



Power Reliability

2024



## Power supply solutions

Power supplies, DC/DC converters, redundancy modules, and uninterruptible power supplies

# Power for superior system availability

## Leading technology with outstanding quality

Supply your systems safely with our QUINT POWER, TRIO POWER, UNO POWER, and STEP POWER product families. Power supplies, DC/DC converters, redundancy modules, and uninterruptible power supplies are harmonized to the demands of various industries when it comes to functionality and design.



### 1 Power supplies

With their various functionalities, performance classes, and designs, our power supplies are the right solution for your application.

- QUINT POWER: Automotive industry, systems manufacturing, process industry, ship building
- TRIO POWER: Machine building
- UNO POWER: Infrastructure
- STEP POWER: Building automation, e-mobility

➤ More information starting on page 4

### 2 DC/DC converters and DC/AC inverters

DC/DC converters supply your system with controlled DC voltage. With the DC/AC inverter, you are securely underway in your DC applications.

- DC/DC converters with SFB Technology for high system availability and extreme applications
- DC/DC converters for the power range up to 100 W
- DC/DC converters for photovoltaic systems
- DC/AC inverters for generating alternating current

➤ More information starting on page 36

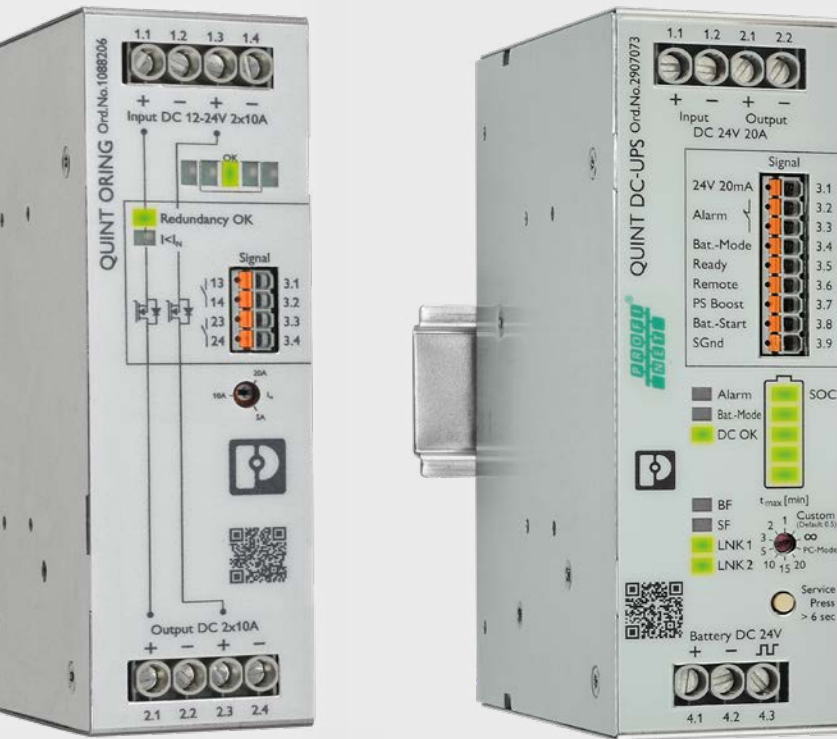
### 3

## Redundancy modules

With our redundant solutions, you can safely secure your systems with high demands on operational safety. Prevent the failure of one power supply unit from resulting in downtime for the entire system.

- Active redundancy modules decouple, monitor, and control up to the load
- Passive redundancy modules decouple power supplies

➤ More information starting on page 50



### 4

## Uninterruptible power supplies

Use uninterruptible power supplies to supply your loads – even without a grid. We offer the following solutions:

- POWER MANAGEMENT SUITE as configuration and management software
- DC UPS modules and AC UPS modules with an integrated interface, power supply, or battery module
- Comprehensive selection of battery modules
- DC UPS modules with integrated capacitor and buffer modules

➤ More information starting on page 58

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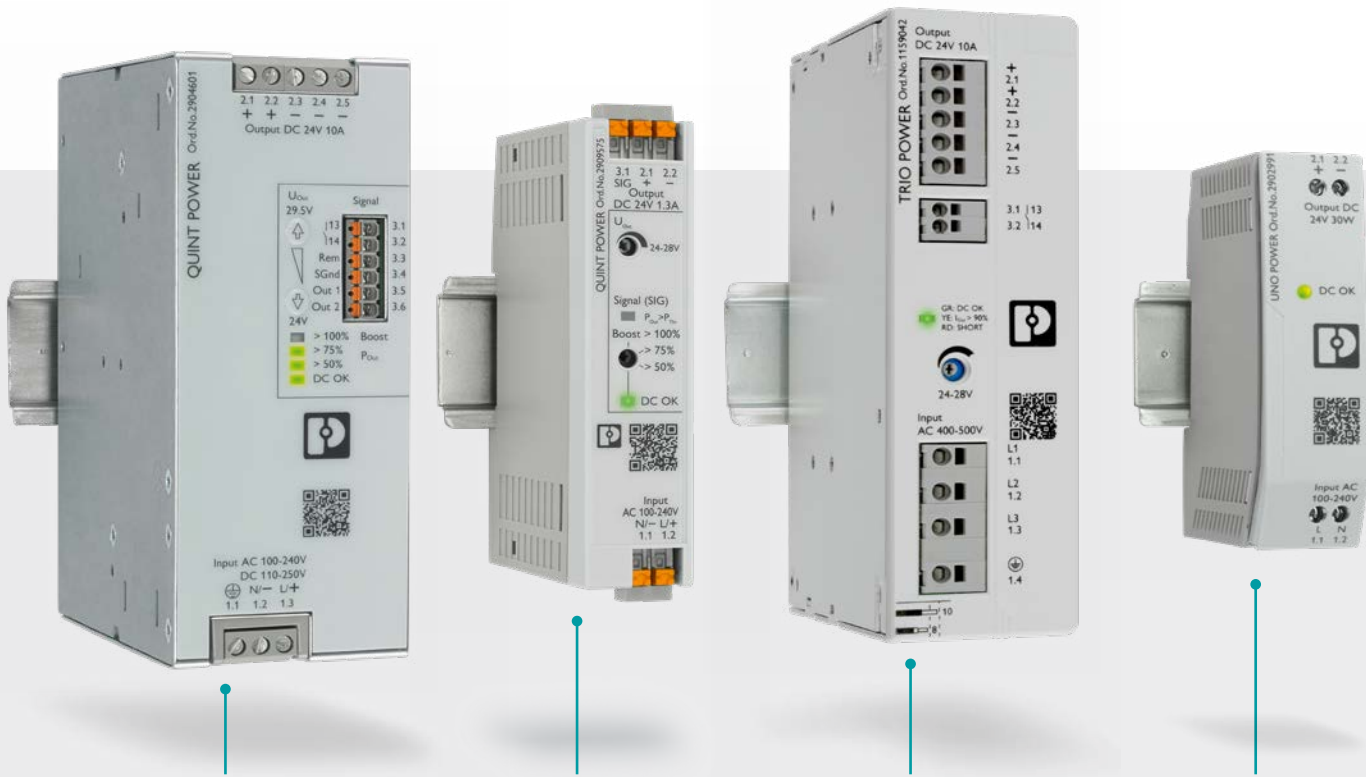
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# Power supplies

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## A comparison of your advantages

Maximize the availability of your systems with high-quality power supplies featuring leading technology. Our range of product families provide a variety of options in design, power, and functionality to meet any application.



### QUINT POWER >100 W

- Powerful with high functionality
- For power up to 1000 W
- SFB Technology
- Preventive function monitoring
- Easy system extension
- Startup of difficult loads
- High level of immunity to interference
- Part of the COMPLETE line system

➤ More information starting on page 6

### QUINT POWER <100 W

- Powerful and space-saving
- For power from 30 W to 100 W
- Preventive function monitoring
- Boost function for starting up difficult loads
- Free choice of connection technology

➤ More information starting on page 12

### TRIO POWER

- Robust with standard functionality
- Solid plug-and-play solution for machine building
- Space-saving design
- Reliable due to dynamic boost with a powerful output characteristic curve
- Smart diagnostics with multicolor LEDs and collective relay contact
- Optionally available with integrated device protection and IO-Link

➤ More information starting on page 18

### UNO POWER

- Compact with basic functionality
- High power density and low no-load losses
- Active function monitoring
- Wide product range for all voltage levels
- Narrow housing from 22.5 to 126 mm wide
- Alignable without minimum clearance to neighboring modules

➤ More information starting on page 24

## STEP POWER

- For industry and building automation
- Maximum energy efficiency due to very low idling losses
- Efficiency level VI
- EN 60335 for use in household applications
- Push-in connection technology
- Flexible mounting by simply snapping onto or screwing onto a level surface

➤ More information starting on page 28






## IP67 POWER

- IP67 degree of protection for decentral supply in the field
- Electrically and mechanically very robust due to high vibration and shock resistance and electric strength
- Selection of various device connections

➤ More information starting on page 34

## Similarities and differences

Power supplies of all product families enhance system availability. Each power supply features high operational safety, an international approval package, and a wide range input.

						
	QUINT POWER		TRIO POWER	UNO POWER	STEP POWER	IP67 POWER
	>100 W	<100 W				
Wide range input and international approval package enable worldwide use	•	•	•	•	•	•
Maximum operating time with high MTBF >500,000 h at +40°C	•	•	•	•	•	•
Can be switched in parallel for increased performance and redundancy	•	•	•	• <sup>4)</sup>	•	•
Wide temperature range of -25 to +70°C	•	•	•	•	•	•
Active function monitoring via switching output for remote diagnostics (DC OK)	•	•	•	•		• <sup>5)</sup>
Preventive function monitoring reports critical operating states before faults occur	•	•				
Reliable starting of difficult loads with the dynamic boost power reserve	•	•	•			• <sup>5)</sup>
Easy system extension with the static boost power reserve	•	• <sup>2)</sup>				• <sup>6)</sup>
Magnetic tripping of miniature circuit breakers with SFB Technology	•					
Three-phase devices continue to operate without errors, even if one phase fails permanently	•		•			• <sup>7)</sup>
Can be used in household applications in accordance with EN 60335					•	
Can be parameterized individually	•					
IO-Link interface	• <sup>1)</sup>		• <sup>3)</sup>			
Integrated electronic device protection			• <sup>3)</sup>			

<sup>1)</sup> Applies to the following devices: [1151047](#), [1151048](#)  
<sup>2)</sup> Applies to the following devices: [2904597](#), [2904598](#), [2909575](#), [2909576](#), [2904605](#), [2904595](#)  
<sup>3)</sup> Applies to the following devices: [1252696](#), [1252697](#)  
<sup>4)</sup> Applies to devices up to and including 120 W  
<sup>5)</sup> Applies to the following devices: [1065976](#), [1111634](#), [1111664](#), [1039830](#), [1039829](#), [1395808](#)  
<sup>6)</sup> Applies to the following device: [1395808](#)  
<sup>7)</sup> Applies to the following device: [1039829](#)

Power supplies

# QUINT POWER

## Powerful with SFB Technology

The dynamic QUINT POWER power supplies with SFB Technology, preventive function monitoring, and configurable settings ensure the availability of your system.



### Your advantages >100 W

- ✔ SFB Technology selectively trips standard miniature circuit breakers
- ✔ Preventive function monitoring reports critical operating states before faults occur
- ✔ Power reserves for easy system extension and starting up difficult loads
- ✔ High efficiency, long service life, and maximum immunity with integrated gas discharge tube
- ✔ Available preconfigured from a batch quantity of just 1

**SFB Technology**   
Designed by Phoenix Contact

# Technologies and advantages

## SFB (Selective Fuse Breaking) Technology

For high system availability, standard miniature circuit breakers must be tripped magnetically so that faulty current paths can be switched off selectively. SFB Technology supplies several times the nominal current for a short period, thus providing the necessary power reserve.

- Six times the nominal current for 15 ms triggers standard miniature circuit breakers quickly and reliably
- When short circuits occur, faulty current paths are disconnected selectively
- Faults are isolated to ensure that the system remains in operation without interruptions



**SFB Technology** 

Designed by Phoenix Contact

## QUINT POWER >100 W

### Powerful SFB Technology

Our QUINT POWER power supplies with SFB Technology are ideally suited for safeguarding your system availability. The power reserve enables the easy extension of your system, as well as the trouble-free start-up of difficult loads. Static boost with sustained power of up to 125% is available for system extension. Dynamic boost of up to 200% for 5 s enables you to start difficult loads. The range of features is rounded out by the customized configuration of signaling thresholds and characteristic curves.



**SFB Technology** 

Designed by Phoenix Contact

## QUINT POWER with IO-Link

The new communicative QUINT POWER power supply with IO-Link can be integrated into industrial networks quickly and easily.

With the integrated IO-Link interface, all the relevant operating data of the power supply, from the 3 V AC side to the 24 V DC side, can be made available to the higher-level automation system. Calculating the usage-dependent service life enables predictive maintenance, raising preventative function monitoring to an entirely new level.

The power supply also enables configuration via IO-Link. The configuration is adopted directly after a device is replaced, saving time and avoiding user errors.





➤ More information starting on page 10




**SFB Technology** 

Designed by Phoenix Contact

# QUINT POWER >100 W





QUINT POWER, 1~				SFB Technology <sup>TM</sup> Designed by Phoenix Contact
				
Input	85 V AC ... 264 V AC 90 V DC ... 350 V DC	85 V AC ... 264 V AC 90 V DC ... 350 V DC	85 V AC ... 264 V AC 90 V DC ... 350 V DC	85 V AC ... 264 V AC 90 V DC ... 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
Type	QUINT4-PS/1AC/24DC/5	QUINT4-PS/1AC/24DC/10	QUINT4-PS/1AC/24DC/20	QUINT4-PS/1AC/24DC/40
Item no.	<a href="#">2904600</a>	<a href="#">2904601</a>	<a href="#">2904602</a>	<a href="#">2904603</a>
	12 V / 15 A			
Type	QUINT4-PS/1AC/12DC/15			
Item no.	<a href="#">2904608</a>			
	48 V / 5 A	48 V / 10 A	48 V / 20 A	
Type	QUINT4-PS/1AC/48DC/5	QUINT4-PS/1AC/48DC/10	QUINT4-PS/1AC/48DC/20	
Item no.	<a href="#">2904610</a>	<a href="#">2904611</a>	<a href="#">2904612</a>	

QUINT POWER, 1~		SFB Technology <sup>TM</sup> Designed by Phoenix Contact
		
Input	85 V AC ... 264 V AC 90 V DC ... 350 V DC	
W x H x D in mm	70 x 130 x 125	
	110 V / 4 A	
Type	QUINT4-PS/1AC/110DC/4	
Item no.	<a href="#">2904613</a>	



# QUINT POWER >100 W

QUINT POWER, 3~				SFB Technology <sup>TM</sup> Designed by Phoenix Contact
				
Input	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC ±195 V DC ... 390 V DC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC ±226 V DC ... 390 V DC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC ±226 V DC ... 390 V DC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC ±226 V DC ... 390 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
Type	QUINT4-PS/3AC/24DC/5	QUINT4-PS/3AC/24DC/10	QUINT4-PS/3AC/24DC/20	QUINT4-PS/3AC/24DC/40
Item no.	2904620	2904621	2904622	2904623
				48 V / 20 A
Type				QUINT4-PS/3AC/48DC/20
Item no.				2904627

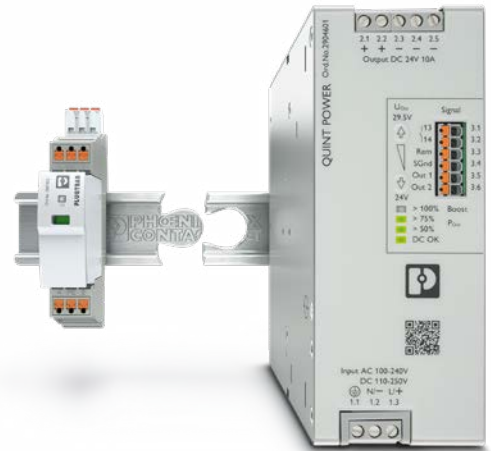
## High protection for your system

For extreme operating conditions, use the ideally matched combination of the PLUGTRAB-SEC surge protection device and the powerful 4th generation QUINT POWER power supply.

### 5-year warranty

If your 4th-generation QUINT POWER becomes damaged in the first five years following purchase despite the using this combination, you will receive a free replacement.



For more information and the conditions, search Item no. [2907928](#) at [www.phoenixcontact.com](http://www.phoenixcontact.com).



For more information on the previous generation of QUINT POWER, simply enter the web code into the search field on our website.

 **Web code: #1513**

# QUINT POWER with IO-Link

QUINT POWER, 3~		SFB Technology <sup>TM</sup> Designed by Phoenix Contact
	 <b>IO-Link</b>	 <b>IO-Link</b>
Input	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC ±226 V DC ... 390 V DC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC ±226 V DC ... 390 V DC
W x H x D in mm	70 x 130 x 125	120 x 130 x 125
	<b>24 V / 20 A</b>	<b>24 V / 40 A</b>
Type	QUINT4-PS/3AC/24DC/20/IOL	QUINT4-PS/3AC/24DC/40/IOL
Item no.	1151048	1151047

## QUINT POWER and CAPAROC – the communicative 24 V supply system

Combine the QUINT POWER IOL power supply with the CAPAROC circuit breaker system or the intelligent QUINT4 DC UPS (from rev. 05). This will supply and protect your system even more intelligently.

Our communicative 24 V supply system increases the data transparency of the entire operation and provides information on all relevant operating and diagnostic data. The central interface to the system

communication between QUINT POWER and CAPAROC ensures simple and cost-efficient integration of the power supply into the network protocol of the circuit breaker system. The PROFINET interface enables complete transparency and access to the entire system. A web server enables on-site access to operating states, error messages, and setting details of the system solution. The supply solution

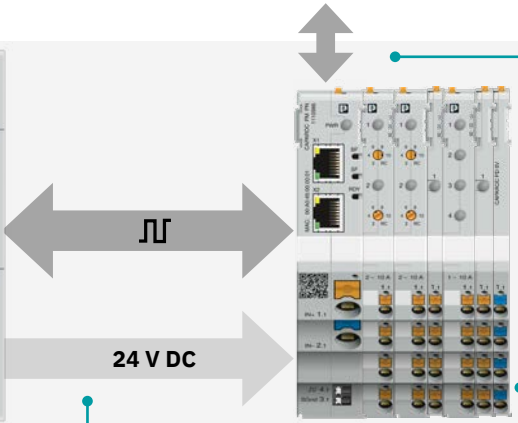
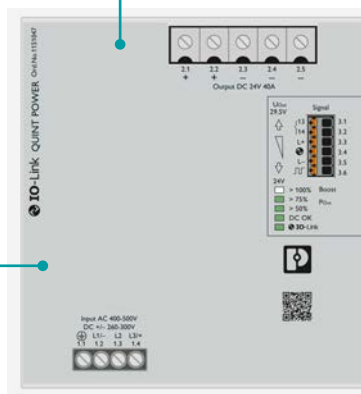
offers complete data consistency, from the primary side right through to the protected load circuits. Preventative function monitoring also helps you reduce downtimes to a minimum.

### General operating data

- Temperature
- Operational runtime
- Remaining service life

### AC-side diagnostic data

- 3 AC input voltage
- Phase monitoring
- Input frequency
- Rotary field direction



### DC-side diagnostic data

- Current
- Voltage
- DC OK
- $P < P_N$




### Digital nameplate



- Device IDs
- Item numbers
- Serial numbers
- Revisions
- Production data

### Diagnostic data for the fused DC-side

- Status of all circuits
- On, off, error message
- Early warning at channel current load >80%
- Flowing current
- Error memory

# QUINT POWER for extreme environments

QUINT POWER, 1-, with protective coating, integrated decoupling MOSFET		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	85 V AC ... 264 V AC 90 V DC ... 350 V DC	85 V AC ... 264 V AC 90 V DC ... 350 V DC	85 V AC ... 264 V AC 90 V DC ... 350 V DC
W x H x D in mm	50 x 130 x 125	70 x 130 x 125	120 x 130 x 140
	<b>24 V / 10 A / +</b>	<b>24 V / 20 A / +</b>	<b>24 V / 40 A / +</b>
Type	QUINT4-PS/1AC/24DC/10/+	QUINT4-PS/1AC/24DC/20/+	QUINT4-PS/1AC/24DC/40/+
Item no.	2904616	2904617	2904618

QUINT POWER, 1-, with protective coating		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	85 V AC ... 264 V AC 90 V DC ... 350 V DC	85 V AC ... 264 V AC 90 V DC ... 350 V DC	
W x H x D in mm	50 x 130 x 125	70 x 130 x 125	
	<b>24 V / 10 A / CO</b>	<b>48 V / 10 A / CO</b>	
Type	QUINT4-PS/1AC/24DC/10/CO	QUINT4-PS/1AC/48DC/10/CO	
Item no.	2904625	2904626	

## QUINT POWER Plus versions – the power supplies for demanding applications

The QUINT POWER Plus versions are the solution for complex applications under extreme ambient conditions.

With MOSFET integrated decoupling for 1+1 and n+1 redundancy, the Plus versions provide symmetrical load distribution and increase system availability. Faults can be detected early on by means of configurable output current signaling thresholds. At the same time, you will save time and space due to the reduced wiring effort.

The Plus variants have a double OVP (overvoltage protection) and thus also protect your system against an increase in voltage. In the event of an error, the output is switched off to protect the loads against overvoltages.

The functional safety standards and directives ensure reliable protection for people, the environment, and machinery.

The QUINT POWER Plus variants meet these requirements (SIL 3, HFT = 1 in accordance with IEC 61508 and IEC 61511) and thus ensure 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 in zone 2 potentially explosive areas.

The Plus versions are rounded out by a wide temperature range of -40°C to +75°C for use under extreme ambient conditions.



# Power supplies

## QUINT POWER – powerful and space-saving

Our small QUINT POWER power supplies cover the power range from 30 to 100 W. These compact power supplies provide you with a perfect combination of preventive function monitoring and exceptional power reserves in a compact size.

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



## Your advantages <100 W

- ✔ Startup of difficult loads by dynamic boost
- ✔ Preventive function monitoring reports critical operating states before faults occur
- ✔ Unique EMC resistance and low emitted interference
- ✔ High efficiency and long service life, with low power dissipation and low heating
- ✔ Slim-line design saves space in the control cabinet

# Technologies and advantages

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Power supplies

## QUINT POWER <100 W

### Powerful and space-saving

In the power range of up to 100 W, QUINT POWER meets the most stringent system demands with a compact size. The devices feature preventative function monitoring and exceptional power reserves. The high electromagnetic compatibility and electric strength, combined with low interference, enable use in demanding applications. Moreover, the devices have a high efficiency of up to 93.7% and a long service life.

High environmental resistance and marine approvals complete the QUINT POWER power series in the low power range.



## QUINT4-SYS for demanding applications

This power supply has been specially developed for the energy supply of compatible Phoenix Contact products via the T-bus DIN rail connector. Furthermore, it can be directly latched onto the DIN rail.

The device features a protective coating and has IECEx, ATEX, and Hazloc approvals. The OVP (overvoltage protection) of <30 V DC protects your system against voltage increases. In the event of an error, the output is switched off to protect the loads against overvoltages. The output circuit is decoupled by a MOSFET.






## The power supply for operational amplifiers


The QUINT4-PS/1AC/2X15DC/2/PT stands out with a high degree of reliability at a high power density. It is used in measurement and control technology and is particularly well-suited for supplying operational amplifiers and sensors. For this purpose, it has two outputs with a nominal current of +15 V DC/2 A and -15 V DC/1.4 A respectively.

Furthermore, with this power supply, the signaling of the DC OK contact can be set and power thresholds can be selected freely.







