernet interface for integration into established industrial networks. The UPS modules for 24 V DC with output currents ranging from 5 to 40 A allow you to create a custom solution combining a power

supply, UPS module, and energy storage. With its IQ Technology and the industry's most powerful battery charger, the battery management system (BMS) ensures superior system availability.





i Web code: #1992




Your advantages

- ✓ Evaluation of the state of health (SOH) and state of charge (SOC), thanks to the intelligent battery management system (BMS)
- ✓ Automatic recognition of the battery capacities and technologies (VRLA, WTR, LiFePO4)
- ✓ Monitoring of output current and voltage, as well as manual connection and disconnection of the system
- ✓ SFB Technology selectively trips standard miniature circuit breakers; consumers connected in parallel continue working

Product overview QUINT DC UPS uninterruptible power supplies

QUINT DC UPS		IQ Technology [®] Designed by PHOENIX CONTACT		
				
W x H x D in mm	35 x 130 x 125	35 x 130 x 125	40 x 130 x 125	47 x 130 x 125
	24 V/5 A/ PN	24 V/10 A/ PN	24 V/20 A/ PN	24 V/40 A/ PN
Type PROFINET	QUINT4-UPS 24DC/24DC/5/PN	QUINT4-UPS 24DC/24DC/10/PN	QUINT4-UPS 24DC/24DC/20/PN	QUINT4-UPS 24DC/24DC/40/PN
Order Number	2906993	2907068	2907073	2907079
	24 V/5 A/EIP	24 V/10 A/EIP	24 V/20 A/EIP	24 V/40 A/EIP
Type EtherNet/IP™	QUINT4-UPS 24DC/24DC/5/EIP	QUINT4-UPS 24DC/24DC/10/EIP	QUINT4-UPS 24DC/24DC/20/EIP	QUINT4-UPS 24DC/24DC/40/EIP
Order Number	2906994	2907069	2907074	2907080
	24 V/5 A/EC	24 V/10 A/EC	24 V/20 A/EC	24 V/40 A/EC
Type EtherCAT®	QUINT4-UPS 24DC/24DC/5/EC	QUINT4-UPS 24DC/24DC/10/EC	QUINT4-UPS 24DC/24DC/20/EC	QUINT4-UPS 24DC/24DC/40/EC
Order Number	2906996	2907070	2907076	2907081
	24 V/5 A/USB	24 V/10 A/USB	24 V/20 A/USB	24 V/40 A/USB
Type USB	QUINT4-UPS 24DC/24DC/5/USB	QUINT4-UPS 24DC/24DC/10/USB	QUINT4-UPS 24DC/24DC/20/USB	QUINT4-UPS 24DC/24DC/40/USB
Order Number	2906991	2907067	2907072	2907078
	24 V/5 A	24 V/10 A	24 V/20 A	24 V/40 A
Type without interface	QUINT4-UPS/24DC/24DC/5	QUINT4-UPS/24DC/24DC/10	QUINT4-UPS/24DC/24DC/20	QUINT4-UPS/24DC/24DC/40
Order Number	2906990	2907066	2907071	2907077

QUINT DC UPS with dual output		IQ Technology [®] Designed by PHOENIX CONTACT	
			
W x H x D in mm	35 x 130 x 125		
	12 V/5 A, 24 V/10 A		
Type	QUINT-UPS/24DC/12DC/5/24DC/10		
Order Number	2320461		

Selection guide for QUINT DC UPS and energy storage system

Select your ideal combination of QUINT DC UPS and energy storage system here.



Power supply



UPS module



Energy storage system






	UPS-CAP		UPS-BAT/LI-ION		UPS-BAT/VRLA-WTR	
W x H x D in mm	126 x 130 x 126	150 x 130 x 126	135 x 202 x 110	264 x 224 x 197	172 x 177 x 178	358 x 174 x 169
	10 A / 10 kJ	20 A / 20 kJ	120 Wh	924 Wh	13 Ah	26 Ah
Type	UPS-CAP/ 24DC/10A/10KJ	UPS-CAP/ 24DC/20A/20KJ	UPS-BAT/LI-ION/ 24DC/120WH	UPS-BAT/LI-ION/ 24DC/924WH	UPS-BAT/ VRLA-WTR/ 24DC/13AH	UPS-BAT/ VRLA-WTR/ 24DC/26AH
Order Number	2320377	2320380	2320351	2908232	2320416	2320429

Buffer times for your QUINT DC UPS with the following energy storage systems: CAP, LI-ION, and VRLA-WTR

Select your energy storage system for 24 V DC applications here.
Example: 20 A is to be buffered for 6 minutes.

QUINT-UPS/24DC/24DC/20A and UPS-BAT/LI-ION/24DC/120WH

Load current	Buffer time																								
	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																									

QUINT DC UPS 1~					IQ Technology [®] Designed by PHOENIX CONTACT	... with dual output
						
W x H x D in mm	35 x 130 x 125	35 x 130 x 125	40 x 130 x 125	47 x 130 x 125	35 x 130 x 125	
Type	24 V / 5 A QUINT4-UPS 24DC/24DC/5...	24 V / 10 A QUINT4-UPS 24DC/24DC/10...	24 V / 20 A QUINT4-UPS 24DC/24DC/20...	24 V / 40 A QUINT4-UPS 24DC/24DC/40...	12 V / 5 A, 24 V / 10 A QUINT-UPS 24DC/12DC/5/24DC/10	
Recommended energy storage system UPS-BAT/...	LI-ION VRLA-WTR VRLA/1.3 ... 12 AH (max. 30 AH)	LI-ION VRLA/1.3 ... 38 AH (max. 60 AH)	LI-ION VRLA/3.4 ... 38 AH (max. 100 AH)	LI-ION 924WH VRLA-WTR VRLA/7.2 ... 38 AH (max. 100 AH)	CAP LI-ION VRLA/1.3 ... 38 AH (max. 60 AH)	

UPS-BAT/VRLA					
					
W x H x D in mm	54 x 157 x 113	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110	330 x 221 x 197
Type	1.3 Ah UPS-BAT/VRLA/ 24DC/1.3AH	3.4 Ah UPS-BAT/VRLA/ 24DC/3.4AH	7.2 Ah UPS-BAT/VRLA/ 24DC/7.2AH	12 Ah UPS-BAT/VRLA/ 24DC/12AH	38 Ah UPS-BAT/VRLA/ 24DC/38AH
Order Number	2320296	2320306	2320319	2320322	2320335

Buffer times for your QUINT DC UPS with VRLA energy storage systems

Select your energy storage system for 24 V DC applications here.
Example: 7 A is to be buffered for one hour.

→  QUINT-UPS/24DC/24DC/10A and
→  UPS-BAT/VRLA/24DC/12AH

Load current	Buffer time																													
	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	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
2 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
3 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
5 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
7 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
10 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
15 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
20 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
25 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
30 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
35 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					
40 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green					






1+1: Two energy storage systems of the same capacity are required in this case. The data is based on an ambient temperature of +20°C.

Selection guide for QUINT AC UPS/500VA and energy storage system

Select your ideal combination of QUINT AC UPS/500VA and energy storage system here.



Power supply **UPS module** **Energy storage system**

	UPS-CAP	UPS-BAT/LI-ION	UPS-BAT/VRLA-WTR		
					
W x H x D in mm	150 x 130 x 126	135 x 202 x 110	264 x 224 x 197	172 x 177 x 178	358 x 174 x 169
	20 A / 20 kJ	120 Wh	924 Wh	13 Ah	26 Ah
Type	UPS-CAP/ 24DC/20A/20KJ	UPS-BAT/LI-ION/ 24DC/120WH	UPS-BAT/LI-ION/ 24DC/924WH	UPS-BAT/VRLA-WTR/ 24DC/13AH	UPS-BAT/VRLA-WTR/ 24DC/26AH
Order Number	2320380	2320351	2908232	2320416	2320429

Buffer times for your QUINT AC UPS/500VA with the following energy storage systems: CAP, LI-ION, and VRLA-WTR


Select your energy storage system for your QUINT AC UPS/500VA (120 / 230 V application).

Example: 125 W is to be buffered for one hour.