# QUINT POWER <100 W

QUINT POWER, with push-in connection, 1~			
			
Input	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC
W x H x D in mm	22.5 x 106 x 90	32 x 106 x 90	45 x 106 x 90
	<b>24 V / 1.3 A</b>	<b>24 V / 2.5 A</b>	<b>24 V / 3.8 A</b>
Type	QUINT4-PS/1AC/24DC/1.3/PT	QUINT4-PS/1AC/24DC/2.5/PT	QUINT4-PS/1AC/24DC/3.8/PT
Item no.	<a href="#">2909575</a>	<a href="#">2909576</a>	<a href="#">2909577</a>
	<b>12 V / 2.5 A</b>		<b>12 V / 7.5 A</b>
Type	QUINT4-PS/1AC/12DC/2.5/PT		QUINT4-PS/1AC/12DC/7.5/PT
Item no.	<a href="#">2904605</a>		<a href="#">2904607</a>
	<b>5 V / 5 A</b>		
Type	QUINT4-PS/1AC/5DC/5/PT		
Item no.	<a href="#">2904595</a>		

QUINT POWER, with push-in connection, 1~			
			
Input	85 V AC ... 264 V AC 88 V DC ... 275 V DC		
W x H x D in mm	45 x 106 x 90		
	<b>2x 15 V / 2 A</b>		
Type	QUINT4-PS/1AC/2X15DC/2/PT		
Item no.	<a href="#">2904596</a>		

# QUINT POWER <100 W

QUINT POWER, with screw connection, 1~			
			
Input	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC
W x H x D in mm	22.5 x 99 x 90	32 x 99 x 90	45 x 99 x 90
	<b>24 V / 1.3 A</b>	<b>24 V / 2.5 A</b>	<b>24 V / 3.8 A</b>
Type	QUINT4-PS/1AC/24DC/1.3/SC	QUINT4-PS/1AC/24DC/2.5/SC	QUINT4-PS/1AC/24DC/3.8/SC
Item no.	<a href="#">2904597</a>	<a href="#">2904598</a>	<a href="#">2904599</a>

QUINT POWER, with screw connection, 1~, protective coating			
			
Input	85 V AC ... 264 V AC 88 V DC ... 350 V DC		
W x H x D in mm	40 x 99 x 114		
	<b>24 V / 2.5 A</b>		
Type	QUINT4-SYS-PS/1AC/24DC/2.5/SC		
Item no.	<a href="#">2904614</a>		

# Device circuit breakers for power supplies

## Device circuit breakers – suitable for every application





An electrical system consists of many components that must work together in concert. Many loads are supplied by the same power supply in this type of arrangement. This creates dependencies that are important and critical to system availability.

Unscheduled machine downtime must be avoided at all costs. Therefore, it is very important to ensure that if there is a fault, any loads and circuits not involved remain unaffected by the fault. The supply voltage must likewise be maintained in the event of a fault. This is the only way to ensure smooth operation.

As soon as an overload or short circuit occurs, the best approach is to shut off the fault as soon as possible, depending on how high the current is. This is where device circuit breakers come in. The elements needed to ensure optimum device protection vary depending on the area of application and system availability requirements. They differ from each other in how they are tripped, their shutdown behavior, and their tripping time.









CAPAROC power modules				
		 IO-Link	 PROFINET	 EtherNet/IP
	Status and reset	With IO-Link	With PN	With EIP <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Nominal current	45 A	45 A	45 A	45 A
Type	CAPAROC PM S-R	CAPAROC PM IOL	CAPAROC PM PN	CAPAROC PM EIP
Item no.	<a href="#">1115661</a>	<a href="#">1115670</a>	<a href="#">1110986</a>	<a href="#">1393553</a>





CAPAROC circuit breaker modules				
				
	1-channel	2-channel	4-channel	Potential distributor
Nominal current	1 A ... 10 A	2 A ... 10 A	1 A ... 10 A	
Type	CAPAROC E1 12-24DC/1-10A	CAPAROC E2 12-24DC/2-10A	CAPAROC E4 12-24DC/1-10A	CAPAROC PD 0V
Item no.	<a href="#">1115649</a>	<a href="#">1110984</a>	<a href="#">1115658</a>	<a href="#">1110987</a>







# Device circuit breakers for power supplies

Multi-channel electronic circuit breakers				
				
	<b>4-channel</b>	<b>8-channel</b>		
Nominal current	0.5 A ... 10 A	0.5 A ... 10 A		
Type	CBM E4 24DC/0.5 ... 10A NO-R	CBM E8 24DC/0.5 ... 10A NO-R		
Item no.	<a href="#">2905743</a>	<a href="#">2905744</a>		

Compact multi-channel electronic circuit breakers				
			 <b>IO-Link</b>	
	<b>Status and reset<sup>1)</sup></b>	<b>N/O contact</b>	<b>With IO-Link</b>	<b>Electrically isolating</b>
Nominal current	1 A ... 4 A	1 A ... 10 A	1 A ... 10 A	1 A ... 8 A
Type	CBMC E4 24DC/1-4A S-R	CBMC E4 24DC/1-10A NO	CBMC E4 24DC/1-10A IOL	CBMC EG4 24DC/1-8A NO
Item no.	<a href="#">1065727</a>	<a href="#">2906032</a>	<a href="#">2910411</a>	<a href="#">1065730</a>

1-channel electronic circuit breakers				
				
	<b>1-channel</b>	<b>1-channel</b>	<b>1-channel</b> <b>NEW</b>	<b>1-channel</b> <b>NEW</b>
Nominal current	1 A ... 4 A	1 A ... 8 A	0.1 A ... 0.63 A	
Type	PTCB E1 24DC/1-4A SI-R	PTCB E1 24DC/1-8A NO	PTCB E1 24DC/0.1-0.63A SI-R	PTCB E1 48DC/1-6A NO
Item no.	<a href="#">1135753</a>	<a href="#">2908262</a>	<a href="#">1441496</a>	<a href="#">1471917</a>

Modular thermomagnetic circuit breakers				Base element
				
	<b>F1</b>	<b>SFB</b>	<b>M1</b>	<b>Push-in connection</b>
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 1/6-2/4 PT-BE
Item no.	<a href="#">2800857</a>	<a href="#">2800841</a>	<a href="#">2800856</a>	<a href="#">2800929</a>

<sup>1)</sup> NEC Class 2 outputs, in accordance with UL 1310

## TRIO POWER

### Power supplies with standard functionality

Our new TRIO POWER power supplies are the ideal solution for machine building. Compact, robust, and always reliable, the TRIO POWER 24 V power supply sets the new standard in machine building. It is the ultimate plug-and-play solution for the control cabinet: simply unpack, connect, and you're done!



### Your advantages

- ✔ Space-saving with low overall width and capability of being mounted directly side by side
- ✔ Robust and reliable with dynamic boost and a powerful output characteristic curve
- ✔ Easy handling with push-in connection technology
- ✔ Smart diagnostics with multicolor LEDs and collective relay contact for a clear status display, with optional IO-Link
- ✔ High system availability with dependable power reliability in one device due to the integrated multichannel circuit breaker

# Technologies and advantages

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Power supplies



## Save space

The vertically arranged front connection technology allows for narrow overall widths and saves space in the control cabinet. Due to TRIO POWER's capability of being mounted directly side by side, the available space can be maximized. The low overall depth enables installation in 210 mm small housings.

## Robust and reliable

TRIO POWER provides a powerful package for drive technology applications with up to 960 W of output power in 1 AC and 3 AC versions. The dynamic boost (150%/5 s) enables difficult loads to be started. With the powerful output characteristic curve, even capacitive loads can be charged without any problems.

## Easy handling

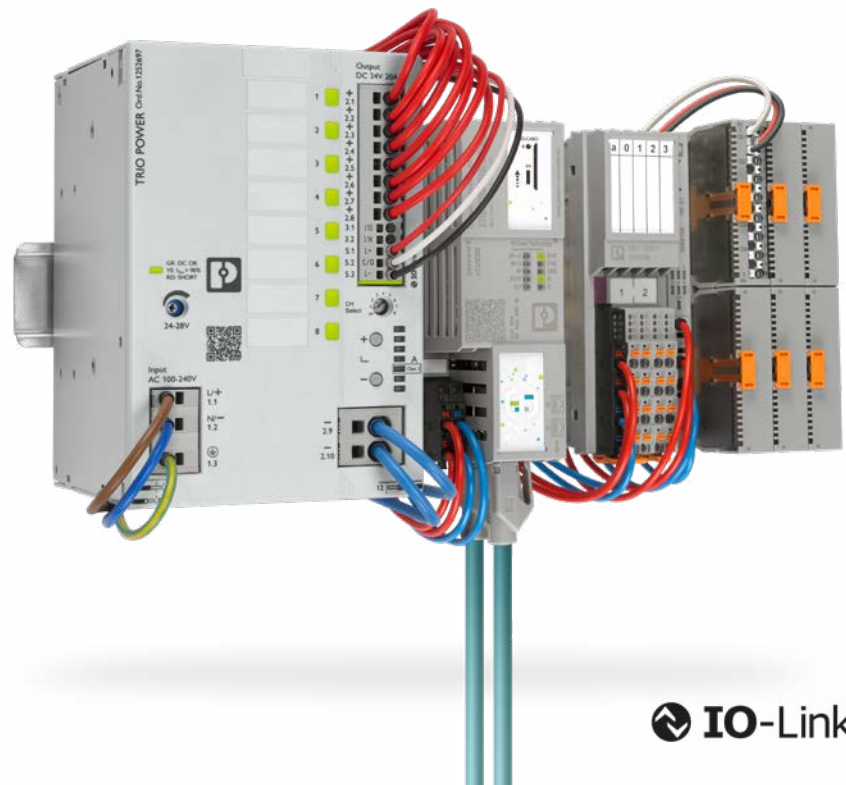
The flexibility of the TRIO power supplies is impressive, with push-in connection technology for quick and tool-free installation. Integrated marking fields can be used for easy EID and circuit marking. Due to an intuitive commissioning concept, the devices are quickly ready for use. The mechanical lock of the potentiometers ensures that the devices are also tamper-proof.

## TRIO POWER power supplies with device protection and IO-Link

All TRIO POWER power supplies feature smart diagnostics with multicolor LEDs and a collective alarm contact. This is used to signal all relevant states such as DC OK, overload, and short circuit.




Devices with integrated multi-channel device protection and an IO-Link interface for diagnostics and parameterization are optionally available. The compact devices reduce the installation work, space requirements in the control cabinet, and material costs.



TRIO POWER power supplies therefore provide a safe supply and protection in one device.






1  
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4  
Power supplies


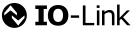

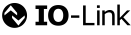
# 3rd generation TRIO POWER

TRIO POWER, 1~			
			
Input	85 V AC ... 264 V AC 90 V DC ... 264 V DC	85 V AC ... 264 V AC 90 V DC ... 264 V DC	85 V AC ... 264 V AC 90 V DC ... 264 V DC
W x H x D in mm	35 x 135 x 120	40 x 135 x 132	55 x 135 x 132
	<b>24 V / 5 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 10 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 20 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Type	TRIO3-PS/1AC/24DC/5	TRIO3-PS/1AC/24DC/10	TRIO3-PS/1AC/24DC/20
Item no.	<a href="#">1159037</a>	<a href="#">1159038</a>	<a href="#">1159039</a>




TRIO POWER, 1~, integrated device protection			
	 <b>IO-Link</b>	 <b>IO-Link</b>	
Input	85 V AC ... 264 V AC 90 V DC ... 264 V DC	85 V AC ... 264 V AC 90 V DC ... 264 V DC	
W x H x D in mm	68 x 135 x 132	88 x 135 x 132	
	<b>24 V / 10 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 20 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	
Type	TRIO3-PS/1AC/24DC/10/4C/IOL	TRIO3-PS/1AC/24DC/20/8C/IOL	
Item no.	<a href="#">1252696</a>	<a href="#">1252697</a>	

# 3rd generation TRIO POWER

TRIO POWER, 3~			
			
Input	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC
W x H x D in mm	40 x 135 x 132	60 x 135 x 132	90 x 135 x 167
	<b>24 V / 10 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 20 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 40 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Type	TRIO3-PS/3AC/24DC/10	TRIO3-PS/3AC/24DC/20	TRIO3-PS/3AC/24DC/40
Item no.	<a href="#">1159042</a>	<a href="#">1159044</a>	<a href="#">1159045</a>

TRIO POWER, 3~, integrated device protection			
	 	 	
Input	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC	3 x 320 V AC ... 550 V AC 2 x 360 V AC ... 550 V AC	
W x H x D in mm	88 x 135 x 132	128 x 135 x 167	
	<b>24 V / 20 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 40 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	
Type	TRIO3-PS/3AC/24DC/20/8C/IOL	TRIO3-PS/3AC/24DC/40/8C/IOL	
Item no.	<a href="#">1362791</a>	<a href="#">1362792</a>	

# 3rd generation TRIO POWER for extreme environments

TRIO POWER, 1-, with PCB with protective coating			
			
Input	85 V AC ... 264 V AC 90 V DC ... 264 V DC	85 V AC ... 264 V AC 90 V DC ... 264 V DC	85 V AC ... 264 V AC 90 V DC ... 264 V DC
W x H x D in mm	35 x 135 x 120	40 x 135 x 132	55 x 135 x 132
	<b>24 V / 5 A / CO</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 10 A / CO</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 20 A / CO</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Type	TRIO3-PS/1AC/24DC/5/CO	TRIO3-PS/1AC/24DC/10/CO	TRIO3-PS/1AC/24DC/20/CO
Item no.	<a href="#">1523018</a>	<a href="#">1523019</a>	<a href="#">1523020</a>

## TRIO POWER for extreme environments

The TRIO POWER power supplies with protective coating ensure high system availability even in extreme ambient conditions. The coating protects against dust, corrosive gases, and humidity. The power supply also impresses with its space-saving design, robust and reliable supply, easy handling, and intelligent diagnostics.



## Power supplies for extreme environments

In addition to TRIO POWER power supplies, we also provide QUINT POWER power supplies and STEP POWER power supplies with protective coating.

QUINT POWER power supplies, DC/DC converters, and redundancy modules also have ATEX and IECEx approvals. In addition to protection against dust and corrosive gases, this also provides protection against 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.



## 2nd generation TRIO POWER





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Power supplies

TRIO POWER, 1~				
				
Input	85 V AC ... 264 V AC 99 V DC ... 275 V DC	85 V AC ... 264 V AC 99 V DC ... 275 V DC	85 V AC ... 264 V AC 99 V DC ... 275 V DC	85 V AC ... 264 V AC 99 V DC ... 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 <sup>1)</sup>	24 V / 5 A / B+D <sup>2)</sup>	24 V / 10 A / B+D <sup>2)</sup>	
Type	TRIO-PS-2G/1AC/24DC/3/ C2LPS	TRIO-PS-2G/1AC/24DC/5/ B+D	TRIO-PS-2G/1AC/24DC/10/ B+D	
Item no.	<a href="#">2903147</a>	<a href="#">2903144</a>	<a href="#">2903145</a>	
	12 V / 5 A / C2LPS <sup>1)</sup>	12 V / 10 A		
Type	TRIO-PS-2G/1AC/12DC/5/ C2LPS	TRIO-PS-2G/1AC/12DC/10		
Item no.	<a href="#">2903157</a>	<a href="#">2903158</a>		
			48 V / 5 A	48 V / 10 A
Type			TRIO-PS-2G/1AC/48DC/5	TRIO-PS-2G/1AC/48DC/10
Item no.			<a href="#">2903159</a>	<a href="#">2903160</a>

TRIO POWER, 1~				
				
Input	187 V AC ... 264 V AC 187 V DC ... 420 V DC			
W x H x D in mm	42 x 130 x 160			

	48.5 V / 5 A			
Type	TRIO-PS-2G/ 230AC-400DC/48DC/5			
Item no.	<a href="#">1157806</a>			

TRIO POWER, 3~				
				
Input	3 x 320 V AC ... 575 V AC 2 x 360 V AC ... 575 V AC	3 x 320 V AC ... 575 V AC		
W x H x D in mm	35 x 130 x 115	110 x 130 x 160		

	24 V / 5 A	72 V / 14 A		
Type	TRIO-PS-2G/3AC/24DC/5	TRIO-PS-2G/3AC/72DC/14		
Item no.	<a href="#">2903153</a>	<a href="#">1076188</a>		

<sup>1)</sup> NEC Class 2 output, certified in accordance with UL 1310.

<sup>2)</sup> Bridge and Deck, optimized for use on ship's bridges.

## UNO POWER

### Compact and highly efficient

With their high power density, UNO POWER power supplies are the perfect solution, particularly in compact control cabinets for centralized and decentralized installations. The efficient technology in a small housing covers loads from 25 W to 960 W with low no-load losses and high efficiencies. The new, particularly narrow UNO POWER generation from 120 W also features a floating DC OK signal contact.

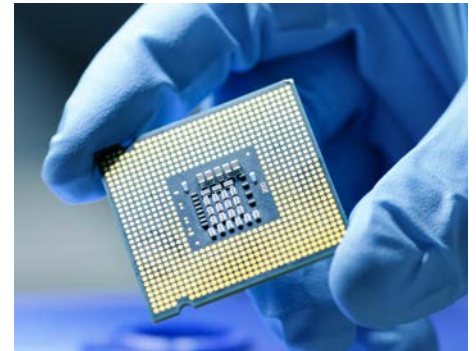
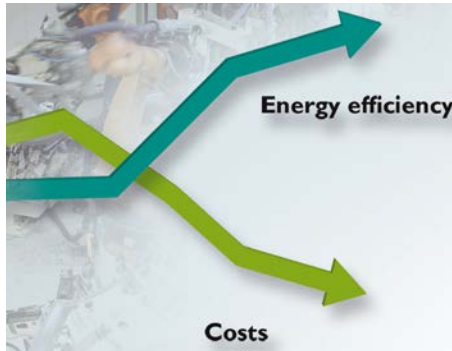


### Your advantages

- ✓ Save space in the control cabinet with the narrow overall width
- ✓ Save energy with the high degree of efficiency
- ✓ Outdoor installation and reliable device startup at -40°C
- ✓ Easy output voltage system diagnostics with the floating switch contact and DC OK LED
- ✓ Alignable without minimum clearance to neighboring modules



# Technologies and advantages



## From 25 W to 960 W

UNO POWER provides high power in a small space.

## Maximum energy efficiency

With efficiencies of over 94% at nominal load, just a small amount of electrical energy is converted into undesired heat energy.

## Conformance with SEMI F47

Suitable for supplying production systems in the semiconductor industry.

## 2nd generation UNO POWER

UNO POWER power supplies are optimal for use in industrial applications and urban infrastructure.

The new generation covers the performance class up to 960 W. For simple system diagnostics, there is a floating DC OK signal contact available for the performance classes from 120 W to 960 W.

The robustness of the devices is characterized by the wide temperature range of -25°C to +70°C (device startup at -40°C type-tested). The derating starts at +55°C and ensures a reliable supply.

The devices are designed to be reliable, enabling class B use in the building. At the same time, the electromagnetic robustness is significantly higher than the EU standards require. The robustness is rounded off by a high degree of vibration resistance.






## UNO POWER for PoE applications




Eliminate the need for a separate power cable when installing devices in systems that are difficult to access. With industrial Power over Ethernet (PoE) solutions from Phoenix Contact, power supply and data transfer are combined in the same Ethernet cable.

The compact UNO POWER power supply ensures high availability in PoE applications. With its increased insulation resistance in accordance with IEEE 802.3bt, as well as lower EMC emitted interference at the DC output in accordance with EN 61204-3, it provides a high level of data integrity for your application.






## 2nd generation UNO POWER



UNO POWER, 1~			
			
Input	85 V AC ... 264 V AC	85 V AC ... 264 V AC	85 V AC ... 264 V AC
W x H x D in mm	35 x 130 x 129	45 x 130 x 129	59 x 130 x 129
	<b>24 V / 120 W</b>	<b>24 V / 240 W</b>	<b>24 V / 480 W</b>
Type	UNO2-PS/1AC/24DC/120W	UNO2-PS/1AC/24DC/240W	UNO2-PS/1AC/24DC/480W
Item no.	<a href="#">1110466</a>	<a href="#">1096432</a>	<a href="#">2910105</a>

UNO POWER, 1~			
		 	
Input	85 V AC ... 264 V AC	85 V AC ... 264 V AC	
W x H x D in mm	126 x 130 x 129	45 x 130 x 129	
	<b>24 V / 960 W</b>	<b>48 V / 240 W</b>	
Type	UNO2-PS/1AC/24DC/960W	UNO2-PS/1AC/48DC/240W	
Item no.	<a href="#">1110043</a>	<a href="#">1110155</a>	

# 1st generation UNO POWER

UNO POWER, 1~			
			
Input	85 V AC ... 264 V AC	85 V AC ... 264 V AC	85 V AC ... 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
Item no.	<a href="#">2902991</a>	<a href="#">2902992</a>	<a href="#">2902993</a>
			24 V / 100 W / H <sup>3)</sup>
Type			UNO-PS/1AC/24DC/100W/H
Item no.			<a href="#">1088851</a>
			24 V / 90 W / C2LPS <sup>2)</sup>
Type			UNO-PS/1AC/24DC/90W/C2LPS
Item no.			<a href="#">2902994</a>
		48 V / 60 W	48 V / 100 W
Type		UNO-PS/1AC/48DC/ 60W	UNO-PS/1AC/48DC/100W
Item no.		<a href="#">2902995</a>	<a href="#">2902996</a>
	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
Item no.	<a href="#">2903000</a>	<a href="#">2903001</a>	<a href="#">2903002</a>
	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
Item no.	<a href="#">2902998</a>	<a href="#">2902999</a>	<a href="#">2902997</a>
		12 V / 55 W / H <sup>3)</sup>	
Type		UNO-PS/1AC/12DC/55W/H	
Item no.		<a href="#">1088850</a>	
	5 V / 25 W	5 V / 40 W	
Type	UNO-PS/1AC/5DC/25W	UNO-PS/1AC/5DC/40W	
Item no.	<a href="#">2904374</a>	<a href="#">2904375</a>	

	UNO POWER, 1~	UNO POWER, 2~	
			
Input	85 V AC ... 264 V AC	2 x 264 V AC ... 575 V AC	
W x H x D in mm	37 x 130 x 125	55 x 90 x 84	
	24 V / 150 W	24 V / 90 W / C2LPS <sup>2)</sup>	
Type	UNO-PS/1AC/24DC/150W	UNO-PS/2AC/24DC/90W/C2LPS	
Item no.	<a href="#">2904376</a>	<a href="#">2904371</a>	

<sup>3)</sup> Can be used in household applications in accordance with EN 60335.

<sup>2)</sup> NEC Class 2 output, certified in accordance with UL 1310.

## STEP POWER

### For building automation

STEP POWER power supplies are optimally tailored to the needs of modern building automation – in both industrial and residential applications. The low no-load losses and high degree of efficiency ensure maximum energy efficiency and meet the requirements of Efficiency Level VI.



### Your advantages

- ✓ Energy savings with high efficiency in no-load and part-load operation (Efficiency Level VI)
- ✓ Space savings in the control cabinet with the narrow and low-profile designs combined with increased performance (up to 100%)
- ✓ Approval for household purposes (EN 60335) allows use in domestic applications for the first time
- ✓ Quick and easy startup with tool-free push-in connection technology at a 45° angle with double terminal points

# Technologies and advantages



## Extreme ambient conditions

The PCB with protective coating ensures high availability even in demanding ambient conditions as low as -40°C.



## Power over Ethernet

The first power supply for small PoE applications with four to eight ports for use in the field of building automation.



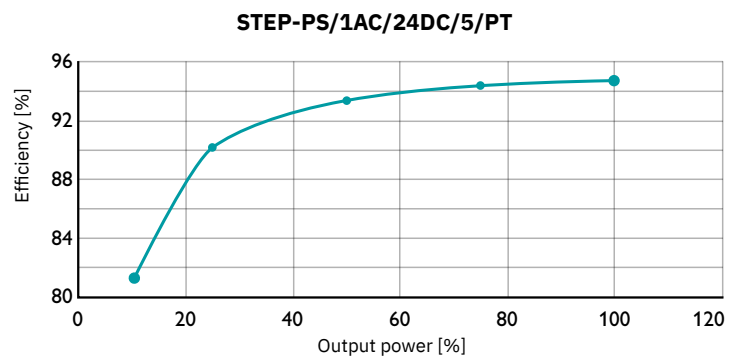
## Efficiency in the control cabinet

- AC or DC input: 1-phase
- DC output: power up to 120 W
- Voltages: 5, 12, 24, 30, 48-56 V DC

## Efficiency Level VI and EcoDesign requirement

With low no-load losses of 0.1 W or 0.21 W and a high degree of efficiency, STEP POWER power supplies ensure optimum energy efficiency in buildings. The power supplies satisfy the high efficiency standard requirements necessary to obtain Efficiency Level VI.

In addition, the requirements of the European EcoDesign directive are also fulfilled. The aim of this is to improve the energy efficiency and environmental compatibility.



The graph shows an example of the degree of effectiveness of the STEP3-PS/1AC/24DC/5/PT over the entire load range from 0 to 100%. From an output power of 25%, the degree of efficiency rises significantly above 90%. With a load of 75%, it even exceeds 94%.

## Building automation

Whether in the e-mobility charger in your garage, shade control in your office building, or the baking oven in your supermarket, power supplies meet stringent demands for the safety of electrical devices. In addition to the standard industrial approvals, the STEP POWER power supplies are certified for household purposes in accordance with DIN EN 60335-1, now for the first time. This is why they are the ideal solution for domestic applications.







# 1 STEP POWER 3rd generation

2





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Power supplies

STEP POWER, 1~				
				
Input	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC	85 V AC ... 264 V AC 88 V DC ... 350 V DC
W x H x D in mm	18 x 90 x 61	36 x 90 x 61	54 x 90 x 61	72 x 90 x 61



	<b>24 V / 0.63 A<sup>1)</sup></b>	<b>24 V / 1.3 A<sup>1)</sup></b>	<b>24 V / 2.5 A<sup>1)</sup></b>	<b>24 V / 4 A</b>
Type	STEP3-PS/1AC/24DC/0.63/PT	STEP3-PS/1AC/24DC/1.3/PT	STEP3-PS/1AC/24DC/2.5/PT	STEP3-PS/1AC/24DC/4/PT
Item no.	<a href="#">1088495</a>	<a href="#">1088494</a>	<a href="#">1088491</a>	<a href="#">1140066</a>
			<b>15 V / 4 A<sup>1) 2)</sup></b>	<b>24 V / 5 A</b>
Type			STEP3-PS/1AC/15DC/4/PT	STEP3-PS/1AC/24DC/5/PT
Item no.			<a href="#">1170956</a>	<a href="#">1088478</a>
	<b>12 V / 1.3 A<sup>1) 2)</sup></b>	<b>12 V / 2.5 A<sup>1) 2)</sup></b>	<b>12 V / 5 A<sup>1) 2)</sup></b>	
Type	STEP3-PS/1AC/12DC/1.3/PT	STEP3-PS/1AC/12DC/2.5/PT	STEP3-PS/1AC/12DC/5/PT	
Item no.	<a href="#">1170952</a>	<a href="#">1170953</a>	<a href="#">1170955</a>	
	<b>5 V / 3 A<sup>1) 2)</sup></b>			
Type	STEP3-PS/1AC/5DC/3/PT			
Item no.	<a href="#">1170954</a>			


STEP POWER, 1~				
			 	
Input	85 V AC ... 264 V AC 88 V DC ... 275 V DC	85 V AC ... 264 V AC 88 V DC ... 275 V DC	108 V AC ... 264 V AC 88 V DC ... 275 V DC	
W x H x D in mm	72 x 90 x 43	72 x 90 x 43	72 x 90 x 61	
	<b>24 V / 3.75 A<sup>1)</sup></b>	<b>24 V / 3.75 A<sup>1)</sup></b>	<b>48 V / 2.5 A</b> <b>NEW</b>	
Type	STEP3-PS/1AC/24DC/3.75/PT/FL	STEP3-PS/1AC/24DC/3.75/PT/LED	STEP3-PS/1AC/48DC/2.5/PT	
Item no.	<a href="#">1088486</a>	<a href="#">1285036</a>	<a href="#">1285035</a>	

<sup>1)</sup> NEC Class 2 output, certified in accordance with UL 1310.

<sup>2)</sup> Deviating input voltage range: 88 to 275 V DC.

# STEP POWER 3rd generation

STEP POWER, 1~, USB port		
		
Input	85 V AC ... 264 V AC 88 V DC ... 275 V DC	85 V AC ... 264 V AC 88 V DC ... 275 V DC
W x H x D in mm	18 x 90 x 61	18 x 90 x 61
	<b>5 V / 3 A / USB-A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>5 V / 3 A / USB-C</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Type	STEP3-PS/1AC/5DC/3/PT/USB-A	STEP3-PS/1AC/5DC/3/PT/USB-C
Item no.	<a href="#">1335699</a>	<a href="#">1335698</a>

STEP POWER, 1~, with PCB with protective coating		
		
Input	85 V AC ... 264 V AC 88 V DC ... 275 V DC	
W x H x D in mm	72 x 90 x 43	
	<b>24 V / 3.75 A / CO<sup>1)</sup></b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	
Type	STEP3-PS/1AC/24DC/3.75/PT/CO	
Item no.	<a href="#">1321105</a>	

<sup>1)</sup> NEC Class 2 output, certified in accordance with UL 1310.



For more information on the 2nd generation of STEP POWER: Simply enter the web code into the search field on our website.

 **Web code: #1930**

# STEP POWER power supply for building automation

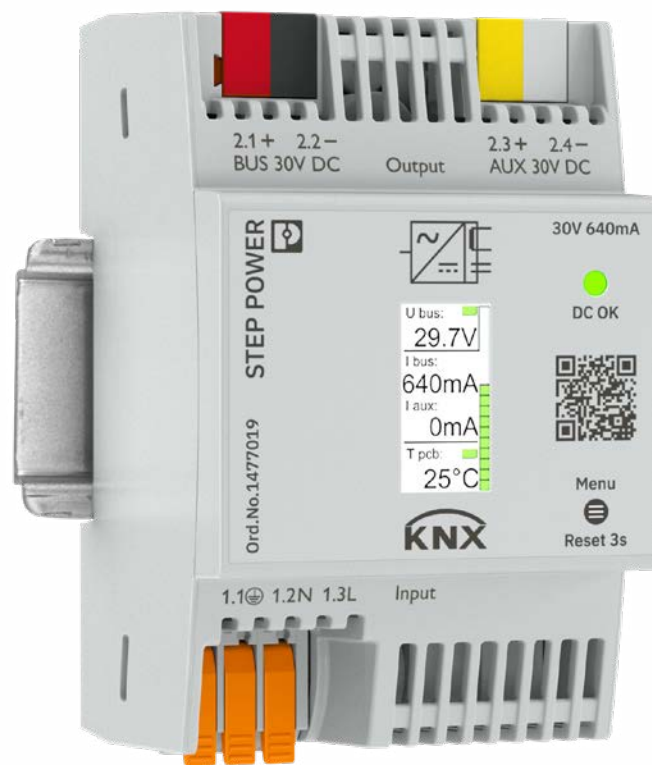
## Bus power supply for KNX

The KNX bus power supply of the STEP POWER family is tailored perfectly to meet the modern building automation needs of industrial and private households. As the first bus power supply, it has an active KNX choke. This adapts dynamically to connected KNX devices, increasing the efficiency of the bus system.

The multifunctional color display shows all relevant KNX status information and provides support during commissioning as well as when extending the building automation system and performing diagnostics.

Use the additional AUX 30 V DC output to supply additional system devices. This auxiliary voltage can be led to the device in parallel via the yellow-white wire pair.

The wide-range input with both AC and DC enables worldwide use and compensates for mains fluctuations so that KNX communication is not affected.




## Your advantages

- ✓ Easy analysis with integrated color display – all relevant KNX status information is available at a glance
- ✓ History can be called up as a diagnostic function in the menu
- ✓ Unique dynamic active KNX choke provides greater efficiency
- ✓ Space-saving compact design
- ✓ Worldwide use with AC and DC wide-range input



# STEP POWER for KNX

STEP POWER, 1~, bus power supply for KNX		
		
Input	85 V AC ... 264 V AC 90 V DC ... 275 V DC	
W x H x D in mm	54 x 90 x 61	
	<b>30 V / 640 mA</b>	<b>NEW</b>
Type	STEP3-PS/1AC/KNX/640/LPT	
Item no.	1477019	

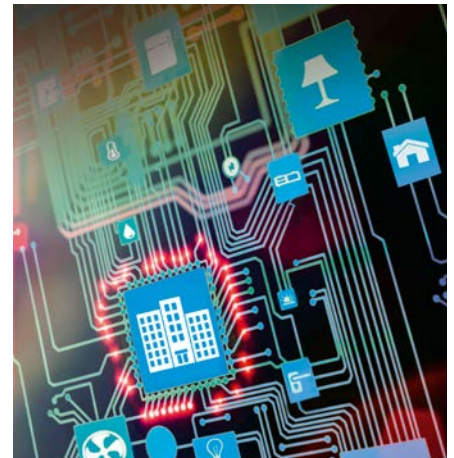
## STEP POWER for KNX bus systems

Our STEP POWER bus voltage supply for the safe operation of a KNX bus system sets new standards.

The STEP POWER bus voltage supply provides the KNX bus with high energy efficiency via a newly developed, patented, active KNX choke. The multifunctional color display provides you with all important KNX status information at a glance, such as the current bus load and historical values as a diagnostic tool in the menu.

The wide input voltage range of 85 to 264 V AC and 90 to 275 V DC means that the KNX bus voltage supply can be used worldwide.

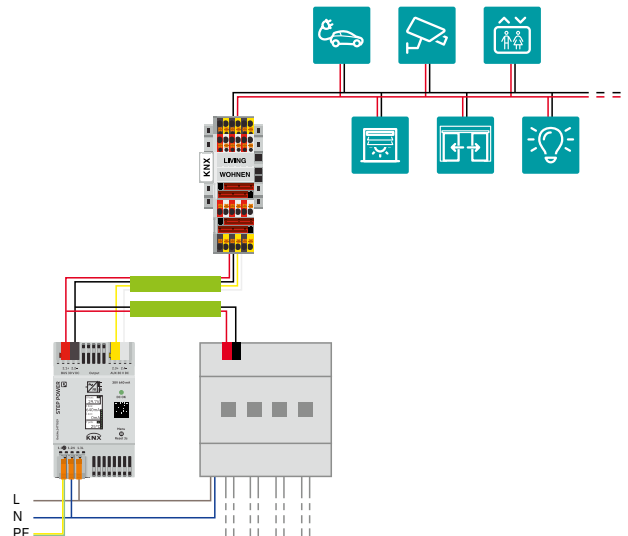
The integrated push-in lever connections round out the handling of the STEP POWER bus voltage supply.



## Structure of KNX TP systems

KNX systems are versatile and can be extended flexibly:

- 1x KNX power supply line per line, with a max of 64 devices
- The power supply and bus line supply the bus devices and enable the exchange of information and telegram transmissions
- The use of any bus line that can be routed and branched enables maximum design flexibility



## Power supplies with IP67 degree of protection





The robust power supplies with an IP67 degree of protection are ideally suited for distributed supply in the field. The weather-resistant cast-aluminum housing protects the devices against dust and water. This enables the power supplies to ensure high system availability, even in harsh ambient conditions. Various device connections provide flexibility during mounting.







### Your advantages

- ✓ Direct installation at the load in the field reduces cable lengths and saves space in the control cabinet
- ✓ The robust cast-aluminum housing ensures high system availability with resistance to extreme ambient conditions (temperature, dust, and water)
- ✓ High shock and vibration resistance, plus electric strength
- ✓ Improved diagnostic options in the field with DC OK LED and AC OK LED
- ✓ NEC Class 2 ( $P_{OUT} < 100\text{ W}$ )

# IP67 POWER

TRIO POWER, 1-, NEC Class 2 output				
				
Input	85 V AC ... 305 V AC 88 V DC ... 275 V DC	85 V AC ... 305 V AC 88 V DC ... 275 V DC	85 V AC ... 305 V AC 88 V DC ... 275 V DC	85 V AC ... 305 V AC 88 V DC ... 275 V DC
W x H x D in mm	100 x 162 x 53	100 x 164 x 53	100 x 164 x 53	100 x 222 x 53
	<b>24 V / 3.75 A / INC<sup>1)</sup></b>	<b>24 V / 3.75 A / M12<sup>1)</sup></b>	<b>24 V / 3.75 A / M12-A<sup>1)</sup></b>	<b>24 V / 3.75 A / IPD<sup>1)</sup></b>
Type	TRIO-PS67/1AC/24DC/3.75/ INC	TRIO-PS67/1AC/24DC/3.75/ M12	TRIO-PS67/1AC/24DC/3.75/ M12-A	TRIO-PS67/1AC/24DC/3.75/ IPD
Item no.	<a href="#">1278302</a>	<a href="#">1278165</a>	<a href="#">1376306</a>	<a href="#">1278301</a>

TRIO POWER, 1~				
				
Input	90 V AC ... 264 V AC 99 V DC ... 275 V DC	90 V AC ... 264 V AC 99 V DC ... 275 V DC	108 V AC ... 264 V AC	90 V AC ... 264 V AC 99 V DC ... 275 V DC
W x H x D in mm	136 x 240 x 53	136 x 240 x 53	136 x 240 x 53	136 x 292 x 53
	<b>24 V / 8 A / INC</b>	<b>24 V / 10 A / M12</b>	<b>24 V / 10 A / 5P</b> <b>NEW</b>	<b>24 V / 10 A / IPD</b>
Type	TRIO-PS67/ 1AC/24DC/8/INC	TRIO-PS67/ 1AC/24DC/10/M12	TRIO-PS67/ 1AC/24DC/10/M12/5P	TRIO-PS67/ 1AC/24DC/10/IPD
Item no.	<a href="#">1065976</a>	<a href="#">1111634</a>	<a href="#">1395808</a>	<a href="#">1111664</a>

<sup>1)</sup> NEC Class 2 output, certified in accordance with UL 1310.

# DC/DC converters and DC/AC inverters

## Everything for the right voltage

Phoenix Contact offers you DC/DC converters for regulated DC voltage:

- With boost functions and SFB Technology
- For extreme requirements
- For photovoltaic applications

With the QUINT INVERTER, you can convert your direct current into alternating current reliably.



### QUINT DC/DC converters for power ratings >100 W

With SFB Technology

➤ More information starting on page 38



### QUINT DC/DC converters for power ratings <100 W

With static and dynamic boost

➤ More information starting on page 44





**DC/DC converters  
for photovoltaic systems**

For decentral power supply in the field

➤ More information starting on page 46

**QUINT Inverters**

For generating alternating current in DC applications

➤ More information starting on page 48

# QUINT DC/DC converters

## With SFB Technology

Featuring high functionality and leading technologies, our QUINT DC/DC converters >100 W deliver safety and reliability. SFB Technology, static boost, dynamic boost, and preventive function monitoring ensure maximum system availability. You can also adjust signaling thresholds and characteristic curves individually.

**SFB Technology**   
Designed by Phoenix Contact



### Your advantages >100 W

- ✔ SFB Technology selectively trips standard miniature circuit breakers
- ✔ Preventive function monitoring reports critical operating states before faults occur
- ✔ Power reserves ensure easy system extension and start up difficult loads
- ✔ High efficiency and long service life
- ✔ Free choice between push-in and screw connection

# Technologies and advantages

## Regulated DC voltage

Avoid disturbances in your application by using DC/DC converters. They regenerate voltages so that the load is always supplied with a regulated DC voltage, even in the case of long cable lengths.

DC/DC converters can be used to alter the voltage level or enable the creation of independent supply systems by means of electrical isolation.

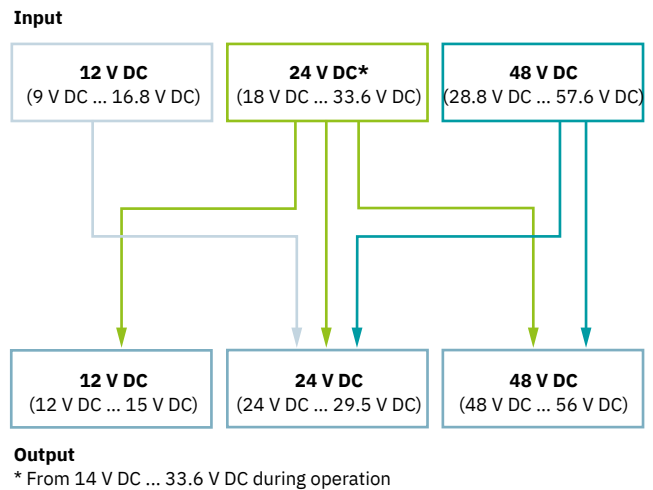


## QUINT POWER >100 W

### Powerful with SFB Technology

The DC/DC converters for the high power ranges have SFB Technology, which ensures that standard miniature circuit breakers are selectively tripped so that loads connected in parallel can continue to operate without interruption.

These DC/DC converters are suitable for high power ratings with currents up to 20 A. Due to the large input voltage range, all common input and output voltages in performance classes up to 480 W are covered.



## Plus version for extreme ambient conditions

The Plus version with integrated decoupling MOSFET for 1+1 and n+1 redundancy provides symmetrical load distribution and increases system availability. It also satisfies the requirements for functional safety (SIL 2). It achieves SIL 3 in conjunction with the QUINT4-S-ORING/12-24DC/1X40/+ redundancy module.




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 in zone 2 potentially explosive areas.



The new Plus version is rounded out by a wide temperature range of -40°C to +70°C for use under extreme ambient conditions.




The PCB protective coating protects against dust, corrosive gases, and 100% humidity. Failures due to creepage currents and electrochemical migration caused by corrosion are also prevented.



# QUINT POWER >100 W

QUINT POWER, with push-in connection		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	18 V DC ... 32 V DC	18 V DC ... 32 V DC	18 V DC ... 32 V DC
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	70 x 130 x 125
	<b>24 V / 24 V / 5 A</b>	<b>24 V / 24 V / 10 A</b>	<b>24 V / 24 V / 20 A</b>
Type	QUINT4-PS/24DC/24DC/5/PT	QUINT4-PS/24DC/24DC/10/PT	QUINT4-PS/24DC/24DC/20/PT
Item no.	<a href="#">2910119</a>	<a href="#">2910120</a>	<a href="#">2910121</a>

QUINT POWER, with push-in connection		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	18 V DC ... 32 V DC	18 V DC ... 32 V DC	
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	
	<b>24 V / 12 V / 8 A</b>	<b>24 V / 48 V / 5 A</b>	
Type	QUINT4-PS/24DC/12DC/8/PT	QUINT4-PS/24DC/48DC/5/PT	
Item no.	<a href="#">2910122</a>	<a href="#">2910123</a>	




QUINT POWER, with push-in connection		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	9 V DC ... 16.8 V DC	29 V DC ... 57.6 V DC	29 V DC ... 57.6 V DC
W x H x D in mm	36 x 130 x 125	36 x 130 x 125	50 x 130 x 125
	<b>12 V / 24 V / 5 A</b>	<b>48 V / 24 V / 5 A</b>	<b>48 V / 48 V / 5 A</b>
Type	QUINT4-PS/12DC/24DC/5/PT	QUINT4-PS/48DC/24DC/5/PT	QUINT4-PS/48DC/48DC/5/PT
Item no.	<a href="#">2910124</a>	<a href="#">2910125</a>	<a href="#">2910128</a>






# QUINT POWER >100 W

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DC/DC converters and DC/AC inverters

QUINT POWER, with screw connection		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	18 V DC ... 32 V DC	18 V DC ... 32 V DC	18 V DC ... 32 V DC
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	70 x 130 x 125
	<b>24 V / 24 V / 5 A</b>	<b>24 V / 24 V / 10 A</b>	<b>24 V / 24 V / 20 A</b>
Type	QUINT4-PS/24DC/24DC/5/SC	QUINT4-PS/24DC/24DC/10/SC	QUINT4-PS/24DC/24DC/20/SC
Item no.	1046800	1046803	1046805

QUINT POWER, with screw connection, protective coating, integrated decoupling MOSFET		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	18 V DC ... 32 V DC		
W x H x D in mm	70 x 130 x 125		
	<b>24 V / 24 V / 20 A / +</b>		
Type	QUINT4-PS/24DC/24DC/20/SC/+		
Item no.	1046881		

QUINT POWER, with push-in connection, protective coating		SFB Technology <sup>TM</sup> Designed by Phoenix Contact	
			
Input	18 V DC ... 32 V DC	18 V DC ... 32 V DC	
W x H x D in mm	36 x 130 x 125	50 x 130 x 125	
	<b>24 V / 24 V / 5 A / CO</b>	<b>24 V / 24 V / 10 A / CO</b>	
Type	QUINT4-PS/24DC/24DC/5/PT/CO	QUINT4-PS/24DC/24DC/10/PT/CO	
Item no.	2910132	2910133	

# QUINT POWER

## Power supplies for railway technology

Our QUINT POWER power supplies and QUINT POWER DC/DC converters are used in both signal technology and in rail vehicles. All devices are characterized by a high degree of reliability and safety. In addition, they are suitable for installation in confined spaces.

Our high-availability power supplies and DC/DC converters are harmonized with the typical requirements of signal technology. With a high efficiency factor and the use of high-quality components, including long-life capacitors, our products feature high reliability (MTBF >500,000 h) and a long service life. They also have an extended temperature range and electronics with a conformal coating for use in outdoor systems. DC/DC converters are used in the signal technology of signal boxes to convert control voltages. The built-in electrical isolation also decouples and suppresses two potentials, and

an ungrounded supply network can be established. For digital signal boxes, we provide converter solutions that can convert the direct current link voltage into conventional control voltage.



Our QUINT DC/DC converters in rail vehicles fulfill the high requirements on quality, zero maintenance, and reliability, just like the power supplies do. We offer DC/DC converters for all standard voltage levels of various train types. We guarantee the high availability with redundantly connected and decoupled DC/DC converters. Furthermore, these solutions fulfill the requirements applicable in railway technology on temperature, fire protection, resistance to EMC, vibration, and the environment, as well as the specific additional requirements of EN 50155.





# 3rd generation QUINT POWER

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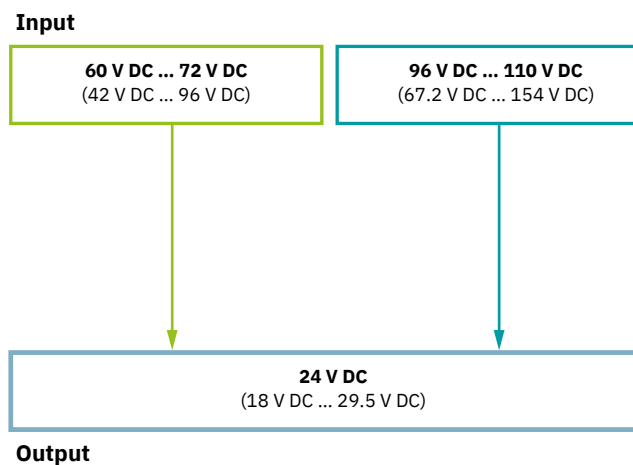
DC/DC converters and DC/AC inverters

QUINT POWER, with screw connection		SFB Technology <sup>TM</sup> Designed by Phoenix Contact
		
Input	42 V DC ... 96 V DC	67.2 V DC ... 154 V DC
W x H x D in mm	48 x 130 x 125	48 x 130 x 125
	<b>60 V ... 72 V / 24 V / 10 A</b>	<b>96 V ... 110 V / 24 V / 10 A</b>
Type	QUINT-PS/60-72DC/24DC/10	QUINT-PS/96-110DC/24DC/10
Item no.	2905009	2905010

QUINT POWER, with screw connection, protective coating		SFB Technology <sup>TM</sup> Designed by Phoenix Contact
		
Input	42 V DC ... 96 V DC	67.2 V DC ... 154 V DC
W x H x D in mm	48 x 130 x 125	48 x 130 x 125
	<b>60 V ... 72 V / 24 V / 10 A / CO</b>	<b>96 V ... 110 V / 24 V / 10 A / CO</b>
Type	QUINT-PS/60-72DC/24DC/10/CO	QUINT-PS/96-110DC/24DC/10/CO
Item no.	2905011	2905012

## 3rd generation QUINT POWER with wide range input

The QUINT DC/DC converters with wide range input are ideal for applications in the rail industry and power generation, among others.