→ QUINT-UPS/1AC/1AC/500VA and UPS-BAT/VRLA-WTR/24DC/26AH

Power	Buffer time																									
	Seconds								Minutes							Hours										
	0.2	0.4	2	8	15	20	40	1	2	3	5	10	20	30	40	45	50	1	2	3	5	8	10	15	20	
15 W																									1+1	
35 W																									1+1	1+1
55 W																									1+1	1+1
90 W																									1+1	1+1
125 W																									1+1	1+1
180 W																									1+1	1+1
275 W																									1+1	1+1
400 W																									1+1	1+1

QUINT AC UPS		IQ Technology [®] Designed by PHOENIX CONTACT
		
W x H x D in mm	125 x 130 x 125	
400 W / 500 VA		
Type	QUINT-UPS/1AC/1AC/500VA	
Order Number	2320270	
Recommended energy storage system 1 x UPS-BAT/...	CAP/20 A LI-ION VRLA-WTR VRLA/3.4 ... 38 AH	

i Web code: #1988

UPS-BAT/VRLA				
				
W x H x D in mm	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110	330 x 221 x 197
	3.4 Ah	7.2 Ah	12 Ah	38 Ah
Type	UPS-BAT/VRLA/ 24DC/3.4AH	UPS-BAT/VRLA/ 24DC/7.2AH	UPS-BAT/VRLA/ 24DC/12AH	UPS-BAT/VRLA/ 24DC/38AH
Order Number	2320306	2320319	2320322	2320335

Buffer times for QUINT AC UPS/500VA with VRLA energy storage systems

Select your energy storage system for your QUINT AC UPS/500VA (120 / 230 V application).
Example: 125 W is to be buffered for one hour.

Power	Buffer time																								
	Seconds							Minutes							Hours										
	0.2	0.4	2	8	15	20	40	1	2	3	5	10	20	30	40	45	50	1	2	3	5	8	10	15	20
15 W																									1+1
35 W																									1+1
55 W																								1+1	
90 W																								1+1	
125 W																								1+1	
180 W																								1+1	
275 W																								1+1	1+1
400 W																								1+1	



 QUINT-UPS/1AC/1AC/500VA and UPS-BAT/VRLA/24DC/12AH

1+1: Two energy storage systems of the same capacity are required in this case. The data is based on an ambient temperature of +20°C.

Selection guide for QUINT AC UPS/1kVA and energy storage system

Select your ideal combination of QUINT AC UPS/1kVA and energy storage system here.







Power supply



UPS module



Energy storage system

	UPS-BAT/LI-ION		UPS-BAT/VRLA-WTR	
				
W x H x D in mm	135 x 202 x 110	264 x 224 x 197	172 x 177 x 178	358 x 174 x 169
	120 Wh	924 Wh	13 Ah	26 Ah
Type	UPS-BAT/LI-ION/ 24DC/120WH	UPS-BAT/LI-ION/ 24DC/924WH	UPS-BAT/VRLA-WTR/ 24DC/13AH	UPS-BAT/VRLA-WTR/ 24DC/26AH
Order Number	2320351	2908232	2320416	2320429

Buffer times for your QUINT AC UPS/1kVA with the following energy storage systems: CAP, LI-ION, and VRLA-WTR


Select your energy storage system for your QUINT AC UPS/1kVA (120 / 230 V application).

Example: 400 W is to be buffered for three hours.







→ QUINT4-UPS/1AC/1AC/1KVA and UPS-BAT/LI-ION/24DC/924WH

Power	Buffer time																			
	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
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
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
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
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
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
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
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
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

QUINT AC UPS		IQ Technology Designed by PHOENIX CONTACT
		
W x H x D in mm	290 x 130 x 125	
900 W/1 kVA		
Type	QUINT4-UPS/1AC/1AC/1KVA	
Order Number	2320283	
Recommended energy storage system 2 x UPS-BAT/...	LI-ION VRLA-WTR VRLA/3.4 ... 38 AH	

i Web code: #1988

UPS-BAT/VRLA				
				
W x H x D in mm	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110	330 x 221 x 197
	3.4 Ah	7.2 Ah	12 Ah	38 Ah
Type	UPS-BAT/VRLA/ 24DC/3.4AH	UPS-BAT/VRLA/ 24DC/7.2AH	UPS-BAT/VRLA/ 24DC/12AH	UPS-BAT/VRLA/ 24DC/38AH
Order Number	2320306	2320319	2320322	2320335

Buffer times for your QUINT AC UPS/1kVA with VRLA energy storage systems

Select your energy storage system for your QUINT AC UPS/1kVA (120-/230-V application).

Example: 400 W is to be buffered for 50 minutes.

→  QUINT4-UPS/1AC/1AC/1KVA and
→  UPS-BAT/VRLA/24DC/12AH

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

Uninterruptible power supplies

QUINT UPS – Intelligent and communicative

With the intelligent QUINT DC UPS for integration into existing industrial networks, you are ready for Industrie 4.0.

With the QUINT DC UPS and the integrated interfaces for PROFINET, EtherNet/IP™, EtherCAT®, and USB, monitoring,

configuration, and shutting the system down in a safe state are possible at all times and anywhere in the world.

Signaling

LEDs and floating relay contacts provide function monitoring. QUINT UPS supplies the following information via the wired contacts:

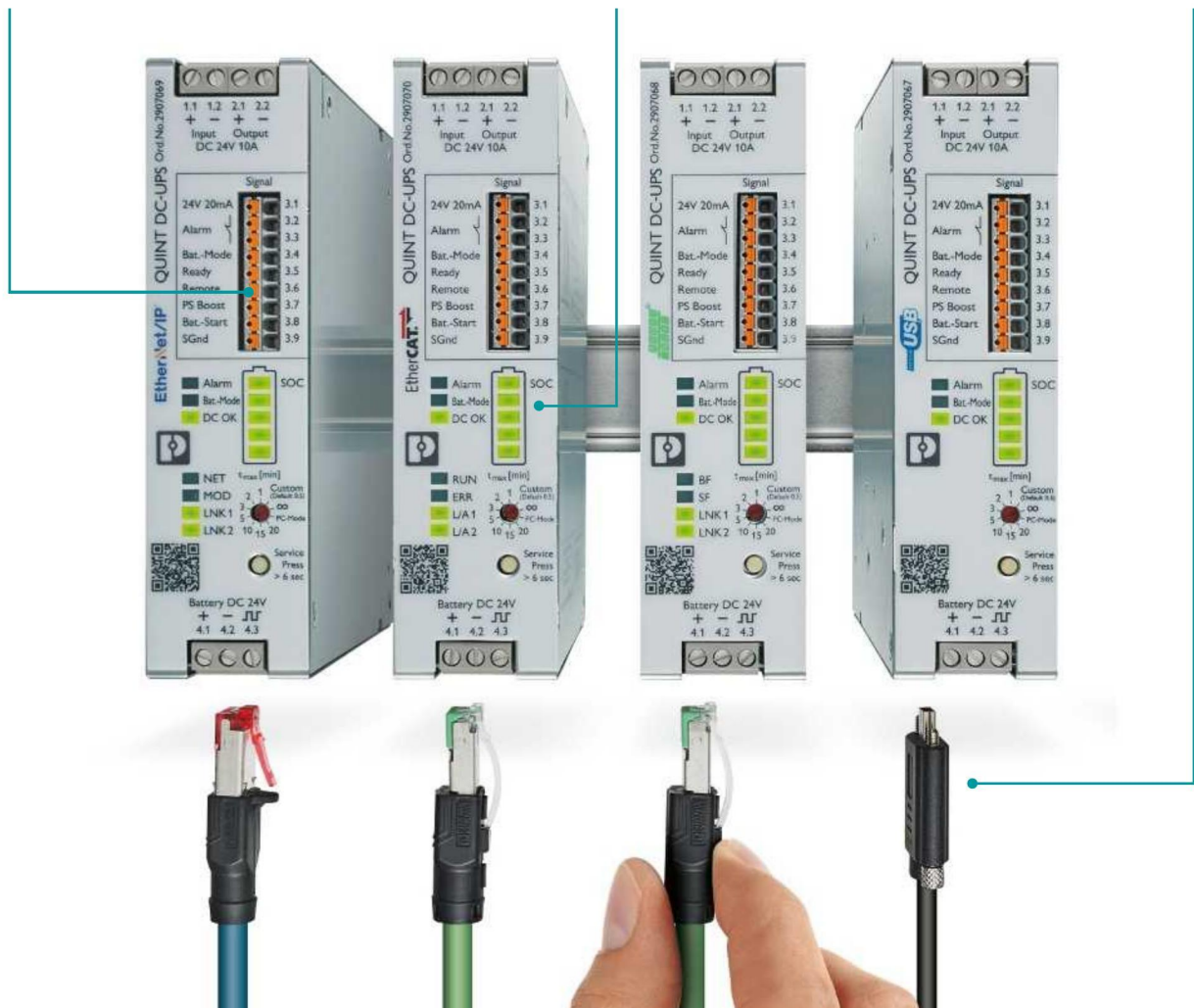
- The load is being supplied by the energy storage
- The energy storage system is being charged
- An alarm is present