## DC/DC converters and DC/AC inverters

### QUINT POWER – powerful with boost function

QUINT DC/DC converters are also available in the power range up to 100 W. Particularly powerful and space-saving, these converters feature high efficiency, preventive function monitoring, and static and dynamic boost.

The low housing depth of 89 mm enables installation in flat control cabinets, and the DNV approval means they can be used in maritime environments. The DC/DC converter start-up at  $-40^{\circ}\text{C}$  ensures reliable operation, even under extreme ambient conditions. In addition, you




can choose between push-in and screw connection.





### Your advantages <100 W

- ✓ Power reserves for easy system extension and starting up difficult loads
- ✓ Preventive function monitoring reports critical operating states before faults occur
- ✓ High efficiency and long service life, with low power dissipation and low heating
- ✓ Slim-line design saves space in the control cabinet
- ✓ Choice of push-in or screw connection

# QUINT POWER <100 W

QUINT POWER, with push-in connection			
			
Input	9 V DC ... 32 V DC	9 V DC ... 32 V DC	22 V DC ... 60 V DC
W x H x D in mm	22.5 x 106 x 90	32 x 106 x 90	45 x 106 x 90
	<b>12 V ... 24 V / 24 V / 1.3 A</b>	<b>12 V ... 24 V / 24 V / 2.5 A</b>	<b>24 V ... 48 V / 48 V / 2 A</b>
Type	QUINT4-PS/12-24DC/24DC/1.3/PT	QUINT4-PS/12-24DC/24DC/2.5/PT	QUINT4-PS/24-48DC/48DC/2/PT
Item no.	1066716	1066714	1098676
	<b>12 V ... 24 V / 5 V ... 15 V / 2.5 A</b>		
Type	QUINT4-PS/12-24DC/5-15DC/2.5/PT		
Item no.	1066704		
		<b>48 V ... 110 V / 24 V / 2.5 A</b>	
Type		QUINT4-PS/48-110DC/24DC/2.5/PT	
Item no.		1066708	

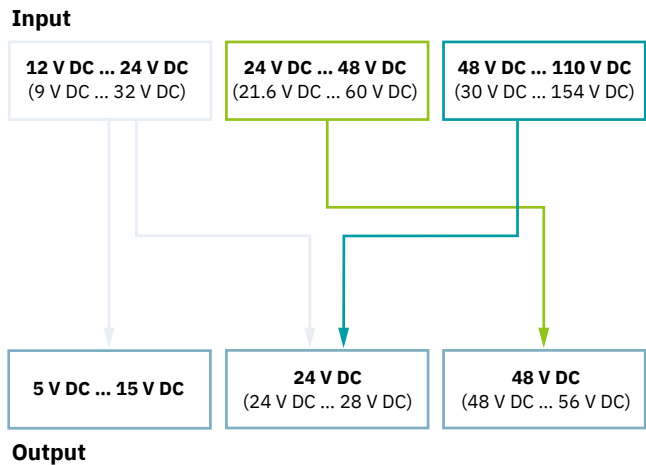
QUINT POWER, with screw connection			
			
Input	9 V DC ... 32 V DC	9 V DC ... 32 V DC	
W x H x D in mm	22.5 x 99 x 90	32 x 99 x 90	
	<b>12 V ... 24 V / 24 V / 1.3 A</b>	<b>12 V ... 24 V / 24 V / 2.5 A</b>	
Type	QUINT4-PS/12-24DC/24DC/1.3/SC	QUINT4-PS/12-24DC/24DC/2.5/SC	
Item no.	1066703	1066718	

## QUINT POWER <100 W

### Powerful and space-saving

These space-saving devices from the QUINT family offer high functionality from a power range of 30 W and also cover the power range of 60 W for the first time.

The low housing depth of 89 mm enables installation in flat control cabinets, and the DNV approval means they can be used in maritime environments. The device start-up at -40°C ensures reliable operation under extreme ambient conditions.



## DC/DC converters for photovoltaic applications

### For decentralized power supply




The DC/DC converters in the TRIO POWER family supply your system directly from the field and provide a reliable power supply even without a central grid. They are particularly well-suited for photovoltaic applications, where they also allow the central inverter to be started without a supplying grid.



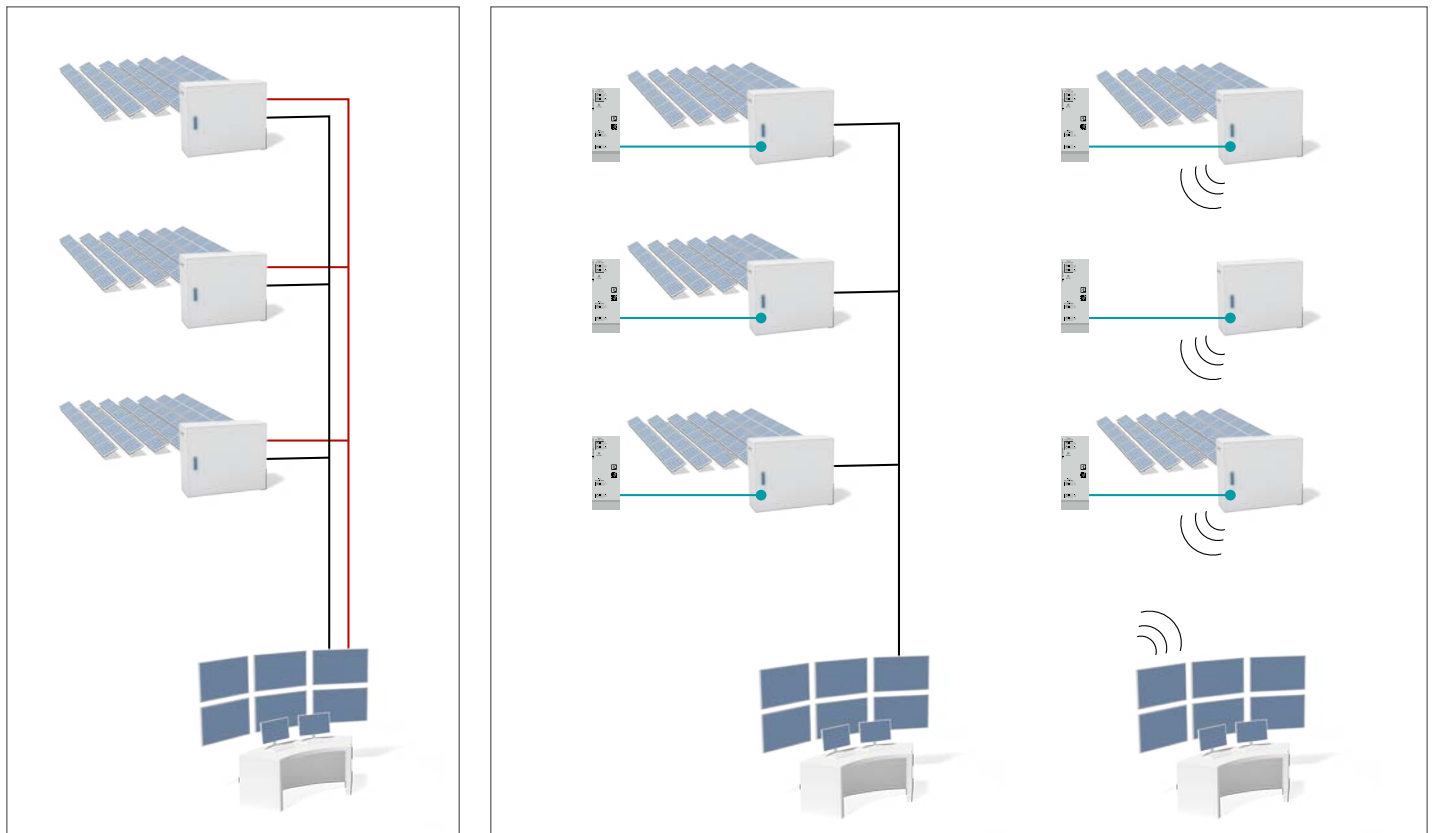
### Your advantages

- ✓ Suitable for use in all photovoltaic systems with high input voltage due to conformity with standards UL 62109 and UL 1741
- ✓ High system availability with a robust design that ensures partial discharge resistance
- ✓ Direct, immediate supply from the solar field to supply the string monitoring function within string combiner boxes
- ✓ Quick and easy installation with push-in connection

# DC/DC converters for photovoltaic applications

	TRIO POWER		UNO POWER
			
Input	450 V DC ... 1650 V DC	510 V DC ... 1650 V DC	300 V DC ... 1000 V DC
W x H x D in mm	48 x 130 x 115	88.5 x 130 x 160	55 x 90 x 84
	<b>1500 V / 24 V / 1.5 A</b>	<b>1500 V / 24 V / 8 A</b>	<b>350 V ... 900 V / 24 V / 60 W</b>
Type	TRIO-PS-2G/1500DC/24DC/1.5	TRIO-PS-2G/1500DC/24DC/8	UNO-PS/350-900DC/24DC/60W
Item no.	1107892	1075240	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.

The TRIO DC/DC converters and the UNO DC/DC converters enable direct connection to string voltages of up to 1500 V DC. This means that the combiner box is supplied directly from the photovoltaic panel and eliminates any additional installation costs.

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

## QUINT inverters

### For generating alternating current

The new DC/AC inverter in the QUINT POWER family offers a compact solution to generate alternating current in DC applications. It delivers a pure sine curve and current with constantly high quality. The inverter also ensures the trouble-free supply of voltage-sensitive loads.





### Your advantages

- ✔ Manual selection of AC output voltage via signal terminal enables worldwide use
- ✔ Pure sine curve at the output
- ✔ USB interface provides easy connection to PCs and other devices
- ✔ Can be switched in parallel for various applications
- ✔ Compact design saves space



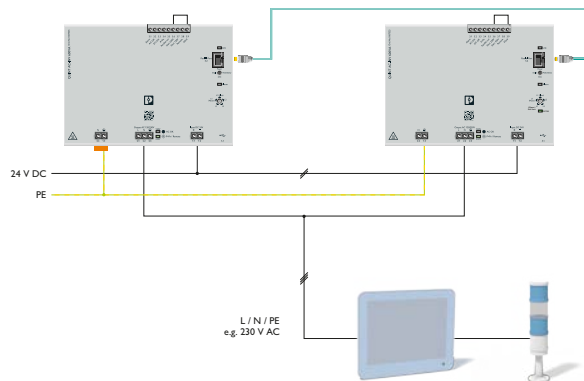
# QUINT inverters

QUINT inverters	
	
Input	20 V DC ... 30 V DC
W x H x D in mm	180 x 130 x 125
<b>480 W / 600 VA</b>	
Type	QUINT4-INV/24DC/1AC/600VA/USB
Item no.	1067325

Accessories	
	
W x H x D in mm	50 x 128 x 52
<b>PORTBRIDGE</b>	
Type	RJ45-PORT-BRIDGE/3XPARALLEL
Item no.	1205351

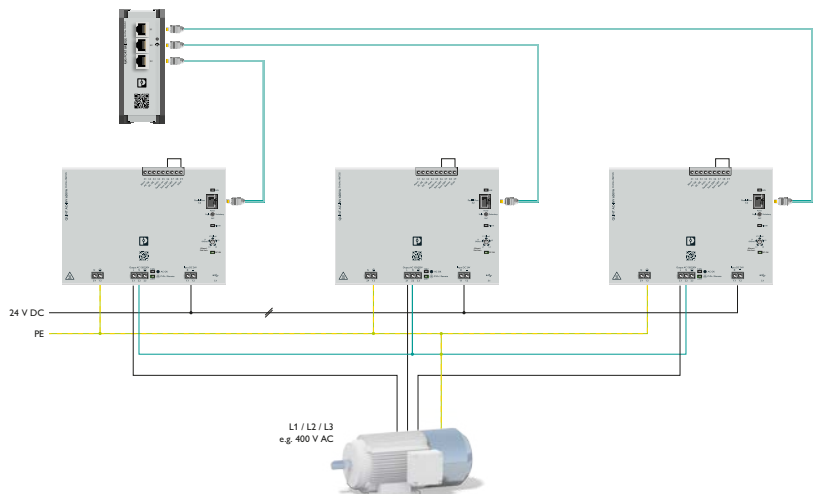
## Parallel connection with synchronized AC output

Take advantage of the option to connect two devices in parallel. This increases the operational safety of your systems in the event of a power supply failure (redundancy), or it gives you the option to increase the power. You can double the output power by using the DC/AC inverter. Communication between the two devices synchronizes the phase relation in both operating modes.



## Three-phase grid for drive application

You can connect three devices in parallel to create a three-phase grid using the RJ45 adapter. The inverters communicate with each other in order to synchronize the 120° phase shift in real time. This enables operation of three-phase drives.



# Redundancy modules

3

## For high operational safety

Redundant power supply solutions are necessary to prevent failures and downtime in complex applications. Two power supplies connected in parallel can be decoupled with either active or passive redundancy modules.



### QUINT ORING

Provides permanent monitoring of the input voltage, output current, and decoupling section

> More information starting on page 52



### QUINT DIODE

Ensures constant redundancy through redundant wiring up to the load with two positive output terminals

> More information starting on page 56

## Active and passive redundancy

### Active redundancy with MOSFETs

Our 1- or 2-channel active redundancy module versions monitor themselves and the connection wiring through to the load. In conjunction with a QUINT POWER power supply, you can extend the system to include complete redundancy monitoring from the AC feed-in to the DC load. By continually monitoring the AC and DC voltage levels, the associated wiring, and the simultaneous decoupling

of the load current, critical operating

### Passive redundancy with diodes

states can be detected and signaled early on. Diodes enable simple decoupling of two power supplies on the DC side. This is useful especially when power supplies are in parallel connection to increase power, or for redundancy purposes. If one device fails due to malfunctions, the second power supply automatically takes

over the entire supply for the DC load. The diode is not subject to preventive function monitoring, and the connecting cables through to the DC load are not monitored.



### TRIO DIODE

With push-in connection for easy installation

➤ More information starting on page 56



### UNO DIODE

Compact diode module for decoupling power supply units connected in parallel

➤ More information starting on page 56



### STEP DIODE

Diode module for tight spaces in the control cabinet

➤ More information starting on page 56

Redundancy modules

## QUINT ORING

For decoupling, monitoring, and control

The new fourth-generation QUINT ORING modules now feature application-specific surge protection, as well as two outputs that ensure maximum system availability. The ACB Technology (Auto Current Balancing) also doubles the service life of the redundantly-operated power supplies, and thus contributes to minimizing the costs of your system.

### Auto Current Balancing Technology




Designed by Phoenix Contact

### Your advantages

- ✔ Preventive function monitoring through constant review of the input voltage, output current, and decoupling section
- ✔ Consistent redundancy through to the load with two positive output terminals
- ✔ Service life doubled with uniform load distribution
- ✔ Energy savings of 70% with MOSFETs
- ✔ Protection against overvoltages at the output (overvoltage protection) increases operational safety



# Active redundancy modules

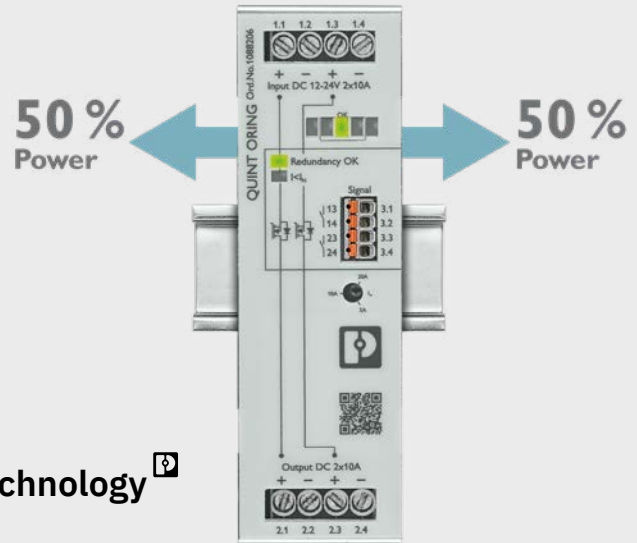
	QUINT ORING		Auto Current Balancing Technology <sup>®</sup> Designed by Phoenix Contact
			
Input	8 V DC ... 29.5 V DC	8 V DC ... 29.5 V DC	18 V DC ... 28 V DC
W x H x D in mm	39 x 130 x 132	46 x 130 x 132	66 x 130 x 125
Type	12 V ... 24 V / 2 x 10 A / 1 x 20 A QUINT4-ORING/12-24DC/2X10/2X10	12 V ... 24 V / 2 x 20 A / 1 x 40 A QUINT4-ORING/12-24DC/2X20/2X20	24 V / 2 x 40 A / 1 x 80 A QUINT-ORING/24DC/2X40/1X80
Item no.	1088206	1088207	2902879

## QUINT ORING with ACB Technology (Auto Current Balancing)

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 now ensures balanced utilization of the power supply units, thereby doubling the service life of the redundant system.

Thanks to the use of modern MOSFET technology, the resulting thermal load is reduced by up to 70% compared to using a diode. This lower level of power dissipation ensures that all the control cabinet components stay cooler.

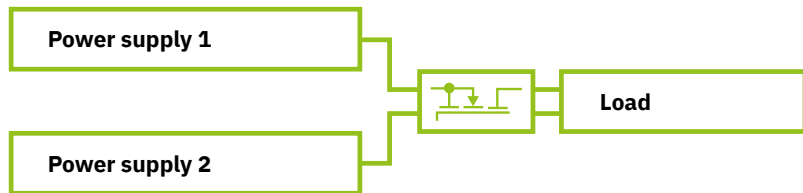


**Auto Current Balancing Technology <sup>®</sup>**  
Designed by Phoenix Contact

## Decoupling, monitoring, and control

The QUINT ORING module ensures the decoupling of the power supplies and the constant monitoring of the input voltage and the output current. You will be warned at an early stage if there is any loss of redundancy.

A system consisting of two QUINT POWER power supplies and a QUINT ORING safely limits the output voltage to 32 V DC in case of a fault.



## Redundancy modules

### QUINT S-ORING for decoupling and monitoring

The QUINT S-ORING is an active, 1-channel redundancy module for the separate structuring of a redundant system.

In combination with the 4th generation of the QUINT POWER power supplies, the input voltage and decoupling section are monitored continuously. The preventive function monitoring feature indicates all critical operating states of the redundant system.

With the overvoltage protection (OVP), the devices safeguard sensitive loads against static surge voltages, thus maximizing operational safety:

#### VP version >30 V

(QUINT4-S-ORING/12-24DC/1x40/VP)

#### Plus version >28.8 V




(QUINT4-S-ORING/12-24DC/1x40/+)



### Your advantages

- ✓ Consistent redundancy up to the load
- ✓ Constant monitoring of input voltage and decoupling section
- ✓ Energy savings of 70% by decoupling with MOSFET
- ✓ Protection against overvoltages at the output (overvoltage protection) increases operational safety
- ✓ Protective coating with ATEX and IECEx approval for extreme ambient conditions

# Active redundancy modules

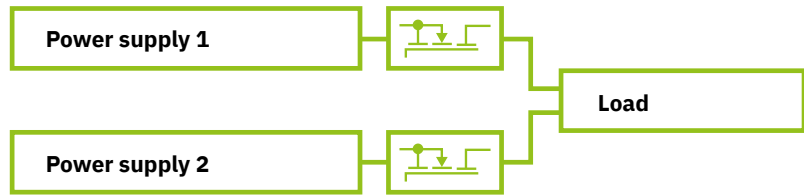
QUINT S-ORING			
			
Input	8 V DC ... 30 V DC	8 V DC ... 27.5 V DC	8 V DC ... 26 V DC
W x H x D in mm	32 x 130 x 125	32 x 130 x 125	32 x 130 x 125
	<b>12 V ... 24 V / 1 x 40 A</b>	<b>12 V ... 24 V / 1 x 40 A / VP<sup>1)</sup></b>	<b>12 V ... 24 V / 1 x 40 A / +<sup>2)</sup></b>
Type	QUINT4-S-ORING/12-24DC/1X40	QUINT4-S-ORING/12-24DC/1X40/VP	QUINT4-S-ORING/12-24DC/1X40/+
Item no.	2907752	1043418	2907753

<sup>1)</sup> Surge voltages are limited to 30 V. <sup>2)</sup> Surge voltages are limited to 28.8 V.

## Decoupling and monitoring

For the separate structuring of a redundant system, the QUINT S-ORING is well-suited to be an active, 1-channel redundancy module.

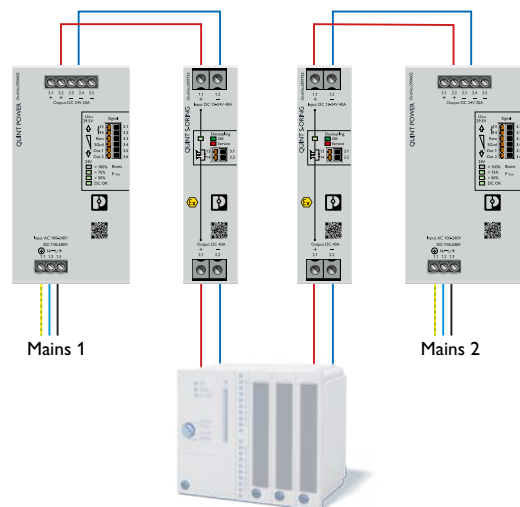
Combine the QUINT S-ORING with the 4th generation QUINT POWER power supply. You will have a fully monitored system that immediately reports critical operating states.



## Operational safety comes first

Availability is a top priority, especially in process engineering systems. Overvoltage protection (OVP) protects downstream loads from surges greater than 30 V DC or 28.8 V DC at the output.

The redundant system made up of the QUINT POWER power supply, and the active redundancy module QUINT4-S-ORING/+ ensures maximum operational safety with SIL certification. Use the system in applications with functional safety up to a safety integrity level of SIL 3 (IEC 61508).



# Passive redundancy modules



## QUINT DIODE

Robust design for high system availability, even under demanding ambient conditions



## TRIO DIODE

With push-in connection for fast and easy installation



## UNO DIODE and STEP DIODE

For decoupling small loads

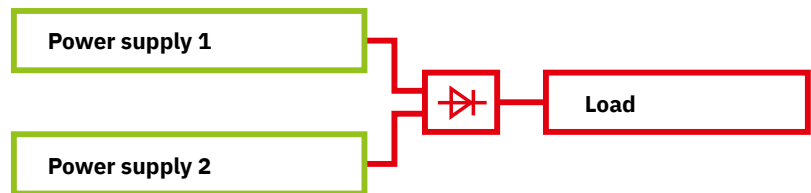
### Redundancy modules for easy decoupling

Diode modules ensure safety when supplying the system. STEP DIODE, UNO DIODE, TRIO DIODE, and QUINT DIODE are the ideal choice when it comes to easy decoupling of power supplies. They can be used for nominal voltages of 5 V DC to 48 V DC.



### Decoupling via diodes

Easy decoupling of power supplies that are operated in parallel ensures a high level of availability. If the power supplies are decoupled, a short circuit no longer has any effect on the load.











# Passive redundancy modules

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Redundancy modules

QUINT DIODE		
		
Input	10 V DC ... 30 V DC	30 V DC ... 56 V DC
W x H x D in mm	50 x 130 x 125	50 x 130 x 125
	<b>12 V ... 24 V / 2 x 20 A / 1 x 40 A</b>	<b>48 V / 2 x 20 A / 1 x 40 A</b>
Type	QUINT4-DIODE/12-24DC/2X20/1X40	QUINT4-DIODE/48DC/2X20/1X40
Item no.	<a href="#">2907719</a>	<a href="#">2907720</a>

TRIO DIODE		
		
Input	10 V DC ... 30 V DC	10 V DC ... 30 V DC
W x H x D in mm	35 x 130 x 115	41 x 130 x 115
	<b>12 V ... 24 V / 2 x 10 A / 1 x 20 A</b>	<b>12 V ... 24 V / 2 x 20 A / 1 x 40 A</b>
Type	TRIO2-DIODE/12-24DC/2X10/1X20	TRIO2-DIODE/12-24DC/2X20/1X40
Item no.	<a href="#">2907380</a>	<a href="#">2907379</a>

UNO DIODE		STEP DIODE
		
Input	4.5 V DC ... 30 V DC	4.5 V DC ... 30 V DC
W x H x D in mm	22.5 x 90 x 84	18 x 90 x 61
	<b>5 V ... 24 V / 2 x 10 A / 1 x 20 A</b>	<b>5 V ... 24 V / 2 x 5 A / 1 x 10 A</b>
Type	UNO-DIODE/5-24DC/2X10/1X20	STEP3-DIODE/5-24DC/2X5/1X10/PT
Item no.	<a href="#">2905489</a>	<a href="#">1283937</a>

# Uninterruptible power supplies

4

## No problems during mains interruptions

Mains interruptions can have serious consequences. We provide the following solutions for high 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 integrated battery module
- Comprehensive selection of battery modules



### DC UPS

- QUINT UPS with IQ Technology
- MINI and TRIO UPS with integrated power supply
- QUINT, UNO, and STEP UPS with integrated battery module

➤ More information starting on page 62



### DC UPS with integrated capacitor and buffer modules

- With double-layer capacitors
- With electrolytic capacitors

➤ More information starting on page 96



### AC UPS

- QUINT UPS with IQ Technology
- TRIO UPS with integrated battery module

➤ More information starting on page 80



### Battery modules

- Different technologies and capacities for your requirements

➤ More information starting on page 94

Uninterruptible power supplies

## POWER MANAGEMENT SUITE

Monitor and configure several power supplies and UPS systems simultaneously with our POWER MANAGEMENT SUITE software. The intelligent communication functions inform you as soon as a situation becomes critical. This reduces the amount of maintenance work needed and increases the availability of your system. All QUINT4 and TRIO 2G devices with USB or EtherNet/IP™ interfaces are supported. The software is available for download free of charge.



### Your advantages

- ✓ Holistic system monitoring: Monitor several power supplies and UPS systems from different PCs
- ✓ Easy configuration: All connected systems can be configured via the user interface directly on the system or via a control room
- ✓ Clear, user-friendly dashboard
- ✓ PC shutdown: One or more PCs can be shut down in a controlled manner in the event of a mains failure
- ✓ Modular setup: Environment is tailored in accordance with the application

# POWER MANAGEMENT SUITE

1  
2  
3  
4

Uninterruptible power supplies

## How our POWER MANAGEMENT SUITE works

### Easy configuration

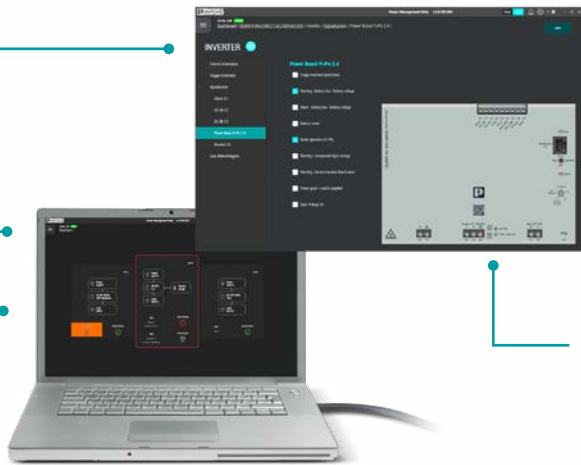
All connected systems can be configured via the user interface directly on the system or via a control room

### Dashboard

Clear, user-friendly dashboard with an overview of all systems at all times

### PC shutdown

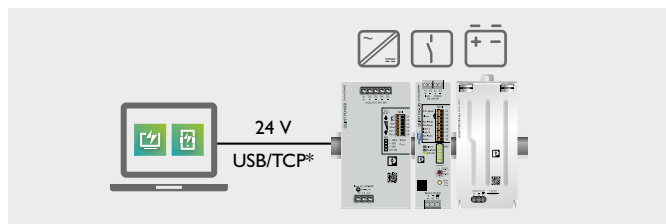
One or more PCs can be shut down in a controlled manner in the event of a mains failure



**Integrated system monitoring**  
Monitor several power supplies and UPS systems from different PCs

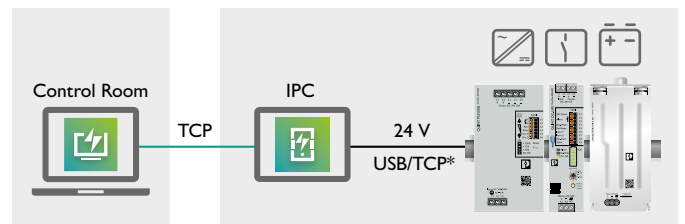
**Modular setup**  
Environment tailored in accordance with the application

## Applications



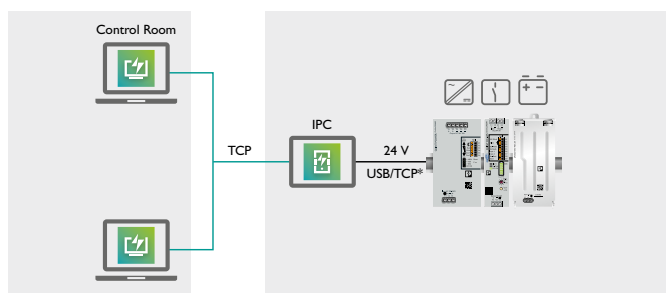
### Single-user

An industrial PC is connected directly to the Phoenix Contact power supply system via the USB or Ethernet cable. The system supplies the industrial PC with power. In the event of a mains failure, the system and the industrial PC undergo a controlled shutdown. In addition, the industrial PC is used to monitor and configure the system.



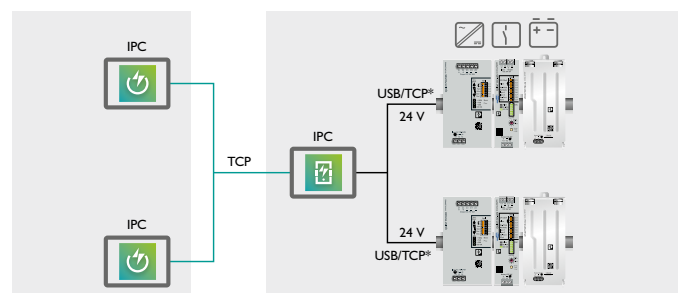
### Local network type 1

An industrial PC is connected directly to the PHOENIX CONTACT power supply system via the USB or Ethernet cable. An additional PC connected to the local network is used to monitor and configure the system.



### Local network type 2

You can also realize type 1 with several clients in a local network. To do so, install the POWER MANAGEMENT SUITE client module on an additional PC.



### Local network type 3

In addition to type 2 in a local network, you also have the option of connecting your PC to several systems at the same time. To do so, connect the industrial PC on which the POWER MANAGEMENT SUITE server is installed to an additional system via the USB or Ethernet cable.

Uninterruptible power supplies

## Supply DC loads without mains

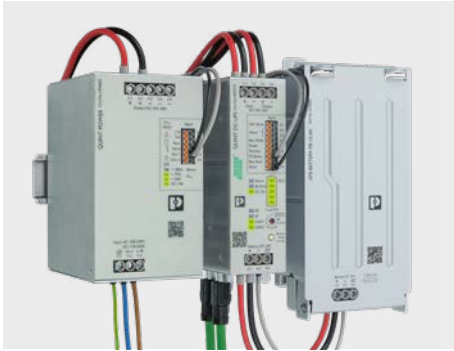
For risk-free system operation

Our uninterruptible power supplies for DC applications supply your application reliably, even when the supply network fails.

Select your DC UPS: Intelligent with IQ Technology, or space-saving with integrated battery module or integrated power supply.



# DC UPS



## QUINT UPS

You will find the QUINT UPS modules and corresponding battery modules starting on page 64.



## With integrated power supply

Space-saving solution – all you have to do is add the battery module.

➤ More information starting on page 72



## With integrated battery module

Space-saving solution – all you have to do is connect the power supply upstream.

➤ More information starting on page 78

## QUINT UPS for DC applications

Reliably protect your DC loads against power supply failure. The QUINT DC UPS for 24 V DC with output currents of 5 A to 40 A is suitable for mains interruptions that last for up to several hours.

Monitor and optimize your battery module automatically with IQ Technology. The POWER MANAGEMENT SUITE configuration and management software and data cables from Phoenix Contact are available for this purpose.

### Substantial power reserve

- For mains and battery operation
- Power Boost static power reserve
- SFB Technology (page 7)

### Easy integration into industrial networks due to interfaces

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



## IQ Technology

Designed by Phoenix Contact

### Adaptive current management

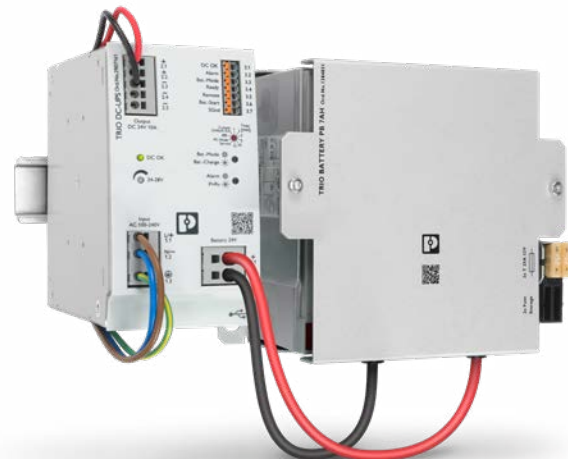
- For fast recharging and high availability of the battery module

## TRIO UPS with integrated power supply

The TRIO DC UPS with integrated power supply supplies your DC loads reliably and with minimal space requirements.

You can easily shut down connected industrial PCs via the integrated USB interface. Startup from the battery module is possible even without power supply input, thus simplifying the commissioning process. You can safeguard your system for up to several hours with the large selection of battery modules. With POWER MANAGEMENT SUITE software, you can optimally adapt the behavior of the UPS to your application.

You will find all TRIO UPS modules and the matching battery modules on page 72.



# 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 A to 40 A enable you to create a custom solution consisting of a power supply, UPS module, and battery

module. With IQ Technology and a powerful battery charger, the battery management system (BMS) ensures high system availability.

You will find all the QUINT devices with the corresponding battery modules starting on page 68.

**IQ Technology** 

Designed by Phoenix Contact



## Your advantages

- ✔ Evaluation of the state of health (SOH) and state of charge (SOC) with the intelligent battery management system (BMS)
- ✔ Automatic recognition of battery capacities and technologies (Pb, 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, so loads connected in parallel continue working



EtherNet/IP



EtherCAT



Power supply



UPS module



Battery module



# QUINT DC UPS

1  
2  
3  
4

Uninterruptible power supplies

QUINT UPS		IQ Technology <sup>1)</sup> 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
	<b>24 V / 5 A / PN</b>	<b>24 V / 10 A / PN</b>	<b>24 V / 20 A / PN</b>	<b>24 V / 40 A / PN</b>
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
Item no.	2906993	2907068	2907073	2907079
	<b>24 V / 5 A / EIP</b>	<b>24 V / 10 A / EIP</b>	<b>24 V / 20 A / EIP</b>	<b>24 V / 40 A / EIP</b>
Type EtherNet/IP Modbus/TCP	QUINT4-UPS/ 24DC/24DC/5/EIP	QUINT4-UPS/ 24DC/24DC/10/EIP	QUINT4-UPS/ 24DC/24DC/20/EIP	QUINT4-UPS/ 24DC/24DC/40/EIP
Item no.	2906994	2907069	2907074	2907080
	<b>24 V / 5 A / EC</b>	<b>24 V / 10 A / EC</b>	<b>24 V / 20 A / EC</b>	<b>24 V / 40 A / EC</b>
Type EtherCAT <sup>1)</sup>	QUINT4-UPS/ 24DC/24DC/5/EC	QUINT4-UPS/ 24DC/24DC/10/EC	QUINT4-UPS/ 24DC/24DC/20/EC	QUINT4-UPS/ 24DC/24DC/40/EC
Item no.	2906996	2907070	2907076	2907081
	<b>24 V / 5 A / USB</b>	<b>24 V / 10 A / USB</b>	<b>24 V / 20 A / USB</b>	<b>24 V / 40 A / USB</b>
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
Item no.	2906991	2907067	2907072	2907078
	<b>24 V / 5 A</b>	<b>24 V / 10 A</b>	<b>24 V / 20 A</b>	<b>24 V / 40 A</b>
Type without interface	QUINT4-UPS/ 24DC/24DC/5	QUINT4-UPS/ 24DC/24DC/10	QUINT4-UPS/ 24DC/24DC/20	QUINT4-UPS/ 24DC/24DC/40
Item no.	2906990	2907066	2907071	2907077




<sup>1)</sup> These devices support SFB Technology.

## QUINT charger – charging rectifier for the DIN rail

With the QUINT charger, the additional charging device for QUINT DC UPS, you can charge both lead and lithium batteries more quickly. The temperature-optimized charging process increases the service life of the battery module, while the higher charging current reduces the charging time.

The two devices communicate via system communication, the coordinated system for optimized battery charging. The charging parameters are configured via the USB interface. Battery status is indicated via LEDs and signal contacts.

You will find the corresponding battery modules starting on page 68.

QUINT CHARGER		
		
W x H x D in mm	60 x 130 x 126	
	<b>24 V / 10 A</b>	
Type	QUINT4-CHARGER/1AC/24DC/10	
Item no.	2907990	

# Uninterruptible power supplies

## IQ Technology for an intelligent UPS system

IQ Technology is the key to an intelligent power supply solution. An intelligent UPS with IQ Technology monitors and optimizes the battery module, reduces maintenance effort, and increases your system availability.

It determines all the relevant states of the battery module. This ensures the crucial transparency required to guarantee supply stability and the best possible utilization of the battery module at all times.

The intelligent battery management calculates the remaining runtime available. It advises as soon as a threshold value is reached. In this way, your system works as long as possible and is shut down before the battery voltage runs out.

The connected battery module is detected automatically. The optimally adjusted charging characteristic maximizes the service life of the battery module. The adapted charging current provides the quickest possible recharging and availability of the energy storage device.

You can keep an eye on your system at all times with intelligent IQ Technology devices. With the QUINT DC UPS, the QUINT CAP, 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.

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

With the intelligent QUINT DC UPS for integration into existing industrial networks, you are ready for Industry 4.0. The integrated interfaces enable you to monitor, configure, or shut down the system in a safe state at any time, regardless of location.

### 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 interface are available in all four performance classes (5 A, 10 A, 20 A, and 40 A).

### Two-port switch

Our QUINT DC UPS has a two-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 input and output voltages and the associated currents

- PC shutdown function: Reliable shutdown of your industrial PC in the event of a mains failure without data loss, and automatic restart of the industrial PC when the mains power returns
- Cold-start function: UPS startup even without mains power

### Function blocks

We include the corresponding function blocks for the following engineering environments so that the QUINT DC UPS can be commissioned quickly:

- PLCnext
- TIA Portal
- Studio 5000
- TwinCAT

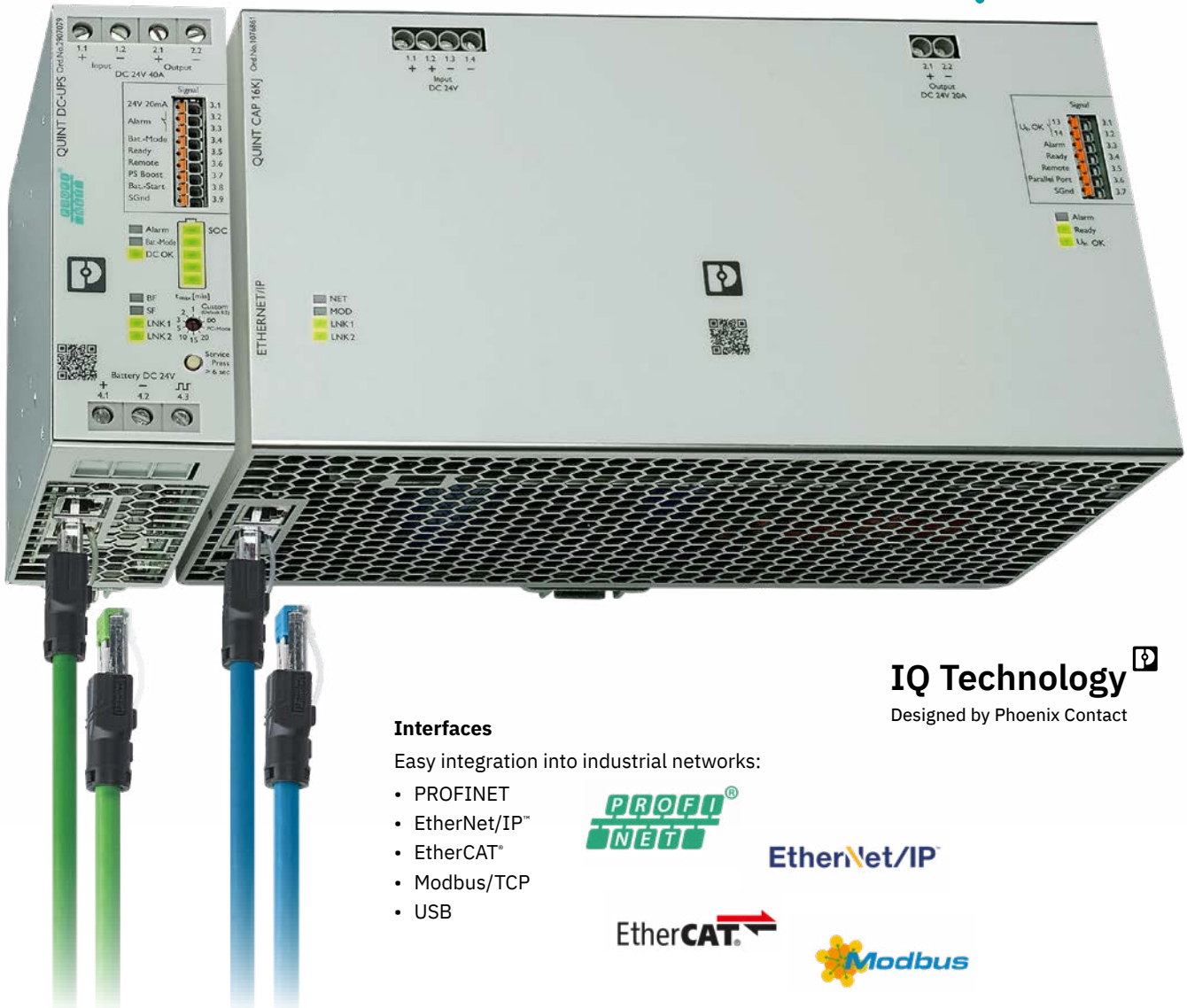
### Device descriptions

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



QUINT DC UPS

QUINT CAP



## IQ Technology <sup>®</sup>

Designed by Phoenix Contact

### Interfaces

Easy integration into industrial networks:

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



### System communication

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

### Intelligent battery management SOC (State of Charge)

Describes the current state of charge and the remaining battery module runtime.

### Intelligent charging

Adapts the charging current, and thereby ensures fast recharging and availability.

### Intelligent Battery Management SOH (State of Health)

Reports on the life remaining for the battery module and provides early warning of failures.

# QUINT DC UPS and battery module

## Select your combination of QUINT DC UPS and battery module here

The UPS modules for 24 V DC with output currents ranging from 5 A to 40 A enable you to create a custom solution consisting of a power supply, UPS module, and battery module. The QUINT DC UPS is available with integrated interfaces for PROFINET,

EtherNet/IP™, EtherCAT®, and USB. If no network connection is needed, there are also variants without an interface.









Power supply



UPS module



Battery module

UPS-BAT/PB 				
				
	54 x 157 x 113	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110
W x H x D in mm				
	<b>1.2 Ah</b>	<b>4 Ah</b>	<b>7 Ah</b>	<b>12 Ah</b>
Type	UPS-BAT/PB/24DC/1.2AH	UPS-BAT/PB/24DC/4AH	UPS-BAT/PB/24DC/7AH	UPS-BAT/PB/24DC/12AH
Item no.	<a href="#">1274520</a>	<a href="#">1274117</a>	<a href="#">1274118</a>	<a href="#">1274119</a>

	QUINT UPS					IQ Technology <sup>®</sup> Designed by Phoenix Contact	... with dual output
W x H x D in mm	35 x 130 x 132	35 x 130 x 132	40 x 130 x 132	47 x 130 x 125	35 x 130 x 125		
Type	24 V / 5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A	12 V / 5 A / 24 V / 10 A		
Recommended battery modules UPS/BAT/...	LI VRLA-WTR PB (1.2 Ah ... 40 Ah) (max. 40 Ah)	LI VRLA-WTR PB (1.2 Ah ... 40 Ah) (max. 80 Ah)	LI VRLA-WTR PB (4 Ah ... 110 Ah) (max. 135 Ah)	LI VRLA-WTR PB (5 Ah ... 110 Ah) (max. 135 Ah)	LI VRLA-WTR PB (1.2 Ah ... 40 Ah) (max. 60 Ah)		

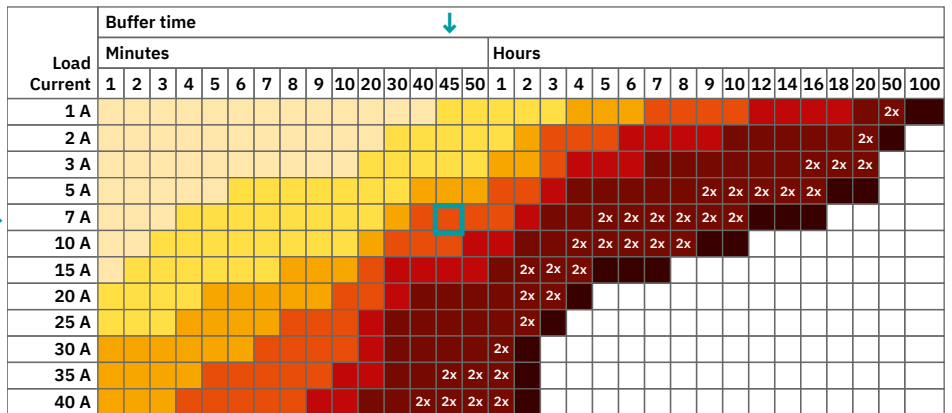
	UPS-BAT/PB				
W x H x D in mm	155 x 168 x 183	333 x 173 x 199	350 x 214 x 332		
Type	20 Ah	40 Ah	110 Ah	<b>NEW</b>	
Item no.	1348516	1354641	1474660		

### Buffer times for QUINT DC UPS with Pb battery module

Select the battery module for your 24 V DC applications here.

Example: 7 A is to be buffered for 45 minutes.

- 
- QUINT4-UPS/24DC/24DC/10A and
- UPS-BAT/PB/24DC/12AH



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

# QUINT DC UPS and battery module

## Select your combination of QUINT DC UPS and battery module here

The UPS modules for 24 V DC with output currents ranging from 5 A to 40 A enable you to create a custom solution consisting of a power supply, UPS module, and battery module. The QUINT DC UPS is available with integrated interfaces for PROFINET,

EtherNet/IP™, EtherCAT®, and USB. If no network connection is needed, there are also variants without an interface.