Intelligent monitoring of the energy storage system

- Automatic recognition of the battery type connected and maximization of the service life, thanks to optimally adjusted charging characteristics
- Adapting the charging current ensures the quickest possible recharging and availability of the energy storage system

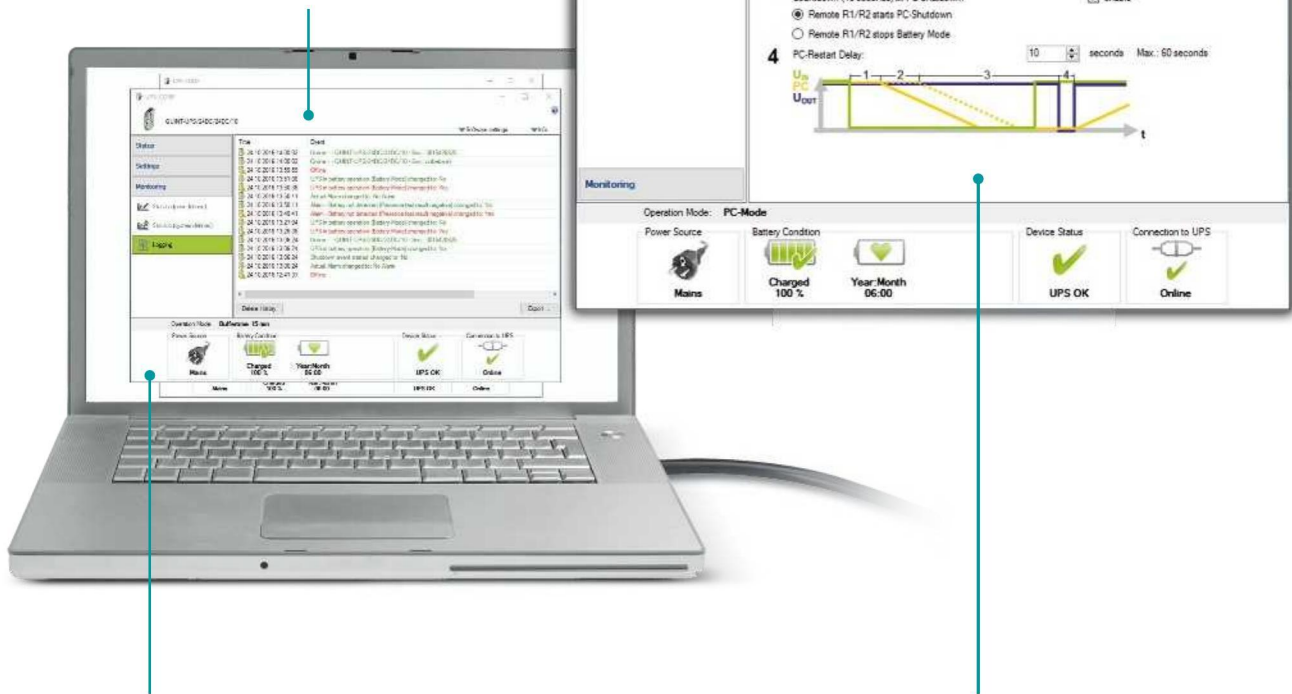
The USB interface is ideal for

- Monitoring and configuration with UPS-CONF
- Safe shutdown of industrial PCs with optimum utilization of the energy storage system
- Automatic startup when mains returns



Configuration

Flexible adaptation of QUINT UPS behavior to individual requirements.



Integrated data recorder

The log file archives events, e.g., when and for how long the QUINT UPS has bridged mains failures.

The software is available free of charge as a download on the Phoenix Contact website under "Downloads" on the QUINT-UPS/... product pages

Preventive function monitoring

All relevant operating parameters are displayed graphically, and important messages appear in the foreground.

User-friendly integration into your network

Function blocks

We include the appropriate function blocks for the following engineering environments with every delivery:

- PLCnext
- TIA Portal
- Studio 5000
- TwinCAT

Device descriptions

Create your own custom function blocks for your controller using our device descriptions.

The library is available free of charge on the Phoenix Contact website under "Downloads" on the QUINT-UPS/... product pages.



Selection guide for QUINT UPS modules with integrated energy storage system

QUINT UPS

Particularly space saving and easy to install in existing systems. Simply connect a 24 V DC power supply unit upstream and the UPS solution is complete. Utilize the benefits of IQ Technology and the minimum wiring outlay. The maintenance-free energy storage device is integrated.

Buffer modules

The QUINT BUFFER and QUINT CAP are both suitable for the DIN rail and combine an electronic switch-over unit and maintenance-free, capacitor-based energy storage system in the same housing.





QUINT BUFFER

The compact buffer module for bridging failures in the seconds range.

QUINT CAP

QUINT CAP for cyclic failures of up to 30 seconds. Your PC can be shut down conveniently thanks to the USB interface.

i Web code: #1989

	QUINT UPS 1~	SFB TECHNOLOGY IQ Technology [®] Designed by PHOENIX CONTACT	QUINT BUFFER	SFB TECHNOLOGY
				
Input	18 ... 30 V DC	18 ... 30 V DC	22.5 ... 30 V DC	22.5 ... 30 V DC
W x H x D in mm	88 x 138 x 125	120 x 169 x 125	57 x 130 x 125	73 x 130 x 125
	24 DC / 5 A / 1.3 Ah	24 DC / 10 A / 3.4 Ah	24 V / 20 A	24 V / 40 A
Type	QUINT-UPS/ 24DC/24DC/5/1.3AH	QUINT-UPS/ 24DC/24DC/10/3.4AH	QUINT4-BUFFER/ 24DC/20	QUINT4-BUFFER/ 24DC/40
Order Number	2320254	2320267	2907913	2908283
Energy storage system	Lead AGM technology	Lead AGM technology	Capacitor-based	Capacitor-based
Information	Integrated temperature sensor optimizes charging currents, thereby increasing the service life		Energy storage system is maintenance-free	

Buffer times for QUINT UPS and QUINT BUFFER

Example: 5 A is to be buffered for 20 minutes.



→ QUINT4-UPS/24DC/24DC/10/3.4AH

Power	Buffer time																														
	Seconds						Minutes										Hours														
	0.2	0.4	0.5	1	1.5	2	4	6	8	16	30	1	2	3	5	6	7	8	9	10	15	20	25	30	40	45	50	1	2	3	
0.5 A																															
1 A																															
2 A																															
3 A																															
5 A																															
7 A																															
10 A																															
20 A																															
30 A																															
40 A																															



Power supply



UPS module



Energy storage system

	QUINT CAP	SFB TECHNOLOGY	Accessories
Input	22.5 ... 30 V DC	22.5 ... 30 V DC	
W x H x D in mm	94 x 130 x 125	118 x 130 x 125	Length: 3 m
	24 DC / 5 A	24 DC / 10 A	USB data cable
Type	QUINT4-CAP/24DC/5/4KJ	QUINT4-CAP/24DC/10/8KJ	MINI-SCREW-USB-DATACABLE
Order Number	2320539	2320571	2908217
Information	Capacitor-based energy storage system Ultra-CAP is maintenance-free		For communication between UPS module and UPS-CONF

Buffer times for QUINT CAP

Example: 5 A is to be buffered for 40 seconds.