Power supply



UPS module



Battery module







UPS-BAT/LI		
		
W x H x D in mm	135 x 202 x 110	
<b>128 Wh</b>		
Type	UPS-BAT/LI/24DC/128WH	
Item no.	<a href="#">1396415</a>	





### Buffer times for QUINT DC UPS with lithium battery module

Example: 10 A can be buffered for a maximum of 25 minutes.

Load Current	Buffer time																					
	Minutes																Hours					
	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	1	2	3
1 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
2 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
3 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
5 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
7 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
10 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
15 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
20 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
25 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
30 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
35 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
40 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

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

	QUINT UPS					IQ Technology <sup>®</sup> Designed by Phoenix Contact	... with dual output
							
W x H x D in mm	35 x 130 x 132	35 x 130 x 132	40 x 130 x 132	47 x 130 x 125	35 x 130 x 125		
	<b>24 V / 5 A</b>	<b>24 V / 10 A</b>	<b>24 V / 20 A</b>	<b>24 V / 40 A</b>	<b>12 V / 5 A / 24 V / 10 A</b>		
Type	QUINT4-UPS/ 24DC/24DC/5 ...	QUINT4-UPS/ 24DC/24DC/10	QUINT4-UPS/ 24DC/24DC/20 ...	QUINT4-UPS/ 24DC/24DC/40 ...	QUINT-UPS/ 24DC/12DC/5/24DC/10		
Recommended battery modules UPS/BAT/...	LI VRLA-WTR PB (1.2 Ah ... 40 Ah) (max. 40 Ah)	LI VRLA-WTR PB (1.2 Ah ... 40 Ah) (max. 80 Ah)	LI VRLA-WTR PB (4 Ah ... 110 Ah) (max. 135 Ah)	LI VRLA-WTR PB (5 Ah ... 110 Ah) (max. 135 Ah)	LI VRLA-WTR PB (1.2 Ah ... 40 Ah) (max. 60 Ah)		

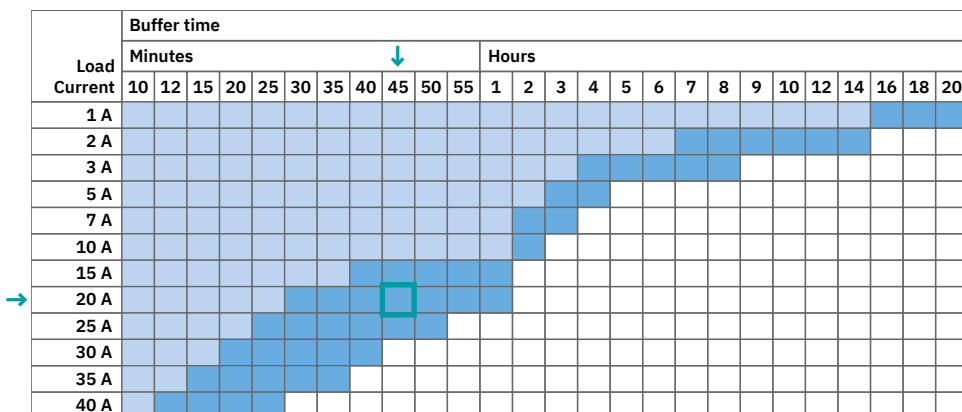
	UPS-BAT/VRLA-WTR		
			
W x H x D in mm	172 x 177 x 178		358 x 174 x 169
	<b>13 Ah</b>		<b>26 Ah</b>
Type	UPS-BAT/VRLA-WTR/24DC/13AH		UPS-BAT/VRLA-WTR/24DC/26AH
Item no.	<a href="#">2320416</a>		<a href="#">2320429</a>

### Buffer times for QUINT DC UPS with VRLA-WTR battery module

Select the battery module for your 24 V DC applications here.

Example: 20 A is to be buffered for 45 minutes.

- ■
- QUINT4-UPS/24DC/24DC/20A and
- UPS-BAT/VRLA-WTR/24DC/26AH



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

# TRIO DC UPS and battery module

Select your combination of TRIO DC UPS with integrated power supply and TRIO battery module here

The TRIO DC UPS with integrated power supply combines two functions in a single housing. The compact solution saves space in the control cabinet and can be adapted to your individual requirements. An input grid is no longer necessary for commissioning. Connected industrial PCs can be shut down easily via the integrated USB interface.

Select the battery capacity according to your required buffer time. This makes it easy for you to put together your own individual complete system.



Power supply    UPS module    Battery module

## The perfect combination of TRIO DC UPS and TRIO battery module

By combining the TRIO UPS and a TRIO BAT battery module, you will receive a complete solution from a single source. No additional material is required for the connection. The UPS and battery module can be connected and combined particularly easily with Push-in Technology.






Different product combinations are possible depending on the application and use case. These combination solutions






ensure that your system is buffered reliably over the desired time period.

The new TRIO battery is the perfect addition to the TRIO UPS family. Choose the solution consisting of UPS and battery tailored perfectly to your requirements from the various combination options.





		TRIO UPS, 1~			TRIO UPS, 3~
					
Input		85 V AC ... 264 V AC 110 V DC ... 250 V DC	85 V AC ... 264 V AC 110 V DC ... 250 V DC	85 V AC ... 264 V AC 110 V DC ... 250 V DC	3 x 320 V AC ... 575 V AC 2 x 360 V AC ... 550 V AC
W x H x D in mm		60 x 130 x 60	68 x 130 x 68	88 x 130 x 160	88 x 130 x 160
		<b>24 V / 5 A</b>	<b>24 V / 10 A</b>	<b>24 V / 20 A</b> <b>NEW</b>	<b>24 V / 20 A</b>
Type		TRIO-UPS-2G/1AC/24DC/5	TRIO-UPS-2G/1AC/24DC/10	TRIO-UPS-2G/1AC/24DC/20	TRIO-UPS-2G/3AC/24DC/20
Item no.		2907160	2907161	1105556	2906367

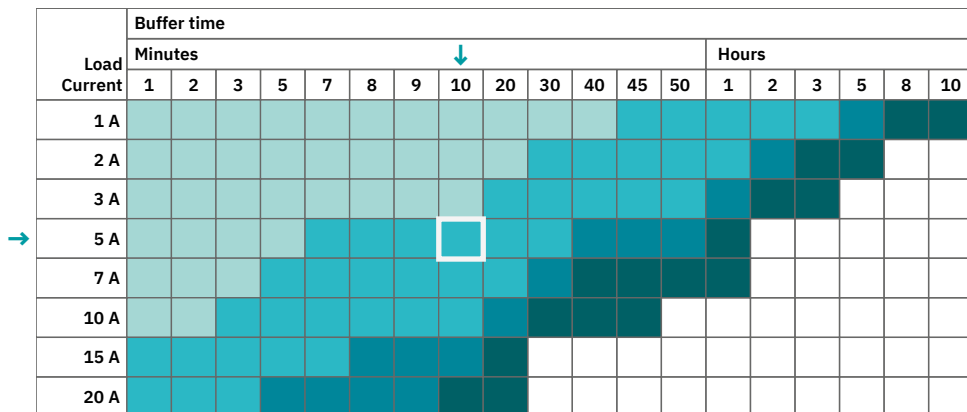
		TRIO BAT			
					
W x H x D in mm		52 x 141 x 108	115 x 154 x 113	164 x 159 x 114	233 x 159 x 114
		<b>1.2 Ah</b> <b>NEW</b>	<b>4 Ah</b> <b>NEW</b>	<b>7 Ah</b> <b>NEW</b>	<b>12 Ah</b> <b>NEW</b>
Type		TRIO-BAT/PB/24DC/1.2AH	TRIO-BAT/PB/24DC/4AH	TRIO-BAT/PB/24DC/7AH	TRIO-BAT/PB/24DC/12AH
Item no.		1394729	1394730	1384031	1394727

### Buffer times for TRIO DC UPS with the TRIO battery module

Select the battery module for your TRIO DC UPS here.

Example: 5 A is to be buffered for 10 minutes.

- 
- TRIO-UPS-2G/1AC/24DC/5 and
- TRIO-BAT/PB/24DC/4AH



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

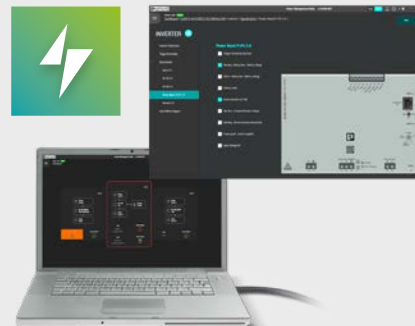
# TRIO DC UPS and battery module

Select your combination of TRIO DC UPS with integrated power supply and battery module here

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

## POWER MANAGEMENT SUITE

You can use the POWER MANAGEMENT SUITE to monitor and configure the TRIO UPS with the corresponding battery module. Easily perform a regulated shutdown of an IPC in the event of a mains failure with the PC shutdown function.



Power supply    UPS module    Battery module

	UPS-BAT/PB	
W x H x D in mm	155 x 168 x 183	333 x 173 x 199
	<b>20 Ah</b>	<b>40 Ah</b>
Type	UPS-BAT/PB/24DC/20AH	UPS-BAT/PB/24DC/40AH
Item no.	<a href="#">1348516</a>	<a href="#">1354641</a>

## Buffer times for TRIO DC UPS with Pb battery module

Select the battery module for your TRIO DC UPS here.

Example: 5 A is to be buffered for 1 hour.

- ■
- TRIO-UPS-2G/1AC/24DC/5 and
- UPS-BAT/PB/24DC/20AH

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

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

	TRIO UPS, 1~			TRIO UPS, 3~
Input	85 V AC ... 264 V AC 110 V DC ... 250 V DC	85 V AC ... 264 V AC 110 V DC ... 250 V DC	85 V AC ... 264 V AC 110 V DC ... 250 V DC	3 x 320 V AC ... 575 V AC 2 x 360 V AC ... 550 V AC
W x H x D in mm	60 x 130 x 60	68 x 130 x 68	88 x 130 x 160	88 x 130 x 160
	<b>24 V / 5 A</b>	<b>24 V / 10 A</b>	<b>24 V / 20 A</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>24 V / 20 A</b>
Type	TRIO-UPS-2G/1AC/24DC/5	TRIO-UPS-2G/1AC/24DC/10	TRIO-UPS-2G/1AC/24DC/20	TRIO-UPS-2G/3AC/24DC/20
Item no.	<a href="#">2907160</a>	<a href="#">2907161</a>	<a href="#">1105556</a>	<a href="#">2906367</a>

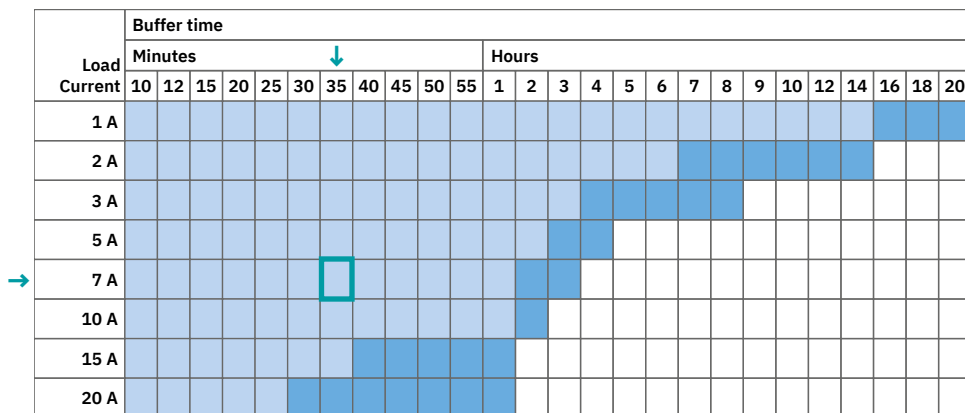
	UPS-BAT/VRLA-WTR	
W x H x D in mm	172 x 177 x 178	358 x 174 x 169
	<b>13 Ah</b>	<b>26 Ah</b>
Type	UPS-BAT/VRLA-WTR/24DC/13AH	UPS-BAT/VRLA-WTR/24DC/26AH
Item no.	<a href="#">2320416</a>	<a href="#">2320429</a>

### Buffer times for TRIO DC UPS with VRLA-WTR battery module

Select the battery module for your TRIO DC UPS here.

Example: 7 A is to be buffered for 35 minutes.

- 
- TRIO-UPS-2G/1AC/24DC/10 and
- UPS-BAT/VRLA-WTR/24DC/13AH



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

# MINI DC UPS and battery modules

## Select your combination of MINI DC UPS with integrated power supply and battery module

With its comprehensive signaling functions, the compact MINI UPS is always used in applications where space-saving solutions are needed. The battery module with lead AGM technology enables buffer times of

up to 40 minutes at nominal load for output voltages of 24 V DC or 12 V DC.



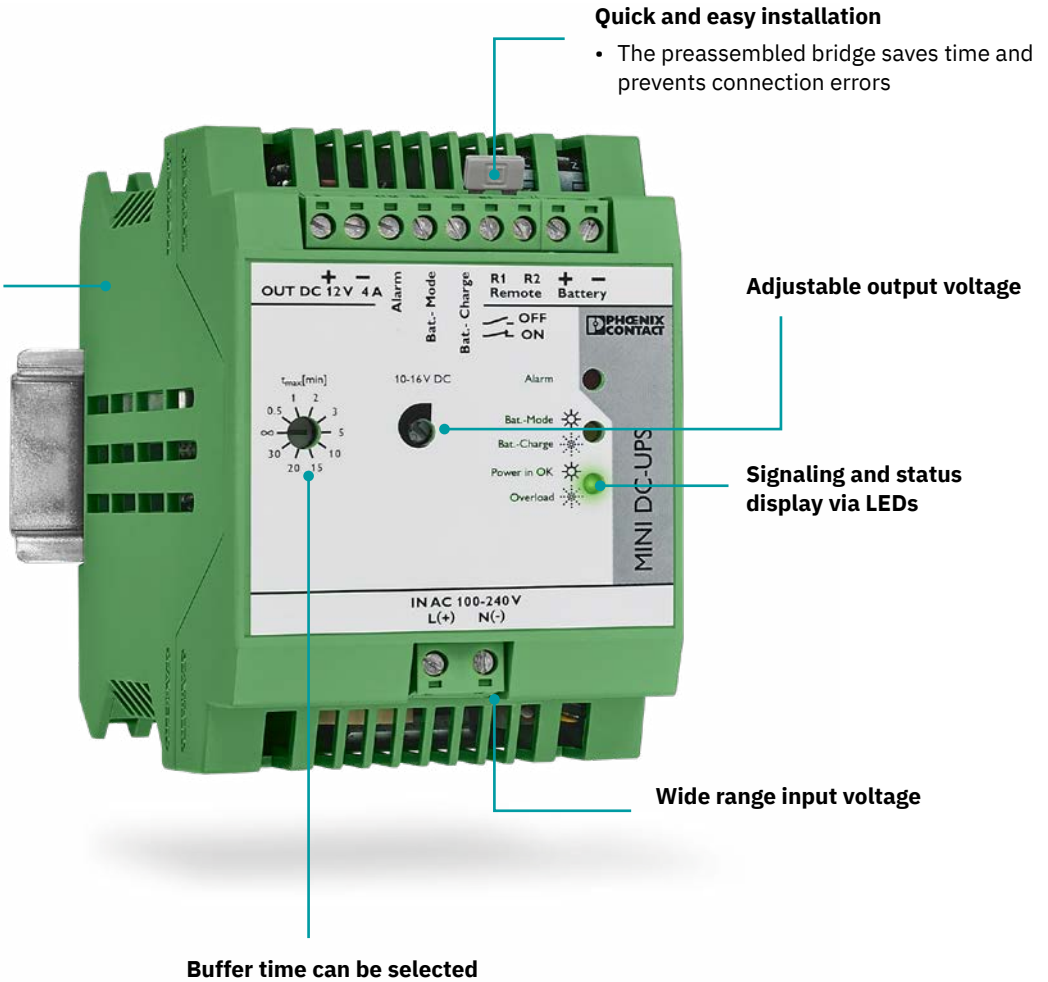
Power supply



UPS module



Battery module



**Quick and easy installation**

- The preassembled bridge saves time and prevents connection errors

**Particularly space-saving**




- With a compact design

**Adjustable output voltage**




**Signaling and status display via LEDs**

**Wide range input voltage**

**Buffer time can be selected**

	MINI UPS, 1~	Battery modules for 24 V DC systems	
			
Input	85 V AC ... 264 V AC 100 V DC ... 350 V DC	-	-
W x H x D in mm	67.5 x 99 x 107	67.5 x 99 x 107	52 x 141 x 108

	24 V / 2 A	0.8 Ah	1.2 Ah <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Type	MINI-DC-UPS/24DC/2	MINI-BAT/24DC/0.8AH	TRIO-BAT/PB/24DC/1.2AH
Item no.	<a href="#">2866640</a>	<a href="#">2866666</a>	<a href="#">1394729</a>
Information	-	Lead AGM technology	Lead AGM technology

	MINI UPS, 1~	Battery modules for 12 V DC systems	
			
Input	85 V AC ... 264 V AC 100 V DC ... 350 V DC	-	-
W x H x D in mm	67.5 x 99 x 107	67.5 x 99 x 107	52 x 130 x 110

	12 V / 4 A	1.6 Ah	2.4 Ah
Type	MINI-DC-UPS/12DC/4	MINI-BAT/12DC/1.6AH	MINI-BAT/12DC/2.6AH
Item no.	<a href="#">2866598</a>	<a href="#">2866572</a>	<a href="#">2866569</a>
Information	-	Lead AGM technology	Lead AGM technology

### Buffer times for MINI DC UPS for 24 and 12 V DC systems

Example of a 24 V DC system:  
1 A is to be buffered for 30 minutes.

- 
- MINI-DC-UPS/24DC/2 and
- MINI-BAT/24DC/1.2AH

Load Current	Buffer time for 24 V DC system										
	Minutes										Hour
	8	9	10	15	20	25	30	40	45	50	1
0.5 A											
1 A											
1.5 A											
2 A											

Example of a 12 V DC system:  
1 A is to be buffered for 30 minutes.

- 
- MINI-DC-UPS/12DC/4 and
- MINI-BAT/12DC/1.6AH

Load Current	Buffer time for 12 V DC system										
	Minutes									Hour	
	8	9	10	20	30	40	45	50	1	2	3
0.5 A											
1 A											
1.5 A											
2 A											

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

# DC UPS

## Select your QUINT DC UPS with integrated battery module here

### QUINT DC UPS

The QUINT DC UPS is very space-saving and can be retrofitted in existing systems very easily. Simply connect a 24 V DC power supply unit upstream, and the UPS solution is complete. When the battery modules have exceeded their service life, they can be quickly and easily replaced.

- IQ Technology: With the integrated temperature sensor, the UPS calculates the optimized charging currents and therefore increases the service life of the battery module
- Minimal wiring effort
- Maintenance-free battery module with lead AGM technology



Power supply    UPS module    Battery module

QUINT UPS <sup>1)</sup>		IQ Technology <sup>TM</sup> <small>Designed by Phoenix Contact</small>
Input	18 V DC ... 30 V DC	18 V DC ... 30 V DC
W x H x D in mm	88 x 138 x 125	120 x 169 x 125
	<b>24 V / 5 A / 1.2 Ah</b>	<b>24 V / 10 A / 4 Ah</b>
Type	QUINT-UPS/ 24DC/ 24DC/5/1.3AH	QUINT-UPS/ 24DC/ 24DC/10/3.4AH
Item no.	2320254	2320267
Information	Lead AGM technology	Lead AGM technology

<sup>1)</sup>These devices support SFB Technology.

### Buffer times for QUINT UPS

Select your UPS with integrated battery module here.

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

→ ■  
→ QUINT-UPS/24DC/24DC/10/3.4AH

Load Current	Buffer time																				
	Minutes															Hours					
	1	2	3	4	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																					

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

## Select your DC UPS with integrated battery module here

### UNO DC UPS

Harmonized with the UNO POWER power supply range, the UNO UPS with 60 W output power is available. The uninterruptible power supply operates flexibly at input voltages ranging from 22.5 to 29.5 V DC. The integrated lead AGM battery module ensures long buffer times of up to 45 minutes.





### STEP DC UPS

The STEP UPS has been designed specifically for use in distribution boards. The uninterruptible power supply operates flexibly at input voltages ranging from 22.5 to 29.5 V DC. The integrated lithium-ion battery module ensures long buffer times of up to 90 minutes at 24 V. The 12 V version operates at input voltages ranging

from 10 V DC to 16.5 V DC. The output current is buffered for up to 45 minutes.



Power supply   UPS module   Battery module

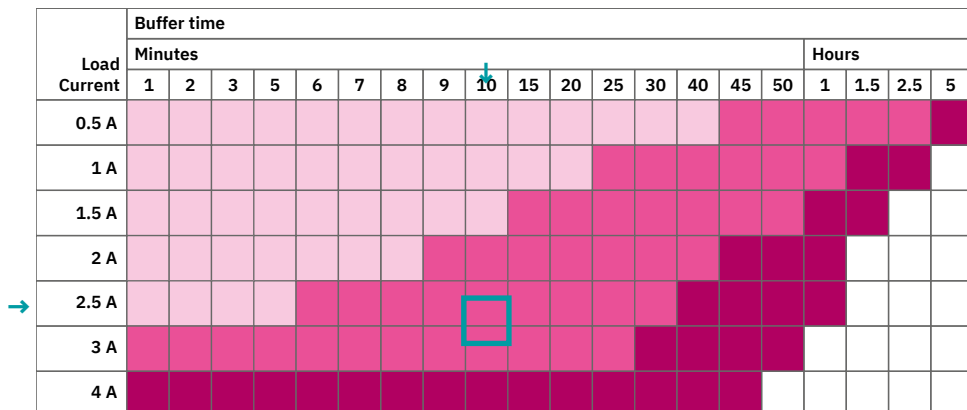
	UNO UPS	STEP UPS	
			
Input	22.5 V DC ... 29.5 V DC	22.5 V DC ... 29.5 V DC	10 V DC ... 16.5 V DC
W x H x D in mm	110 x 90 x 84	108 x 90 x 71	108 x 90 x 71
	<b>24 V / 60 W</b>	<b>24 V / 3 A / 46 Wh</b>	<b>12 V / 4 A / 46 Wh</b>
Type	UNO-UPS/24DC/24DC/60W	STEP-UPS/24DC/24DC/3/46WH	STEP-UPS/12DC/12DC/4/46WH
Item no.	<a href="#">2905907</a>	<a href="#">1081430</a>	<a href="#">1082548</a>
Information	Lead AGM technology	Lithium-ion technology	Lithium-ion technology

## Buffer times for UNO UPS and STEP UPS

Select your UPS with integrated battery module here.

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

- 
- STEP-UPS/24DC/24DC/3A/46WH



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

Uninterruptible power supplies

## Supplying AC loads without mains

For online and offline operation

Our uninterruptible power supplies for industrial AC applications ensure maximum failsafe performance and system availability in the event of voltage failures or fluctuations. The AC UPS delivers a pure sine curve at the output and supplies AC loads with alternating current of up to 2.5 kVA without interruption. Choose the ideal AC UPS with appropriate battery module for your application.





# AC UPS



## QUINT HP UPS

For wall mounting, with IQ Technology and suitable external battery module with a power of up to 2.5 kVA.



## QUINT AC UPS

For the DIN rail, with IQ Technology and suitable battery module for loads up to 1 kVA.



## TRIO AC UPS

For the DIN rail, with integrated battery module, for more space in the control cabinet.