QUINT4-CAP/24DC/10/8KJ

Load current	Buffer time								
	Seconds					Minutes			
	15	20	30	40	50	1	2	3	5
1 A									
2.5 A									
5 A									
6.25 A									
7.5 A									
10 A									
12.5 A									

Selection guide for UPS modules with integrated energy storage system

Particularly space-saving

UPS module and energy storage system combined in one housing. Just one power supply needs to be connected upstream.

The energy storage systems can of course be replaced quickly and easily when they reach the end of their service life.

TRIO AC UPS

The TRIO AC UPS with Push-in Technology for the DIN rail saves space and reliably supplies your AC loads. It delivers a pure sine curve at the output. The sine wave generated in battery operation is synchronized to the grid previously used for supply. Connected industrial PCs can be shut down via the integrated USB interface.

 **Web code: #1987**




UNO UPS

Compact and narrow, the UNO UPS with integrated lead AGM energy storage system ensures long buffer times.

STEP UPS

The STEP DC UPS has been designed specifically for use in distribution boards. It requires just a minimal space of 198 mm on the DIN rail.

 **Web code: #1990**

	TRIO AC UPS 1~		Accessories
			
Input	184 ... 264 V AC	96 ... 138 V AC	
W x H x D in mm	210 x 169 x 139	210 x 169 x 139	Length: 3 m
	230 V / 750 VA	120 V / 750 VA	USB data cable
Type	TRIO-UPS-2G/ 1AC/1AC/230V/750VA	TRIO-UPS-2G/ 1AC/1AC/120V/750VA	MINI-SCREW- USB-DATACABLE
Order Number	2905909	2905908	2908217
Information	Energy storage system with lead AGM technology	Energy storage system with lead AGM technology	For communication between UPS module and UPS-CONF

Buffer times for TRIO AC UPS

1+1: An additional energy storage system of the same capacity (3.4 Ah) of type UPS-BAT/ VRLA/24DC/3.4AH (2320306) or QUINT-BAT/24DC/3.4AH (2866349) is required in this case.

The data is based on an ambient temperature of +20°C.

Power	Buffer time												Hours	
	Minutes												1	1.5
	1	1.5	2	4	6	8	10	15	20	30	40	50	1	1.5
50 W													1+1	1+1
100 W										1+1	1+1	1+1		
150 W								1+1	1+1	1+1				
200 W							1+1	1+1	1+1					
250 W						1+1	1+1	1+1						
300 W					1+1	1+1	1+1							
400 W				1+1	1+1	1+1								
500 W			1+1	1+1	1+1									
600 W		1+1	1+1	1+1										






Power supply



UPS module



Energy storage system

	UNO UPS 1~	STEP UPS 1~	
			
Input	23 ... 30 V DC	22.5 ... 29.5 V DC	10 ... 16.5 V DC
W x H x D in mm	110 x 90 x 90	108 x 90 x 61	108 x 90 x 61
	24 V / 60 W	24 DC / 24 DC / 3 A New	12 DC / 12 DC / 4 A New
Type	UNO-UPS/24DC/24DC/60W	STEP-UPS/24DC/24DC/3/46WH	STEP-UPS/12C/12DC/4/46WH
Order Number	2905907	1081430	1082548
Energy storage system	Lead AGM technology	Lithium-ion technology	Lithium-ion technology

Buffer times for UNO UPS and STEP UPS

Example: 2.5 A is to be buffered for 10 minutes.

  UNO-UPS/24DC/24DC/60W
  STEP-UPS/24DC/24DC/3A

Load current	Buffer time																										
	Seconds						Minutes						Hours														
	0.2	0.4	1	2	8	16	30	1	2	3	5	6	7	8	9	10	15	20	25	30	40	45	50	1	1.5	2	3
0.5 A																											
1 A																											
1.5 A																											
2 A																											
2.5 A																											
3 A																											
4 A																											

Selection guide for UPS modules with integrated power supply

Small and flexible

The MINI UPS and TRIO UPS combine a power supply and electronic switch-over unit in the same housing. They ensure the operation of DC loads in the event of mains faults. Just one energy storage system is required to complete the UPS system.

i Web code: #1991

MINI UPS

The MINI UPS, with its comprehensive signaling functions, is always used in applications where space-saving solutions are needed. The energy storage systems with lead AGM technology enable buffer times at nominal load of up to 40 minutes at output voltages of 24 V DC or 12 V DC.

TRIO UPS

Supply DC loads reliably and save space with the new uninterruptible TRIO power supplies. An input grid is no longer necessary for startup. Connected industrial PCs can be shutdown easily via the integrated USB interface.



Power supply



UPS module



Energy storage system

	MINI UPS 1~	
Input	85 ... 264 V AC, 100 ... 350 V DC	85 ... 264 V AC, 100 ... 350 V DC
W x H x D in mm	67.5 x 99 x 107	67.5 x 99 x 107
	24 DC / 2 A	12 DC / 4 A
Type	MINI-DC-UPS/24DC/2	MINI-DC-UPS/12DC/4
Order Number	2866640	2866598

	Energy storage systems for MINI UPS	
Energy storage system	Lead AGM technology	Lead AGM technology
W x H x D in mm	67.5 x 99 x 107	52 x 130 x 110
	24 DC / 0.8 Ah	24 DC / 1.3 Ah
Type	MINI-BAT/24DC/0.8AH	MINI-BAT/24DC/1.3AH
Order Number	2866666	2866417
	12 DC / 1.6 Ah	12 DC / 2.6 Ah
Type	MINI-BAT/12DC/1.6AH	MINI-BAT/12DC/2.6AH
Order Number	2866572 2x	2866569 2x

Buffer times for MINI DC UPS





Select your MINI BAT for your MINI UPS here.



Example: 1 A is to be buffered for 20 minutes.

Load current	Minutes										Hours			
	2	3	5	6	7	8	9	10	20	30	45	50	1	2
0.5 A														
1 A														
1.5 A														
2 A														



MINI-DC-UPS/24DC/2 and MINI-BAT/24DC/0.8AH

	TRIO DC UPS 1~		TRIO DC UPS 3~	Accessories
				
Input	100 ... 240 V AC, 110 ... 250 V DC	100 ... 240 V AC, 110 ... 250 V DC	3 x 400 ... 500 V AC 2 x 400 ... 500 V AC	For communication between UPS module and UPS-CONF, length 3 m
W x H x D in mm	60 x 130 x 115	68 x 130 x 160	88 x 130 x 160	
	24 DC / 5 A	24 DC / 10 A	24 DC / 20 A	USB data cable
Type	TRIO-UPS-2G/1AC/24DC/5	TRIO-UPS-2G/1AC/24DC/10	TRIO-UPS-2G/3AC/24DC/20	MINI-SCREW- USB-DATACABLE
Order Number	2907160	2907161	2906367	2908217

UPS-BAT/VRLA					
					
W x H x D in mm	54 x 157 x 113	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110	330 x 221 x 197
	1.3 Ah	3.4 Ah	7.2 Ah	12 Ah	38 Ah
Type	UPS-BAT/VRLA/ 24DC/1.3AH	UPS-BAT/VRLA/ 24DC/3.4AH	UPS-BAT/VRLA/ 24DC/7.2AH	UPS-BAT/VRLA/ 24DC/12AH	UPS-BAT/VRLA/ 24DC/38AH
Order Number	2320296	2320306	2320319	2320322	2320335

Buffer times for TRIO DC UPS with VRLA energy storage system





Select your energy storage system for your TRIO DC UPS.



Example: 10 A is to be buffered for 10 minutes.

→  TRIO-UPS-2G/1AC/24DC/10 and
UPS-BAT/VRLA/24DC/3.4AH





Load current	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	Green																								
2 A	Green																								
3 A	Green																								
5 A	Green																								
7 A	Green																								
10 A	Green																								
15 A	Yellow																								
20 A	Yellow																								






Product overview Accessories

	Mounting on S7-300 rail		Mounting on level surfaces	
				
	QUINT-PS adapter S7/1	QUINT-PS adapter S7/2	Adapter UWA 182/52	Adapter UWA 130
Order Number	2938196	2938206	2938235	2901664
Information	For: QUINT-PS/1AC/24DC/3.5 QUINT-PS/1AC/24DC/5 QUINT-PS/3AC/24DC/5	For: QUINT-PS/1AC/24DC/10 QUINT-PS/3AC/24DC/10 QUINT-PS/3AC/24DC/20	For: TRIO-PS from 10 A QUINT-PS QUINT4-UPS QUINT4-BUFFER	For: QUINT4-PS QUINT4-UPS QUINT-PS/1AC/24DC/40 QUINT-UPS/1AC/1AC/500VA





	Programming adapters	Cooling fans
		
	TWN4 MIFARE NFC USB ADAPTER	Fan for QUINT, QUINT-PS/FAN/4
Order Number	2909681	2320076
Description	<ul style="list-style-type: none"> • Programming adapter for near field communication (NFC) • With USB interface • For configuring NFC-capable QUINT POWER power supplies wirelessly 	<ul style="list-style-type: none"> • In the standard power supply mounting position, the temperature range increases by 10 K (max. ambient temperature of +70°C) • When the mounting position is rotated, position-dependent derating no longer applies • Tool-free mounting




Product overview Accessories for uninterruptible power supplies





Accessories for QUINT UPS and TRIO UPS				
				
	Programming adapter	RS-232 data cable	Open End data cable	MINI DIN data cable
Type	IFS-BT-PROG-ADAPTER	IFS-RS232-DATACABLE	IFS-OPEN-END-DATACABLE	IFS-MINI-DIN-DATACABLE
Order Number	2905872	2320490	2320450	2320487
Description	<ul style="list-style-type: none"> Bluetooth programming adapter for wireless communication between UPS module and UPS-CONF 	<ul style="list-style-type: none"> Modbus communication with RS-232 interface COM server from Phoenix Contact for Ethernet communication Address superordinate controllers such as Inline controllers (ILCs) or Remote Field Controllers (RFCs) directly Use the Phoenix Contact Inline controller as a gateway and access other communication protocols Length: 2 m 	<ul style="list-style-type: none"> Open cable for flexible communication Length: 2 m 	<ul style="list-style-type: none"> Direct communication with the Inline controller (ILC) from the Phoenix Contact Inline system (100 series) Length: 2 m

Accessories for QUINT UPS and TRIO UPS					
					
	Software	USB data cable	Memory block	Memory block	FL COMSERVER UNI 232/422/485
Type	UPS-CONF	IFS-USB-DATACABLE	IFS-CONFSTICK	IFS-CONFSTICK-L	
Order Number	2320403	2320500	2986122	2901103	2313452
Description	<ul style="list-style-type: none"> Available free of charge on the Phoenix Contact website under "Downloads" on the QUINT-UPS/... product pages. 	<ul style="list-style-type: none"> For communication between UPS module and UPS-CONF Length: 3 m 	<ul style="list-style-type: none"> For saving and transferring configured values to other QUINT UPS modules or for use as a service stick With lock Can remain in the UPS 	<ul style="list-style-type: none"> For saving and transferring configured values to other QUINT UPS modules or for use as a service stick Without lock 	<ul style="list-style-type: none"> Integration of serial RS-232, RS-422, and RS-485 interfaces For machine and system access via Ethernet network




Accessories for uninterruptible power supplies

	Energy storage system mounting		Fuses for AC UPS	
				
	BATTERY MOUNTING KIT	BATTERY MOUNTING CASE	FUSE 40 A/32 V ATOF	FUSE 10 A/400 V GRL
Order Number	2320788	2320458	2908357	2908358
Information	For: UPS-BAT/VRLA/24DC/38AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH UPS-BAT/LI-ION/24DC/924WH	For: UPS-BAT/VRLA/24DC/38AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH UPS-BAT/LI-ION/24DC/924WH	For: TRIO-UPS-2G/1AC/1AC/230V/750VA TRIO-UPS-2G/1AC/1AC/120V/750VA	For: TRIO-UPS-2G/1AC/1AC/230V/750VA TRIO-UPS-2G/1AC/1AC/120V/750VA QUINT-UPS/1AC/1AC/500VA

Fuses for UPS-BAT energy storage system			
			
	FUSE 15 A/32 V FK1	FUSE 25 A/32 V ATOF	FUSE 30 A/32 V ATOF
Order Number	2908360	2908366	2908365
Information	For: UPS-BAT/VRLA/24DC/1.3AH	For: UPS-BAT/VRLA/24DC/3.4AH UPS-BAT/VRLA/24DC/7.2AH UPS-BAT/VRLA/24DC/12AH UPS-BAT/VRLA/24DC/38AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH UPS-BAT/LI-ION/24DC/924WH	For: UPS-BAT/LI-ION/24DC/120WH

Fuses MINI-BAT and UNO-UPS for energy storage system				
				
	FUSE 5 A/32 V FK1	FUSE 15 A/32 V FKS	FUSE 10 A/32 V FK1	FUSE 25 A/32 V FKS
Order Number	1104162	2908361	2908364	2908363
Information	For: UNO-UPS/24DC/24DC/60W	For: MINI-BAT/24DC/1.3AH	For: MINI-BAT/12DC/1.6AH	For: MINI-BAT/12DC/2.6AH

Accessories for uninterruptible power supplies

	Replacement batteries for UPS-BAT/VRLA		Replacement batteries for UPS-BAT/VRLA/WTR
			
	BAT-KIT 2X12V/1.3AH	BAT-KIT 2X12V/38AH	BAT-KIT-WTR 2X12V/13AH
Order Number	2908665	2908237	2908368
	BAT-KIT 2X12V/3.4AH		BAT-KIT-WTR 2X12V/26AH
Order Number	2908233		2908369
	BAT-KIT 2X12V/7.2AH		
Order Number	2908234		
	BAT-KIT 2X12V/12AH		
Order Number	2908235		

Approvals for QUINT POWER

		UL				CSA	Ship	EX																	
CE	UL/C-UL Listed 61010	UL Listed UL 508	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	DNV GL Group	ABS American Bureau of Shipping	BV Bureau Veritas	LR Lloyd's Register	NIK Nippon Kaiji Kyokai	RINA	ATEX	IECEX	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601, 2 x MOOP	EN 50121-4, -5, -3-2	EAC	Startup at -40°C	Installation altitude	
QUINT POWER power supplies with SFB Technology																									
QUINT4-PS 1AC/24DC/5	2904600	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QUINT4-PS 1AC/24DC/10	2904601	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QUINT4-PS 1AC/24DC/20	2904602	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QUINT4-PS 1AC/24DC/20/+	2904617	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QUINT4-PS 1AC/24DC/40	2904603	*	•	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*c*
QUINT-PS/1AC/24DC/3.5	2866747	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QUINT4-PS/1AC/12DC/15	2904608	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QUINT-PS/1AC/12DC/20	2866721	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	d
QUINT4-PS/1AC/48DC/5	2904610	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS/1AC/48DC/10	2904611	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT-PS/1AC/48DC/20	2866695	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	d
QUINT4-PS 3AC/24DC/5	2904620	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 3AC/24DC/10	2904621	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 3AC/24DC/20	2904622	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS/3AC/24DC/40	2904623	*	•	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*c*
QUINT-PS/3AC/48DC/20	2320827	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	b
QUINT-PS/1AC/24DC/5/CO	2320908	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	d
QUINT-PS/1AC/24DC/10/CO	2320911	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT-PS/1AC/24DC/20/CO	2320898	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	d
QUINT-PS/3AC/24DC/20/CO	2320924	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT POWER power supplies <100 W																									
QUINT4-PS 1AC/24DC/1.3/PT	2909575	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/24DC/1.3/SC	2904597	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/24DC/2.5/PT	2909576	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/24DC/2.5/SC	2904598	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/24DC/3.8/PT	2909577	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/24DC/3.8/SC	2904599	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/5DC/5/PT	2904595	*	*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/12DC/2.5/PT	2904605	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c
QUINT4-PS 1AC/12DC/7.5/PT	2904607	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	c

* Approval in preparation
a) max. 3000 m b) max. 4000 m c) max. 5000 m d) max. 6000 m e) max. 2000 m

All products receive further approvals on a continual basis.
For up-to-date information, please refer to the Phoenix Contact website under "Downloads" on the relevant product pages.