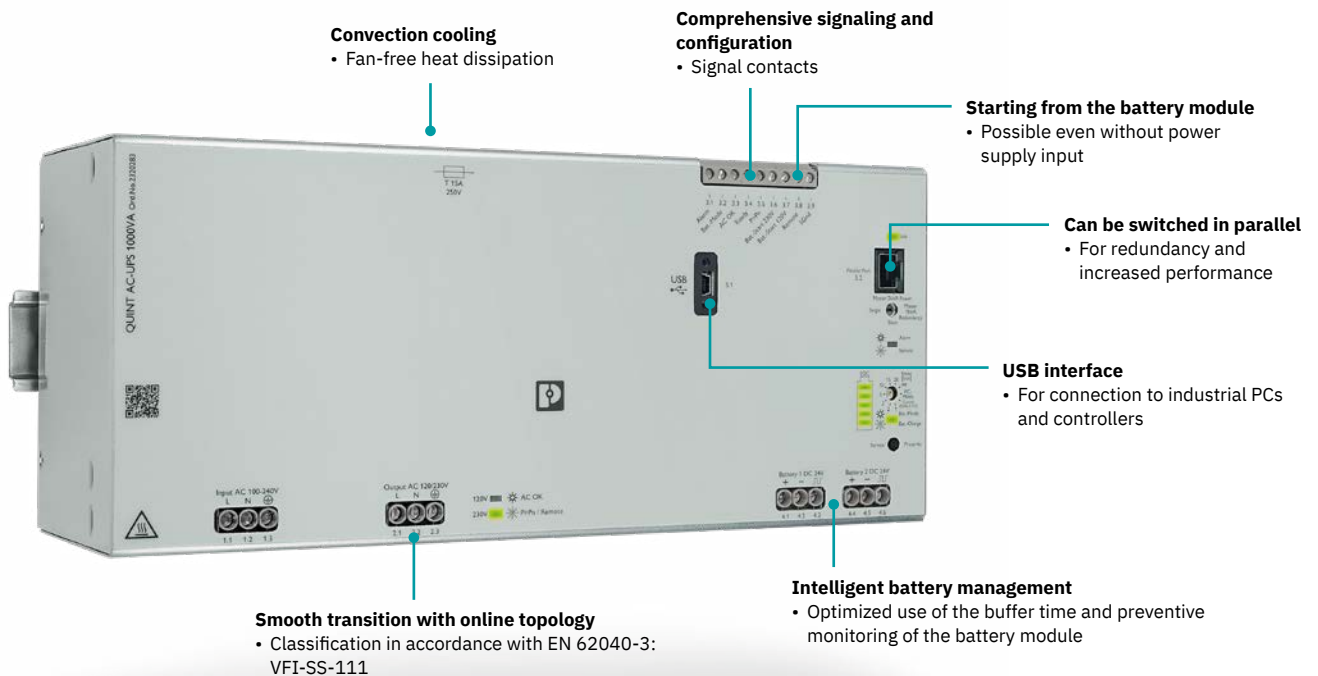
## QUINT AC UPS

The clever IQ Technology in the QUINT UPS for AC applications monitors and optimizes the operation of your battery module. To supply your processes and applications as long as possible, use the complete energy content. You will be warned at an early stage of possible failures, because your UPS detects the remaining expected life of the battery

module. At the same time, the UPS detects the current performance of the energy storage device. The different battery module types available allow the optimized operation of your system.

The UPS can be integrated via the USB interface, which means it can be connected to higher-level controllers. The QUINT AC UPS delivers a pure

sine curve at the output. The sine wave generated during battery operation is synchronized to the grid previously used for supply, allowing seamless transition.



# QUINT AC UPS and battery module

## Select your combination of High Power QUINT AC UPS and battery module here

The new QUINT HP UPS for powers up to 2.5 kVA can be mounted directly on the wall and ensures superior system availability with the appropriate battery module.

In the event of power failure, the QUINT HP-UPS ensures uninterrupted transition to buffer mode and back again. Mains input and output voltages are synchronous.





The online topology with a pure sine wave reliably supplies your AC loads with a perfect voltage at powers ranging from 1.5 to 2.5 kVA.

The QUINT HP-UPS has a slot to accommodate optionally available communication cards such as USB and RS-232/RS-485.

The state of charge of the UPS as well as the buffer time and the service life of the battery module can be viewed at any time via the software.



Power supply    UPS module    Battery module

	QUINT HP-UPS	 IQ Technology <small>Designed by Phoenix Contact</small>	QUINT HP-BAT
			
W x H x D in mm	150 x 240 x 143	150 x 240 x 143	156.5 x 354 x 143
	<b>120 AC / 1.5 kVA</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>230 AC / 1.5 kVA</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>7 Ah</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
No. of battery modules			1x    2x    3x    4x    5x
Type	QUINT-HP-UPS/ 120AC/1.5KVA/PT	QUINT-HP-UPS/ 230AC/1.5KVA/PT	QUINT-HP-BAT/PB/48DC/7.0AH/PT
Item no.	<a href="#">1136804</a>	<a href="#">1136811</a>	<a href="#">1133819</a>

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

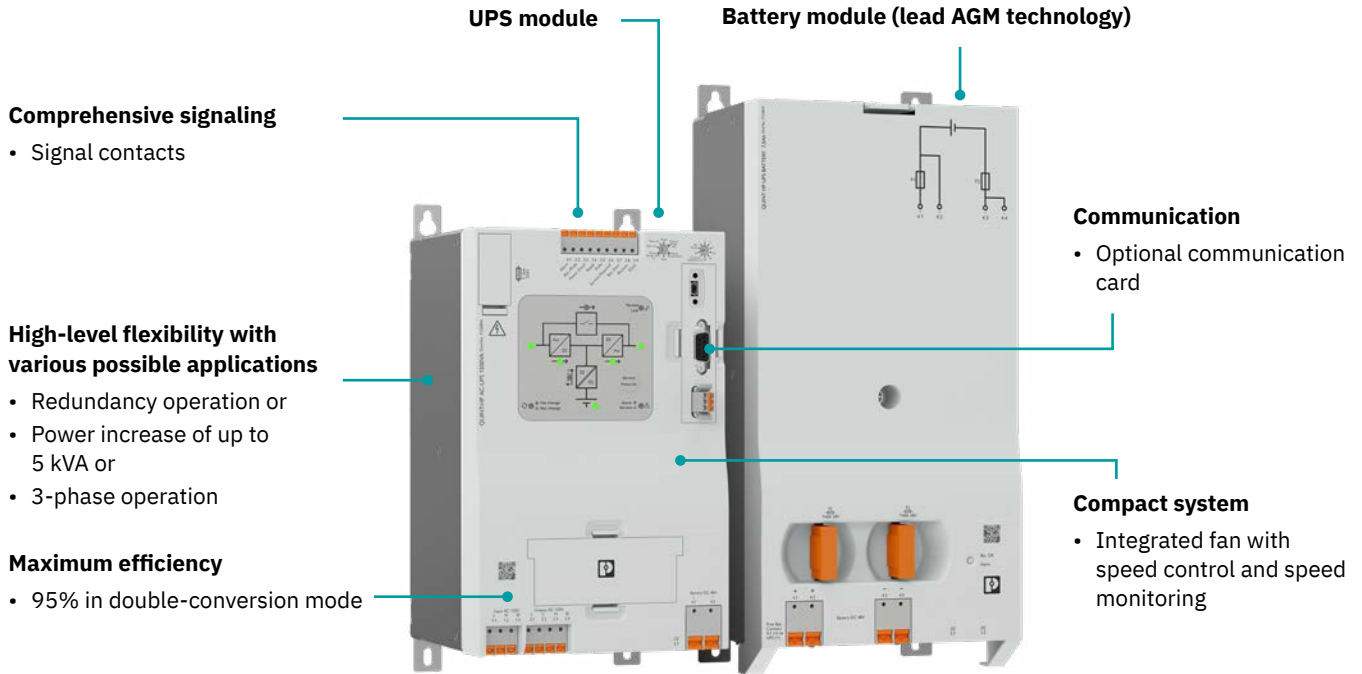
Select the battery module for your QUINT HP UPS/1.5 kVA (120/230 V application) here.





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

- 
- QUINT-HP-UPS/230AC/1.5KVA/PT
- 2x QUINT-HP-BAT/PB/48DC/7.0AH/PT

Load Current	Buffer time																							
	Minutes						Hours																	
	1	2	3	5	7	8	9	10	15	20	30	40	45	50	1	2	3	4	5	6	8	9	10	12
100 W																								
250 W																								
500 W																								
800 W																								
1000 W																								
1150 W																								
1350 W																								

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



	QUINT HP-UPS	 IQ Technology Designed by Phoenix Contact	QUINT HP-BAT
			
W x H x D in mm	188 x 240 x 143	188 x 240 x 143	156.5 x 354 x 143
	<b>120 AC / 2.5 kVA</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>230 AC / 2.5 kVA</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>	<b>7 Ah</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
No. of battery modules			2x <span style="background-color: #9c27b0; color: white; padding: 2px;">4x</span> <span style="background-color: #9c27b0; color: white; padding: 2px;">6x</span> <span style="background-color: #9c27b0; color: white; padding: 2px;">8x</span> <span style="background-color: #9c27b0; color: white; padding: 2px;">10x</span>
Type	QUINT-HP-UPS/ 120AC/2.5kVA/PT	QUINT-HP-UPS/ 230AC/2.5kVA/PT	QUINT-HP-BAT/PB/48DC/7.0AH/PT
Item no.	<a href="#">1136813</a>	<a href="#">1136815</a>	<a href="#">1133819</a>

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

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

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

- ■
- QUINT-HP-UPS/230AC/2.5kVA/PT
- 8x QUINT-HP-BAT/PB/48DC/7.0AH/PT

Load Current	Buffer time																						
	Minutes															Hours							
	1	2	3	5	7	8	9	10	15	20	30	40	45	50	1	2	3	4	5	6	8	9	10
250 W																							
500 W																							
1000 W																							
1250 W																							
1500 W																							
1750 W																							
2000 W																							
2250 W																							

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

# QUINT AC UPS and battery module

## Select your combination of QUINT AC UPS/500VA and battery module here

With the new QUINT AC UPS, you can also reliably protect smaller loads up to 500 VA. Only one battery module is needed to safeguard your system.








Power supply







UPS module



Battery module

	UPS-BAT/PB			
				
W x H x D in mm	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110	
	<b>4 Ah</b>	<b>7 Ah</b>	<b>12 Ah</b>	
Type	UPS-BAT/PB/24DC/4AH	UPS-BAT/PB/24DC/7AH	UPS-BAT/PB/24DC/12AH	
Item no.	<a href="#">1274117</a>	<a href="#">1274118</a>	<a href="#">1274119</a>	

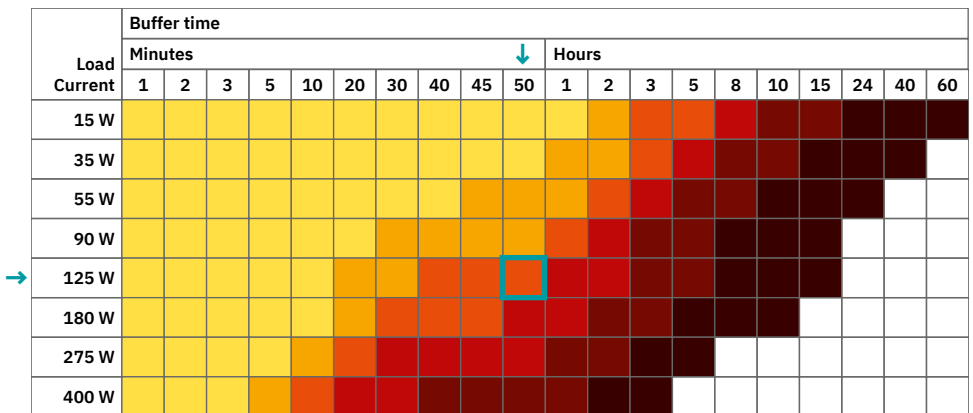
QUINT AC-UPS, 1~		IQ Technology <sup>®</sup> Designed by Phoenix Contact
		
W x H x D in mm	180 x 130 x 125	
<b>400 W / 500 VA / USB</b>		
Type	QUINT4-UPS/1AC/1AC/500VA/USB	
Item no.	1067327	
Recommended battery modules UPS/BAT/...	LI VRLA-WTR PB (4 Ah ... 110 Ah)	

UPS-BAT/PB				IQ
				
W x H x D in mm	155 x 168 x 183	333 x 173 x 199	350 x 214 x 332	
	<b>20 Ah</b>	<b>40 Ah</b>	<b>110 Ah</b>	<b>NEW</b>
Type	UPS-BAT/PB/24DC/20AH	UPS-BAT/PB/24DC/40AH	UPS-BAT/PB/24DC/110AH	
Item no.	1348516	1354641	1474660	

### Buffer times for QUINT AC UPS/500VA with Pb battery module

Select the battery module for your QUINT AC UPS/500VA here.  
 Example: 125 W is to be buffered for 50 minutes.

- ■
- QUINT4-UPS/1AC/1AC/500VA/USB
- UPS-BAT/PB/24DC/12AH



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

# QUINT AC UPS and battery module

## Select your combination of QUINT AC UPS/500VA and battery module here

With this new QUINT AC UPS, you can also reliably protect smaller loads up to 500 VA. Only one battery module is needed to safeguard your system.






Power supply



UPS module



Battery module



UPS-BAT/LI		
		
W x H x D in mm	135 x 202 x 110	
	<b>128 Wh</b>	
Type	UPS-BAT/LI/24DC/128WH	
Item no.	<a href="#">1396415</a>	





## Buffer times for QUINT AC UPS/500VA with lithium battery module

Example: 125 W can be buffered for a maximum of 40 minutes.

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

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


QUINT AC-UPS, 1~		IQ Technology <sup>®</sup> Designed by Phoenix Contact
		
W x H x D in mm	180 x 130 x 125	
<b>400 W / 500 VA / USB</b>		
Type	QUINT4-UPS/1AC/1AC/500VA/USB	
Item no.	1067327	
Recommended battery modules UPS/BAT/...	LI VRLA-WTR PB (4 Ah ... 110 Ah)	

UPS-BAT/VRLA-WTR		
		
W x H x D in mm	172 x 177 x 178	358 x 174 x 169
	<b>13 Ah</b>	<b>26 Ah</b>
Type	UPS-BAT/VRLA-WTR/24DC/13AH	UPS-BAT/VRLA-WTR/24DC/26AH
Item no.	2320416	2320429

### Buffer times for QUINT AC UPS/500VA with VRLA-WTR battery module

Select the battery module for your QUINT AC UPS/500VA here.

Example: 125 W is to be buffered for 1 hour.

- 
- QUINT4-UPS/1AC/1AC/500VA/USB
- UPS-BAT/VRLA-WTR/24DC/26AH

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

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

# QUINT AC UPS and battery module

## Select your combination of QUINT AC UPS/1 kVA and battery module here

With this QUINT AC UPS, you can also reliably protect large loads up to 1 kVA. Only one battery module is needed to safeguard your system.








Power supply





UPS module








Battery module

	UPS-BAT/PB 		
			
W x H x D in mm	85 x 191 x 110	135 x 202 x 110	202 x 202 x 110
	<b>4 Ah</b>	<b>7 Ah</b>	<b>12 Ah</b>
Type	UPS-BAT/PB/24DC/4AH	UPS-BAT/PB/24DC/7AH	UPS-BAT/PB/24DC/12AH
Item no.	<a href="#">1274117</a>	<a href="#">1274118</a>	<a href="#">1274119</a>



QUINT AC-UPS, 1~		IQ Technology <sup>®</sup> Designed by Phoenix Contact
		
W x H x D in mm	290 x 130 x 125	
<b>900 W / 1000 VA / USB</b>		
Type	QUINT4 UPS/1AC/1AC/1KVA	
Item no.	2320283	
Recommended battery modules UPS/BAT/...	LI VRLA-WTR PB (4 Ah ... 110 Ah)	

UPS-BAT/PB			
			
W x H x D in mm	155 x 168 x 183	333 x 173 x 199	350 x 214 x 332
	<b>20 Ah</b>	<b>40 Ah</b>	<b>110 Ah</b> <span style="background-color: #e91e63; color: white; padding: 2px;">NEW</span>
Type	UPS-BAT/PB/24DC/20AH	UPS-BAT/PB/24DC/40AH	UPS-BAT/PB/24DC/110AH
Item no.	1348516	1354641	1474660

### Buffer times for QUINT AC UPS/1 kVA with Pb battery module

Select the battery module for your QUINT AC UPS/1 kVA here. You always need two PB battery modules of the same capacity.

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

- ■
- QUINT4-UPS/1AC/1AC/1KVA
- 2 x UPS-BAT/PB/24DC/20AH

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

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

# QUINT AC UPS and battery module

## Select your combination of QUINT AC UPS/1 kVA and battery module here

With this QUINT AC UPS, you can also reliably protect large loads up to 1 kVA. Only one battery module is needed to safeguard your system.






Power supply



UPS module



Battery module

UPS-BAT/LI		
		
W x H x D in mm	135 x 202 x 110	
<b>128 Wh</b>		
Type	UPS-BAT/LI/24DC/128WH	
Item no.	<a href="#">1396415</a>	

### Buffer times for QUINT AC UPS/1 kVA with lithium battery module



You always need two lithium battery modules of the same capacity for a QUINT AC UPS/1 kVA.





Example:

500 W can be buffered for a maximum of 20 minutes with 2x UPS-BAT/LI/24DC/128WH.

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

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


QUINT AC-UPS, 1~		IQ Technology <sup>®</sup> Designed by Phoenix Contact
		
W x H x D in mm	290 x 130 x 125	
<b>900 W / 1000 VA / USB</b>		
Type	QUINT4 UPS/1AC/1AC/1KVA	
Item no.	2320283	
Recommended battery modules UPS/BAT/...	LI VRLA-WTR PB (4 Ah ... 40 Ah)	

UPS-BAT/VRLA-WTR		
		
W x H x D in mm	172 x 177 x 178	358 x 174 x 169
<b>13 Ah</b>		<b>26 Ah</b>
Type	UPS-BAT/VRLA-WTR/24DC/13AH	UPS-BAT/VRLA-WTR/24DC/26AH
Item no.	2320416	2320429

### Buffer times for QUINT AC UPS/1 kVA with VRLA-WTR battery module

Select the battery module for your QUINT AC UPS/1 kVA here. You always need two VRLA-WTR battery modules of the same capacity.

Example: 600 W is to be buffered for 1 hour.

- 
- QUINT4-UPS/1AC/1AC/1KVA
- 2 x UPS-BAT/VRLA-WTR/24DC/26AH

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

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

# TRIO AC UPS

## Select your TRIO AC UPS with integrated battery module here

The TRIO AC UPS for the DIN rail with integrated battery module and Push-in Technology saves space and reliably supplies your AC loads.

The housing combines the UPS and battery module and makes retrofitting existing systems particularly easy.

The TRIO UPS for AC applications delivers a pure sine curve at the output. The sine wave generated during battery operation is synchronized to the grid previously used for supply, allowing seamless transition. The module can also be started without mains supply via the battery module.

Connected industrial PCs can be shut down via the integrated USB interface.



Power supply



UPS module



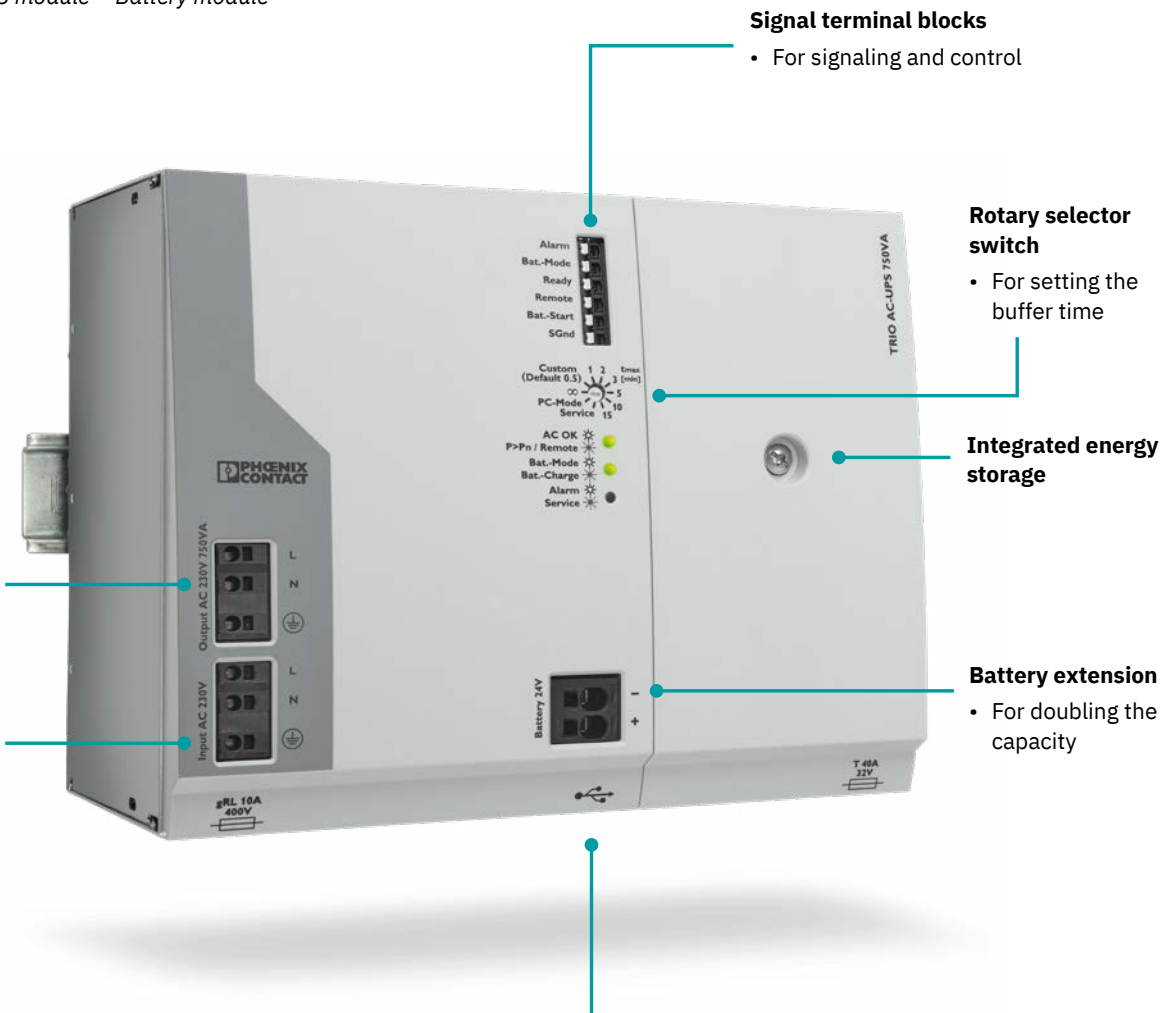
Battery module

### Pure sine curve

- In battery operation, the sine wave generated is synchronized to the previously applied grid

### Input and output terminal

- Push-in Technology



### Signal terminal blocks

- For signaling and control

### Rotary selector switch

- For setting the buffer time




### Integrated energy storage

### Battery extension

- For doubling the capacity

### USB interface

- For configuration and for shutting down an IPC

TRIO UPS, 1~		
		
	Input 96 V AC ... 138 V AC W x H x D in mm 210 x 170 x 136	Input 184 V AC ... 264 V AC W x H x D in mm 210 x 170 x 136
	<b>120 V / 750 VA</b>	<b>230 V / 750 VA</b>
Type	TRIO-UPS-2G/1AC/1AC/120V/750VA	TRIO-UPS-2G/1AC/1AC/230V/750VA
Item no.	2905908	2905909
Information	Lead AGM technology	Lead AGM technology

**Buffer times for TRIO AC UPS:**

2x: In these cases, you need another UPS-BAT/PB/24DC/4AH type battery module (1274117) with the same capacity (4 Ah).

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

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

Uninterruptible power supplies

## Battery modules

For the optimal supply of your system

With the battery modules for our modular series of uninterruptible power supplies, you will always have the right solution for your system.

Choose between our various technologies and capacities. Whatever your requirements, we have the right battery module for you.



### Your advantages

- ✓ Battery modules for a long service life
- ✓ Battery modules for very long buffer times in extreme environments
- ✓ Maintenance-free
- ✓ Immediate availability, as all battery modules are sent to our warehouse optimally charged

# Technologies and advantages



## Lithium battery module

More cycles with a low weight.