Approvals for TRIO POWER

		UL					CSA	Ship					EX													
		CE	UL/C-UL Listed 61010	UL Listed UL 508	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	cCSAus 61010-2-201	DNV GL Group	ABS American Bureau of Shipping	BV Bureau Veritas	LR Lloyd's Register	NK Nippon Kaiji Kyokai	RINA	ATEX	IECEx	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601, 2 x MOOP	Railway standard EN 50155	EAC	Startup at -40°C	Installation altitude
TRIO POWER power supplies																										
TRIO-PS-2G/1AC/24DC/3/C2LPS	2903147	•		•	•	•	•			•									•*	•				•		c
TRIO-PS-2G/1AC/24DC/5	2903148	•		•	•	•				•									•*	•				•		c
TRIO-PS-2G/1AC/24DC/5/B+D	2903144	•		•	•					•									•*	•				•		c
TRIO-PS-2G/1AC/24DC/10	2903149	•		•	•	•				•									•*	•				•	•	c
TRIO-PS-2G/1AC/24DC/10/B+D	2903145	•		•	•					•									•*	•				•		c
TRIO-PS-2G/1AC/24DC/20	2903151	•		•	•	•				•									•*	•				•	•	b
TRIO-PS-2G/1AC/12DC/5/C2LPS	2903157	•		•	•	•	•													•				•		c
TRIO-PS-2G/1AC/12DC/10	2903158	•		•	•	•														•				•		c
TRIO-PS-2G/1AC/48DC/5	2903159	•		•	•	•														•				•		c
TRIO-PS-2G/1AC/48DC/10	2903160	•		•	•	•														•				•		c
TRIO-PS-2G/3AC/24DC/5	2903153	•		•	•	•				•										•				•		c
TRIO-PS-2G/3AC/24DC/10	2903154	•		•	•	•				•										•				•	•	c
TRIO-PS-2G/3AC/24DC/20	2903155	•		•	•	•				•										•				•	•	c
TRIO-PS-2G/3AC/24DC/40	2903156	•		•	•	•														•				•		b
TRIO POWER IP67 power supplies																										
TRIO-PS-IP67/1AC/24DC/20	1039830	•							•											•				•	•	b
TRIO-PS-IP67/3AC/24DC/20	1039829	•							•											•				•	•	c
TRIO CrossPowerSystem power supplies																										
EM-CPS-PS/3AC/24DC/5	1064922	•	•																	•				•		c

* >200 V AC

a) max. 3000 m b) max. 4000 m c) max. 5000 m d) max. 6000 m e) max. 2000 m

All products receive further approvals on a continual basis.

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Approvals for UNO POWER, MINI POWER, and STEP POWER

		UL					CSA	Ship					EX										
CE	UL/C-UL Listed 61010	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	DNV GL Group	ABS American Bureau of Shipping	BV Bureau Veritas	LR Lloyd's Register	NK Nippon Kaiji Kyokai	RINA	ATEX	IEC 60335-1 household standard	DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601, 2 x MOOP	Railway standard EN 50155, 50121-4	EAC	Startup at -40°C	Installation altitude
UNO POWER power supplies																							
UNO-PS/1AC/24DC/30W	2902991	•	•	•	•	•												•			•	a	
UNO-PS/1AC/24DC/60W	2902992	•	•	•	•	•												•			•	d	
UNO-PS/1AC/24DC/90W/C2LPS	2902994	•	•	•	•	•												•			•	a	
UNO-PS/1AC/24DC/100W	2902993	•	•	•	•	•												•			•	a	
UNO-PS/1AC/24DC/100W/H	1088851	•	•	•	•	•								•				•			•	a	
UNO-PS/1AC/24DC/150W	2904376	•	•	•	•	•												•			•	c	
UNO-PS/1AC/24DC/240W	2904372	•	•	•	•	•												•			•	a	
UNO2-PS/1AC/24DC/480W	2910105	•	•															•			•	a	
UNO-PS/1AC/5DC/25W	2904374	•	•	•	•	•												•			•	b	
UNO-PS/1AC/5DC/40W	2904375	•	•	•	•	•												•			•	a	
UNO-PS/1AC/12DC/30W	2902998	•	•	•	•	•												•			•	a	
UNO-PS/1AC/12DC/55W	2902999	•	•	•	•	•												•			•	d	
UNO-PS/1AC/12DC/55W/H	1088850	•	•	•	•	•								•				•			•	d	
UNO-PS/1AC/12DC/100W	2902997	•	•	•	•	•												•			•	c	
UNO-PS/1AC/15DC/30W	2903000	•	•	•	•	•												•			•	a	
UNO-PS/1AC/15DC/55W	2903001	•	•	•	•	•												•			•	d	
UNO-PS/1AC/15DC/100W	2903002	•	•	•	•	•												•			•	d	
UNO-PS/1AC/48DC/60W	2902995	•	•	•	•	•												•			•	d	
UNO-PS/1AC/48DC/100W	2902996	•	•	•	•	•												•			•	c	
UNO-PS/2AC/24DC/90W/C2LPS	2904371	•	•	•	•	•												•			•	b	
MINI POWER power supplies																							
MINI-PS-100-240AC/5DC/3	2938714	•	•	•	•	•															•	b	
MINI-PS-100-240AC/2x15DC/1	2938743	•	•	•	•	•															•	b	
STEP POWER power supplies																							
STEP-PS/1AC/24DC/0.5	2868596	•	•	•	•	•												•			•	b	
STEP-PS/1AC/24DC/0.75FL	2868622	•	•	•	•	•		•	•		•							•	•		•	c	
STEP-PS/1AC/24DC/0.75	2868635	•	•	•	•	•		•	•	•	•	•						•	•		•	c	
STEP-PS/1AC/24DC/1.75	2868648	•	•	•	•	•		•	•	•	•	•						•	•		•	c	
STEP-PS/1AC/24DC/2.5	2868651	•	•	•	•	•		•	•	•	•	•						•	•		•	a	
STEP-PS/1AC/24DC/3.8/C2LPS	2868677	•	•	•	•	•		•						•				•			•	d	
STEP-PS/1AC/24DC/4.2	2868664	•	•	•	•	•		•			•							•			•	d	
STEP-PS/1AC/5DC/2	2320513	•	•	•	•	•												•			•	b	
STEP-PS/1AC/5DC/6.5	2868541	•	•	•	•	•		•	•		•							•			•	d	
STEP-PS/1AC/12DC/1	2868538	•	•	•	•	•												•			•	b	
STEP-PS/1AC/12DC/1.5FL	2868554	•	•	•	•	•		•	•		•							•	•		•	c	
STEP-PS/1AC/12DC/1.5	2868567	•	•	•	•	•		•	•		•							•	•		•	c	
STEP-PS/1AC/12DC/3	2868570	•	•	•	•	•		•	•		•							•			•	c	
STEP-PS/1AC/12DC/5	2868583	•	•	•	•	•		•	•		•							•			•	d	
STEP-PS/1AC/15DC/4	2868619	•	•	•	•	•		•	•		•							•			•	c	
STEP-PS/1AC/48DC/2	2868680	•	•	•	•	•		•	•		•							•			•	d	
STEP-PS/48AC/24DC/0.5	2868716	•	•	•	•	•												•			•	b	
STEP-PS/277AC/24DC/3.5	2904945	•	•	•	•	•												•			•	a	

Approvals for DC/DC converters

	CE	UL				CSA	Ship										EX									
		UL/C-UL Listed 61010	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	DNV GL Group	ABS American Bureau of Shipping	BV Bureau Veritas	LR Lloyd's Register	NK Nippon Kaiji Kyokai	RINA	RMRS	ATEX	IECEx	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Railway standard EN 50155:2007	Railway standard EN 50121-4	EAC	EN 50121-3-2	Startup at -40°C	Installation altitude	
DC/DC converters																										
QUINT4-PS/24DC/24DC/5/PT	2910119	•			•			*	*	*	*	*	*	*	*	*	•	•				•	•	•	•	c
QUINT4-PS/24DC/24DC/5/SC	1046800	•			•			*	*	*	*	*	*	*	*	*	•	•				•	•	•	•	c
QUINT4-PS/24DC/24DC/10/PT	2910120	•			•			*	*	*	*	*	*	*	*	*	•	•				•	•	•	•	c
QUINT4-PS/24DC/24DC/10/SC	1046803	•			•			*	*	*	*	*	*	*	*	*	•	•				•	•	•	•	c
QUINT-PS/24DC/24DC/20	2320102	•	•	•	•			•	•	•	•	•	•	•	•	•			•		•	•	•	•	•	d
QUINT4-PS/24DC/12DC/8/PT	2910122	•			•			*	*	*	*	*	*	*	*	*	•	•				•	•	•	•	c
QUINT-PS/24DC/48DC/5	2320128	•	•	•	•			•	•	•	•	•	•	•	•	•			•		•	•	•	•	•	d
QUINT-PS/12DC/24DC/5	2320131	•	•	•	•			•	•	•	•	•	•	•	•	•			•		•	•	•	•	•	d
QUINT-PS/12DC/12DC/8	2905007	•	•	•	•														•		•	•	•	•	•	d
QUINT4-PS/48DC/24DC/5/PT	2910125	•			•			*	*	*	*	*	*	*	*	*	•	•				•	•	•	•	c
QUINT-PS/48DC/48DC/5	2905008	•	•	•	•														•		•	•	•	•	•	d
QUINT-PS/60-72DC/24DC/10	2905009	•	•	•	•														•		•	•	•	•	•	d
QUINT-PS/96-110DC/24DC/10	2905010	•	•	•	•														•		•	•	•	•	•	d
QUINT-PS/24DC/24DC/5/CO	2320542	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	d
QUINT-PS/24DC/24DC/10/CO	2320555	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	d
QUINT-PS/24DC/24DC/20/CO	2320568	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	d
QUINT-PS/60-72DC/24DC/10/CO	2905011	•	•	•	•														•	•	•	•	•	•	•	d
QUINT-PS/96-110DC/24DC/10/CO	2905012	•	•	•	•														•	•	•	•	•	•	•	d
UNO-PS/350-900DC/24DC/60W	2906300	•																	•		•	•	•	•	•	c
MINI-PS-12-24DC/24DC/1	2866284	•	•	•	•			•													•	•	•	•	•	d
MINI-PS-12-24DC/5-15DC/2	2320018	•	•	•	•			•													•	•	•	•	•	d
MINI-PS-12-24DC/48DC/0.7	2320021	•	•	•	•			•													•	•	•	•	•	d
MINI-PS-48-60DC/24DC/1	2866271	•	•	•	•																•	•	•	•	•	d
MINI-PS/10-42AC/15-60DC/3	2320199	•	•	•																	•	•	•	•	•	d

* Approval in preparation

a) max. 3000 m b) max. 4000 m c) max. 5000 m d) max. 6000 m e) max. 2000 m

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For up-to-date information, please refer to the Phoenix Contact website under "Downloads" on the relevant product pages.

Approvals for redundancy modules and energy storage systems

		UL					CSA	Ship					EX											
		UL Listed UL 508	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL 1778	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	DNV GL Group	ABS American Bureau of Shipping	BV Bureau Veritas	LR Lloyd's Register	NK Nippon Kaiji Kyokai	RINA	ATEX	IECEX	DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601	EAC	Startup at -40°C	Installation altitude
Redundancy modules																								
QUINT4-S-ORING/12-24DC/1x40	2907752	•	•	•	•				•										•	•	•	•	c	
QUINT4-S-ORING/12-24DC/1x40/+	2907753	•	•	•	•				•						•	•			•	•	•	•	c	
QUINT4-S-ORING/12-24DC/1x40/VP	1043418	•	•	•	•										•	•			•	•	•	•	c	
QUINT-ORING/24DC/2x10/1x20	2320173	•	•	•	•				•	•	•	•	•	•	•	•			•	•	•	•	e	
QUINT-ORING/24DC/2x20/1x40	2320186	•	•	•	•				•	•	•	•	•	•	•	•			•	•	•	•	e	
QUINT-ORING/24DC/2x40/1x80	2902879	•	•	•	•				•	•	•	•	•	•	•	•			•	•	•	•	e	
QUINT4-DIODE/12-24DC/2x20/1x40	2907719	•	•	•	•										•	•				•	•	•	e	
QUINT4-DIODE/48DC/2x20/1x40	2907720	•	•	•	•										•	•				•	•	•	e	
TRIO2-DIODE/12-24DC/2x10/1x20	2907380	•	•	•	•				•											•	•	•	e	
TRIO2-DIODE/12-24DC/2x20/1x40	2907379	•	•	•	•				•											•	•	•	e	
UNO-DIODE/5-24DC/2x10/1x20	2905489	•	•	•	•														•	•	•	•	e	
STEP-DIODE/5-24DC/2x5/1x10	2868606	•	•	•	•														•	•	•	•	e	
Energy storage systems																								
UPS-BAT/VRLA/24DC/1.3AH	2320296	•	•	•	•															•	•	•	d	
UPS-BAT/VRLA/24DC/3.4AH	2320306	•	•	•	•				•	•										•	•	•	d	
UPS-BAT/VRLA/24DC/7.2AH	2320319	•	•	•	•				•	•										•	•	•	d	
UPS-BAT/VRLA/24DC/12AH	2320322	•	•	•	•				•	•										•	•	•	d	
UPS-BAT/VRLA/24DC/38AH	2320335	•	•	•	•				•	•									•	•	•	•	d	
UPS-BAT/VRLA-WTR/24DC/13AH	2320416	•	•	•	•				•	•									•	•	•	•	d	
UPS-BAT/VRLA-WTR/24DC/26AH	2320429	•	•	•	•				•	•									•	•	•	•	d	
UPS-BAT/LI-ION/24DC/120WH	2320351	•	•	•	•															•	•	•	d	
UPS-BAT/LI-ION/24DC/924 WH	2908232	•	•	•	•															•	•	•	d	
UPS-CAP/24DC/10A/10KJ	2320377	•	•	•	•				•	•										•	•	•	d	
UPS-CAP/24DC/20A/20KJ	2320380	•	•	•	•				•	•										•	•	•	d	
STEP-BAT/LI-ION/18.5DC/46WH	1081355	•	•	•	•														•	•	•	•	e	
MINI-BAT/24DC/0.8AH	2866666	•	•	•	•															•	•	•	d	
MINI-BAT/24DC/1.3AH	2866417	•	•	•	•															•	•	•	d	
MINI-BAT/12DC/1.6AH	2866572	•	•	•	•															•	•	•	d	
MINI-BAT/12DC/2.6AH	2866569	•	•	•	•															•	•	•	d	

* Approval in preparation
a) max. 3000 m b) max. 4000 m c) max. 5000 m d) max. 6000 m e) max. 2000 m

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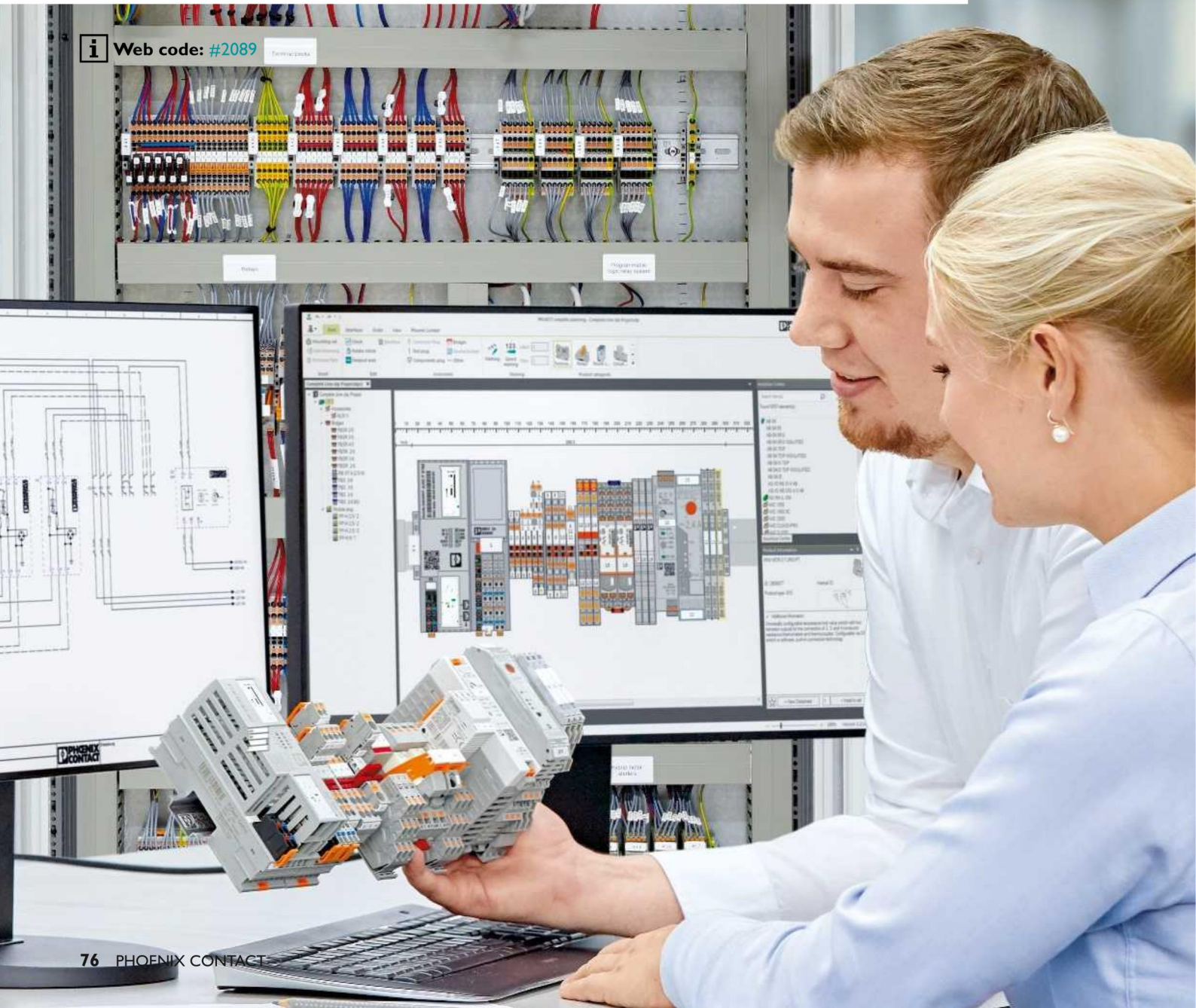
Approvals for uninterruptible power supplies

		UL				CSA	Ship						EX									
CE	UL/C-UL Listed 61010	UL Listed UL 508	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL 1778	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	DNV GL Group	ABS American Bureau of Shipping	BV Bureau Veritas	LR Lloyd's Register	NK Nippon Kaiji Kyokai	RINA	ATEX	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601	EAC	Startup at -40°C	Installation altitude
Uninterruptible power supplies																						
QUINT4-UPS/24DC/24DC/5/PN	2906993	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/10/PN	2907068	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/20/PN	2907073	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/40/PN	2907079	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/5/EIP	2906994	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/10/EIP	2907069	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/20/EIP	2907074	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/40/EIP	2907080	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/5/EC	2906996	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/10/EC	2907070	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/20/EC	2907076	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/40/EC	2907081	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/5/USB	2906991	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/10/USB	2907067	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/20/USB	2907072	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/40/USB	2907078	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/5	2906990	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/10	2907066	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/20	2907071	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT4-UPS/24DC/24DC/40	2907077	•	•			•				*	*	*	*	*	*			•	•	•	b	
QUINT-UPS/24DC/12DC/5/24DC/10	2320461	•		•	•														•		e	
QUINT-UPS/1AC/1AC/500VA	2320270	•			•	•													•		e	
QUINT4-UPS/1AC/1AC/1KVA	2320283	•			•	*												•	•	•	a	
TRIO-UPS-2G/1AC/1AC/230V/750VA	2905909	•			•	•													•		a	
TRIO-UPS-2G/1AC/1AC/120V/750VA	2905908	•			•	•													•		a	
QUINT-UPS/24DC/24DC/5/1.3AH	2320254	•		•	•	•													•		d	
QUINT-UPS/24DC/24DC/10/3.4AH	2320267	•		•	•	•													•		d	
QUINT4-BUFFER/24DC/24DC/20	2907913	•		•	•	•												•	•	•	b	
QUINT4-BUFFER/24DC/24DC/40	2909283	•		•	•	•												•	•	•	b	
QUINT4-CAP/24DC/5/4KJ	2320539	•		•	•	•												•	•	•	b	
QUINT4-CAP/24DC/10/8KJ	2320571	•		•	•	•												•	•	•	b	
UNO-UPS/24DC/24DC/60W	2905907	•			•													•	•		e	
STEP-UPS/24DC/24DC/3/46WH	1081430	•		•	•													•	•		e	
STEP-UPS/12DC/12DC/4/46WH	1082548	•		•	•													•	•		e	
TRIO-UPS-2G/1AC/24DC/5	2907160	•	•		•					*									•	•	d	
TRIO-UPS-2G/1AC/24DC/10	2907161	•	•		•					*									•	•	d	
TRIO-UPS-2G/3AC/24DC/20	2906367	•	•		•					*									•	•	d	
MINI-DC-UPS/24DC/2	2866640	•	•	•	•	•															c	
MINI-DC-UPS/12DC/4	2866598	•	•	•	•	•													•		d	

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COMPLETE line is a system comprising 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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Your advantages in detail:



Comprehensive product portfolio

With COMPLETE line, we offer a complete product portfolio of technologically leading products. This includes:

- Controllers and I/O modules
- Power supplies and device circuit breakers
- Terminal blocks and distribution blocks
- Relay modules and motor starters
- Signal conditioners
- Safety technology
- Surge protection
- Heavy-duty connectors



Intuitive handling

Thanks to the simple, intuitive handling of the coordinated hardware components, you will save time during installation, startup, and maintenance. Push-in connection technology enables you to wire applications quickly – without using tools. The broad, technologically leading product portfolio will always provide you with the right product for standard or special applications.



Time savings across the entire engineering process

The PROJECT complete planning and marking software supports the entire process of control cabinet manufacturing. The program features an intuitive user interface that enables the individual planning, automatic checking, and direct ordering of terminal strips.



Reduced logistics costs

Reduced variety of parts, thanks to standardized marking, bridging, and testing accessories. The COMPLETE line system coordinates products, design, and accessories so that you benefit from maximum reusability and thus reduce your logistics costs.



Optimized processes in control cabinet manufacturing

COMPLETE line supports you, from engineering through to manufacturing, in designing your control cabinet production as efficient as possible. Thus, your customized concept for optimizing your processes in control cabinet manufacturing is created. Our terminal strip production helps you to flexibly manage order peaks or to supply your control cabinet production with fully assembled DIN rails just in time.



The new standard for the control cabinet

Discover the extensive COMPLETE line product portfolio and find out more about COMPLETE line and your comprehensive solutions for the control cabinet.

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At Phoenix Contact, the focus is always on you, the customer. With over 50 subsidiaries around the world and more than 30 agencies, we are always close by.

As a result, you receive verified, first-hand advice and benefit from fast and timely delivery of a complete package consisting of high-grade, optimally coordinated components. Our expertise and the high levels of production depth allow customized solutions tailored to you. We will also support you after the purchase with comprehensive after-sales services.

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Your advantages in detail:



Fast terminal strip production

The terminal strip production service provides help in managing order peaks flexibly, and enables terminal strips to be delivered just-in-time for series production. The fully assembled and marked terminal strips, already equipped with accessories, then simply have to be installed and connected.



Individual set solutions

To reduce the effort of materials and stock management, you can order pre-picked material sets under a single order number.



Customer-specific solutions

Can't find what you're looking for in our range? No problem: from minor adaptations to completely new product developments, we focus on your specific requirements.



Global approvals and certificates

Our numerous certificates are proof that you can put your full trust in our products, because quality is essential. We strive to satisfy this requirement in every respect. For this reason, our systems, processes, and products are inspected and certified several times over.



Comprehensive after-sales services

We are there for you – not just before your purchase, but also afterwards with our comprehensive after-sales services. This includes a repair service, a replacement service, and a spare part service.



Comprehensive training program

From the basics to specialist expertise: we will provide you with the skills you need to the extent and configuration you require.

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Phoenix Contact is a globally present, Germany-based market leader. Our group is synonym for future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation. A global network across more than 100 countries, and 17,400 employees ensure a close proximity to our customers, which we believe is particularly important.

The wide variety of our innovative products makes it easy for our customers to find future-oriented solutions for different applications and industries. We especially focus on the fields of energy, infrastructure, process and factory automation.



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