- Lithium iron phosphate technology



## VRLA/WTR battery modules

For longer buffer times at extreme temperatures.

- Pure lead AGM



## Lead battery modules

For long buffer times under normal conditions.

- Lead AGM

## Intelligent battery modules for QUINT UPS

All battery modules compatible with the QUINT UPS are equipped with the following features:

- Quick installation with automatic detection of the battery module and tool-free replacement during operation
- Constant communication with QUINT UPS for continuous monitoring and intelligent management
- Extremely long service life with optimized charging characteristics

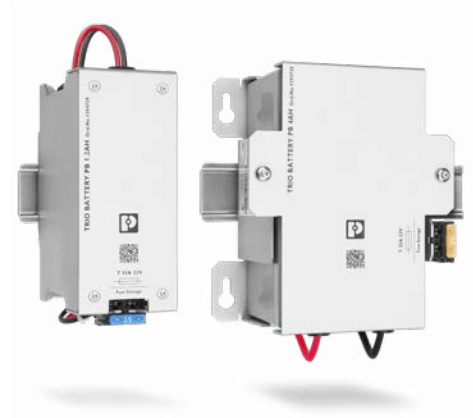
Type	Temperature	Service life at +20°C	Service life at +50°C	Charging cycles at 80% discharge level	Charging cycles at 50% discharge level
UPS-BAT/LI...	-20°C ... +60°C	10 years	2 years	1600	2200
UPS-BAT/VRLA-WTR...	-25°C ... +60°C	12 years	1.5 years	400	650
UPS-BAT/PB...	0°C ... +40°C	Up to 12 Ah: 6 years Up to 40 Ah: 8 years Up to 110 Ah: 10 years	1 year	250	450

## Battery modules for TRIO UPS

The new TRIO-BAT family consists of four capacities from 1.2 Ah to 12 Ah. The robust metal housing is equipped with cables and, for the devices up to 4 Ah, can be mounted on both the DIN rail and wall. The battery modules feature a fuse holder for easy handling. The TRIO batteries are the perfect addition to our TRIO UPS family.

### The battery modules are equipped with the following features:

- Long buffer times under normal conditions
- Convenient wall or DIN rail mounting in the uniform design of the TRIO UPS modules
- Comprehensive approval package, compatible with TRIO UPS
- Easy handling with preassembled cables and fuse holders
- Temperature range: -20°C ... +50°C
- Service life at +20°C: 6 years
- Buffer times: 1 A/11 h or 40 A/8 min



Uninterruptible power supplies

## DC UPS with integrated capacitor

### Intelligent protection in the event of mains failures

The QUINT CAP modules with integrated interface can be easily implemented into industrial networks. The DC UPS with integrated capacity intercepts cyclical failures of up to several minutes. It combines an electronic switchover unit and an energy storage device in one housing.



### Your advantages

- ✓ Easy integration into industrial networks with freely selectable interface: USB/Modbus/RTU, PROFINET, EtherNet/IP™/Modbus/TCP, EtherCAT®
- ✓ Long service life with maintenance-free double-layer capacitors
- ✓ Reliable startup of difficult loads with static boost
- ✓ Comprehensive signaling: Preventive function monitoring reports critical operating states
- ✓ Extension of the buffer time with parallel connection of up to four devices



EtherNet/IP™

USB

EtherCAT®



Power supply



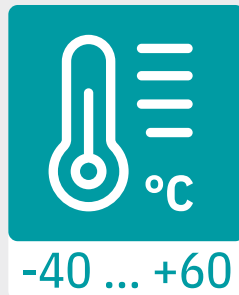
UPS module



Battery module



# DC UPS with integrated capacitor and buffer modules



## Maintenance-free

- High reliability
- Long service life
- High cycle rates >500,000

## Flexible fields of application

- Modular design
- Temperature range: -40°C ... +60°C
- Easy to integrate in existing networks

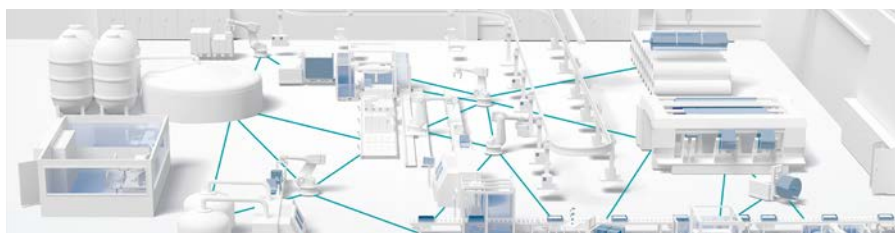
## Effective protection

- Soft start function for optimum starting
- Protection from overload and overheating
- Protection from overvoltages and undervoltages

## QUINT CAP – DC UPS with integrated capacitor

The maintenance-free QUINT CAP modules prevent cyclic failures lasting up to several minutes. With their integrated interface, they can be easily implemented into industrial networks. They combine an electronic switchover unit and energy storage in the same housing, and thus save space. Maintenance-free double-layer capacitors are used as energy storage devices.

Depending on the application, modules are available with 1 kJ, 4 kJ, 8 kJ, and even 16 kJ, with or without communication interface. QUINT CAP modules are ideal for use in the fields



of machine building, intralogistics, infrastructure, and the wind industry.

With the POWER MANAGEMENT SUITE, a software for easy and fast configuration and monitoring of your UPS system is available in the free download area.

For more information on this, see page 60.

## STEP CAP with double-layer capacitors

The compact STEP DC UPS with integrated capacitor can bridge power failures lasting up to one minute. The space-saving module combines an electronic switchover unit and an energy storage device in one housing.

The capacity module stores the energy required to bridge mains failures in maintenance-free electrolytic capacitors. This ensures high system availability.



# DC UPS with integrated capacitor

## QUINT DC UPS with integrated capacitor

QUINT CAP <sup>1)</sup>				
Input	22.5 V DC ... 30 V DC	22.5 V DC ... 30 V DC	22.5 V DC ... 30 V DC	22.5 V DC ... 30 V DC
W x H x D in mm	85 x 102.5 x 90	94 x 130 x 125	118 x 130 x 125	244 x 130 x 125

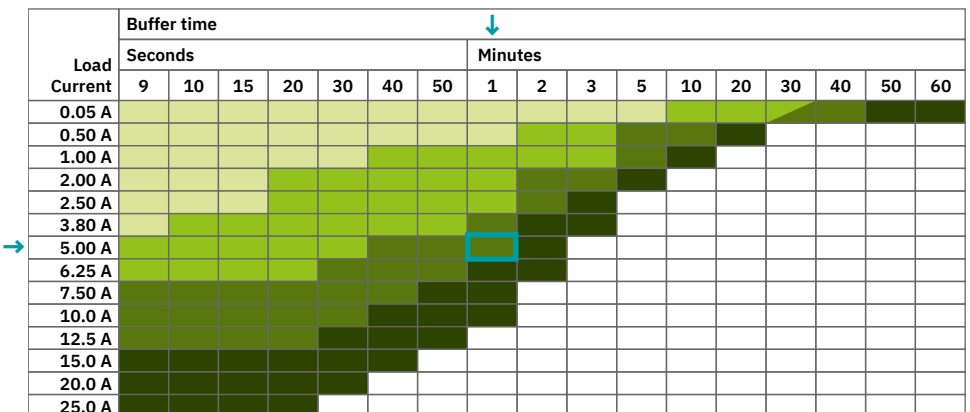
	24 V / 3.8 A	24 V / 5 A	24 V / 10 A	24 V / 20 A
Type	QUINT4-CAP/24DC/3.8/1KJ/PT	QUINT4-CAP/24DC/5/4KJ	QUINT4-CAP/24DC/10/8KJ	QUINT4-CAP/24DC/20/16KJ/USB
Item no.	2320526	2320539	2320571	1065635
Type				24 V / 20 A QUINT4-CAP/24DC/20/16KJ/PN
Item no.				1076860
Type				24 V / 20 A QUINT4-CAP/24DC/20/16KJ/EIP
Item no.				1076861
Type				24 V / 20 A QUINT4-CAP/24DC/20/16KJ/EC
Item no.				1076858
Information	Energy storage system based on maintenance-free double-layer capacitors			

<sup>1)</sup> The devices support SFB Technology in mains operation in conjunction with 4th generation QUINT POWER power supplies.

### Buffer times for QUINT CAP

Example: 5 A is to be buffered for 1 minute.

- 
- QUINT4-CAP/24DC/10/8KJ



The data is based on an ambient temperature of +25°C.

## STEP CAP integrated capacitor

**Position A**

- Maximum buffer time

**Position B**

- Maximum service life

**Space-saving**

- With the compact design in STEP design

**Maintenance-free**



- With double-layer capacitors

**Modular and flexible for various applications**

- -25°C ... +60°C

**High system availability**

- With a long capacitor service life

STEP CAP	
	
Input	23.7 V DC ... 26.5 V DC
W x H x D in mm	80 x 125 x 60
<b>24 V / 2 A</b> <span style="float: right; background-color: #e91e63; color: white; padding: 2px;">NEW</span>	
Type	STEP-CAP/24VDC/2/0.4KJ
Item no.	1519633
Information	Energy storage system based on maintenance-free double-layer capacitors

## Buffer times for STEP CAP

Position A

- Maximum buffer times

Position B

- Maximum service life

Load Current	Buffer time												
	Seconds											Minutes	
	6	8	10	12	15	20	25	30	35	40	50	1	2
0.10 A	■	■	■	■	■	■	■	■	■	■	■	■	■
0.30 A	■	■	■	■	■	■	■	■	■	■	■	■	■
0.50 A	■	■	■	■	■	■	■	■	■	■	■	■	■
0.80 A	■	■	■	■	■	■	■	■	■	■	■	■	■
1.00 A	■	■	■	■	■	■	■	■	■	■	■	■	■
1.30 A	■	■	■	■	■	■	■	■	■	■	■	■	■
1.50 A	■	■	■	■	■	■	■	■	■	■	■	■	■
1.80 A	■	■	■	■	■	■	■	■	■	■	■	■	■
2.00 A	■	■	■	■	■	■	■	■	■	■	■	■	■

The data is based on an ambient temperature of +25°C.

# QUINT buffer module

## Select your QUINT BUFFER with electrolytic capacitors here

The compact QUINT buffer module bridges failures within seconds. It combines an electronic switchover unit and an energy storage device in one housing. The capacity module stores the energy required to bridge mains failures in maintenance-free electrolytic capacitors. The long service life of the capacitors and the integrated safety functions ensure high system availability.

The integrated “soft start” limits the inrush current and thus prevents the power supply unit from being overloaded.



## Your advantages

- ✓ Maximum energy efficiency
- ✓ High system availability due to long capacitor service life
- ✓ Wide temperature range of -40°C to +70°C
- ✓ Static boost for starting up difficult loads
- ✓ Reliability and safety with integrated safety functions

# Buffers

## Reliability and security

- With the integrated safety function

## Wide temperature range

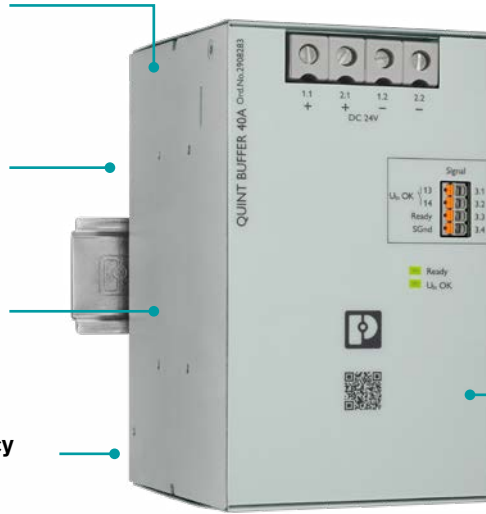
- -40°C ... +70°C

## Static boost

- For starting difficult loads

## Maximum energy efficiency

- Optimized energy use



## High system availability




- With a long capacitor service life

## Comprehensive signaling on the device

- LEDs and signal terminal blocks

## Integrated "soft start"

- For limiting the inrush current and preventing power supply unit overload

QUINT buffer <sup>1)</sup>		
		
Input	22.5 V DC ... 30 V DC	22.5 V DC ... 30 V DC
W x H x D in mm	56 x 130 x 125	72 x 130 x 125
	<b>24 V / 20 A</b>	<b>24 V / 40 A</b>
Type	QUINT4-BUFFER/24DC/20	QUINT4-BUFFER/24DC/40
Item no.	2907913	2908283
Information	Energy storage system based on maintenance-free electrolytic capacitors	

<sup>1)</sup> The devices support SFB Technology in mains operation in conjunction with 4th generation QUINT POWER power supplies.

## Buffer times for QUINT buffer





Example: 1 A is to be buffered for 1 second.



- 
- QUINT4-BUFFER/24DC/20

Load Current	Buffer time															
	Seconds															
	0.1	0.3	0.4	0.5	1	1.5	6	7	9	12	14	16	18	19	25	30
0.1 A																
0.25 A																
0.50 A																
0.75 A																
1 A																
5 A																
10 A																
20 A																
30 A																
40 A																



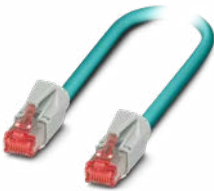


The data is based on an ambient temperature of +25°C.





## Accessories – product overview

Mounting and programming adapters				
				 <b>NEW</b>
	<b>Mounting adapter</b>	<b>Mounting adapter</b>	<b>Programming adapter</b>	<b>Programming adapter</b>
	UWA 182/52	UWA 130	TWN4 MIFARE NFC USB ADAPTER	USB IO-LINK ADAPTER
Item no.	<a href="#">2938235</a>	<a href="#">2901664</a>	<a href="#">2909681</a>	<a href="#">1533311</a>
Description	For: QUINT-PS QUINT4-PS QUINT4-UPS QUINT4-UPS/24DC/24DC/... QUINT4-UPS/ 1AC/1AC/500VA/USB QUINT4-CHARGER QUINT4-CAP QUINT4-BUFFER QUINT4-INV TRIO-PS (from 10 A) TRIO-UPS-2G/1AC/24DC/...	For: QUINT-PS (1 kW) QUINT4-PS QUINT4-UPS QUINT4-CHARGER QUINT4-CAP QUINT4-BUFFER QUINT4-INV TRIO-UPS-2G	<ul style="list-style-type: none"> <li>• Programming adapter for near field communication (NFC)</li> <li>• With USB interface</li> <li>• For wireless configuration of NFC-capable QUINT POWER power supplies</li> </ul>	<ul style="list-style-type: none"> <li>• Programming adapters for IO-Link</li> <li>• With USB interface</li> <li>• For configuring IO-Link-capable QUINT POWER and TRIO POWER power supplies</li> </ul>




Accessories for QUINT HP UPS	
	 <b>NEW</b>
<b>Interface card</b>	<b>Fan</b>
Type	QUINT-HP-COM/USB-SER
Item no.	<a href="#">1252055</a>
	<a href="#">1252068</a>




## Accessories – product overview

Accessories for 4th generation QUINT UPS and 2nd generation TRIO UPS					
					
	<b>Software</b>	<b>USB data cable</b>	<b>Ethernet data cable</b>	<b>PROFINET data cable</b>	<b>IoT gateway</b>
Type	POWER MANAGEMENT SUITE	MINI-SCREW-USB-DATACABLE	Network cable – NBC-R4AC/1,0-93E/R4AC	Patch cable – NBC-R4AC/1,0-93B/R4AC	IoT gateway – CLOUD IOT GATEWAY
Item no.	1252232	2908217	1408933	1408968	1031235
Type			Network cable – NBC-R4AC/2,0-93E/R4AC	Patch cable – NBC-R4AC/2,0-93B/R4AC	
Item no.			1408934	1408969	
Type			Network cable – NBC-R4AC/5,0-93E/R4AC	Patch cable – NBC-R4AC/5,0-93B/R4AC	
Item no.			1408935	1408970	
Type			Network cable – NBC-R4RC/10,0-94B/R4RC	Patch cable – NBC-R4AC/10,0-93B/R4AC	
Item no.			1408963	1408971	

Accessories for 3rd generation QUINT UPS				
				
	<b>Configuration software</b>	<b>USB data cable</b>	<b>Memory block</b>	<b>Interface converter</b>
Type	UPS-CONF	IFS-USB-DATACABLE	IFS-CONFSTICK	FL COMSERVER UNI 232/422/485
Item no.	2320403	2320500	2986122	2313452
Type		IFS-BT-PROG-ADAPTER	IFS-CONFSTICK-L	
Item no.		2905872	2901103	
Type		IFS-RS232-DATACABLE		
Item no.		2320490		
Type		IFS-OPEN-END-DATACABLE		
Item no.		2320450		
Type		IFS-MINI-DIN-DATACABLE		
Item no.		2320487		




## Accessories – product overview




Mounting for battery modules			
			
	<b>BATTERY MOUNTING KIT</b>	<b>BATTERY MOUNTING CASE</b>	<b>BATTERY MOUNTING CASE</b>
Item no.	2320788	1134645	2320458
Information	For: UPS-BAT/PB/24DC/20AH UPS-BAT/PB/24DC/40AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH	For: UPS-BAT/PB/24DC/20AH UPS-BAT/VRLA-WTR/24DC/13AH	For: UPS-BAT/VRLA-WTR/24DC/26AH UPS-BAT/PB/24DC/20AH UPS-BAT/PB/24DC/40AH UPS-BAT/VRLA-WTR/24DC/13AH



	Replacement batteries for UPS-BAT/PB	Replacement batteries for UPS-BAT/VRLA/WTR	Replacement batteries for UPS-BAT/LI
			
	<b>UPS-BAT-KIT 2X12/1.2AH</b>	<b>UPS-BAT-KIT-WTR 2X12V/13AH</b>	<b>UPS-BAT-KIT-LI/24DC/64WH</b>
Item no.	1283114	2908368	1446073
	<b>UPS-BAT-KIT 2X12/4AH</b>	<b>UPS-BAT-KIT-WTR 2X12V/26AH</b>	
Item no.	1283116	2908369	
	<b>UPS-BAT-KIT 2X12/7AH</b>		
Item no.	1283119		
	<b>UPS-BAT-KIT 2X12/12AH</b>		
Item no.	1283121		
	<b>UPS-BAT-KIT 2X12/20AH</b>		
Item no.	1185595		
	<b>UPS-BAT-KIT 2x12/40AH</b>		
	1383182		



## Accessories – product overview

Fuses for AC UPS			
			
	<b>FUSE 40A / 32V ATOF</b>	<b>FUSE 10A / 400V GRL</b>	<b>FUSE 25A / 58V TAC ATO</b>
Item no.	2908357	2908358	1021340
Information	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 QUINT4-UPS/1AC/1AC/500VA/USB	For: QUINT4-UPS/1AC/1AC/1KVA

Fuses for battery modules			
			
	<b>FUSE 15A / 32V FK1</b>	<b>FUSE 25A / 32V ATOF</b>	<b>FUSE 5A / 32V FK-1</b>
Item no.	2908360	2908366	2908367
Information	For: UPS-BAT/PB/24DC/1.2AH	For: UPS-BAT/PB/24DC/4AH UPS-BAT/PB/24DC/7AH UPS-BAT/PB/24DC/12AH UPS-BAT/PB/24DC/20AH UPS-BAT/PB/24DC/40AH UPS-BAT/PB/24DC/110AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH UPS-BAT/LI/24DC/128WH MINI-BAT/12DC/2.6AH TRIO-BAT/PB/24DC/4AH TRIO-BAT/PB/24DC/7AH TRIO-BAT/PB/24DC/12AH	For: UNO-UPS/24DC/24DC/60W MINI-BAT/24DC/0.8AH

Fuses for battery modules			
			
	<b>FUSE 15A / 32V FKS ATO</b>	<b>FUSE 10A / 32V FK1</b>	
Item no.	2908361	2908364	
Information	For: MINI-BAT/24DC/1.3AH QUINT-UPS/24DC/24DC/5/1.3AH QUINT-UPS/24DC/24DC/10/3.4AH TRIO-BAT/PB/24DC/1.2AH	For: MINI-BAT/12DC/1.6AH	

# Approvals for power supplies

		UL					CSA		Ship					Ex												
	CE/UKCA	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	CSA 22.2 No 61010-1	CSA 22.2 No 61010-2-201	DNV	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/IECEX	CCC-Ex	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Med. standard IEC 60601, 2 x MOOP	EN 50121-4, -5, -3-2	Startup at -40°C	Installation altitude
<b>QUINT POWER power supplies &gt;100 W</b>																										
QUINT4-PS/1AC/24DC/5	2904600	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/24DC/10	2904601	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/24DC/20	2904602	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/24DC/40	2904603	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/12DC/15	2904608	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/48DC/5	2904610	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/48DC/10	2904611	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/48DC/20	2904612	•	•	•	•	•	•				•	•	*	•	•						•	•		•	•	c
QUINT4-PS/1AC/110DC/4	2904613	•	•	•	•	•	•		•		•	•	*	•	•						•	•		•	•	b
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
QUINT4-PS/3AC/48DC/20	2904627	•	•	•	•	•	•				•	•	*	•	•						•	•		•	•	c
QUINT4-PS/3AC/24DC/20/IOL	1151048	•		•	•	•	•				•	•	*	•	•						•	•		•	•	c
QUINT4-PS/3AC/24DC/40/IOL	1151047	•		•	•	•	•				•	•	*	•	•						•	•		•	•	c
QUINT4-PS/1AC/24DC/10/+	2904616	•		•	•	•	•				•	•	•	•	•		•	•			•	•		•	•	c
QUINT4-PS/1AC/24DC/20/+	2904617	•		•	•	•	•				•	•	•	•	•		•	•			•	•		•	•	c
QUINT4-PS/1AC/24DC/40/+	2904618	•		•	•	•	•				•	•	*	•	*	*	•	•			•	•		•	•	c
QUINT4-PS/1AC/24DC/10/CO	2904625	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c
QUINT4-PS/1AC/48DC/10/CO	2904626	•		•	•	•	•				•	•	•	•	•						•	•		•	•	c

\* 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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		UL					CSA		Ship					Ex													
		CE/UKCA	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	CSA 22.2 No 61010-1	CSA 22.2 No 61010-2-201	DNV	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/IECEX	CCC-Ex	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Med. standard IEC 60601, 2 x MOOP	EN 50121-4, -5, -3-2	Startup at -40°C	Installation altitude
<b>QUINT POWER power supplies &lt;100 W</b>																											
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
QUINT4-PS/1AC/2x15DC/2/PT	2904596	•	•			•	•			•		•										•	•		•	•	c
QUINT4-SYS-PS/1AC/24DC/2.5/SC	2904614	•	•			•	•					•							•	•		•	•		•	•	c

# Approvals for power supplies

		UL							CSA	Ship						Ex									
		CE/UKCA	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 1, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 61010-2-201	DNV	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/IECEX	CCC-Ex	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Med. standard IEC 60601, 2 x MOOP	Railway standard EN 50155	Startup at -40°C	Installation altitude
<b>TRIO POWER power supplies</b>																									
TRIO-PS-2G/1AC/24DC/3/C2LPS	2903147	•			•	•	•	•			•									•	•			•	c
TRIO3-PS/1AC/24DC/5	1159037	•	•				•				•									•	•			•	c
TRIO-PS-2G/1AC/24DC/5/B+D	2903144	•			•	•					•									•	•				c
TRIO3-PS/1AC/24DC/10	1159038	•	•				•				•									•	•			•	c
TRIO-PS-2G/1AC/24DC/10/B+D	2903145	•			•	•					•									•	•				c
TRIO3-PS/1AC/24DC/20	1159039	•	•				•				•									•	•			•	c
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
TRIO3-PS/3AC/24DC/10	1159042	•	•				•													•	•			•	c
TRIO3-PS/3AC/24DC/20	1159044	•	•				•													•	•			•	c
TRIO3-PS/3AC/24DC/40	1159045	•	•				•													•	•			•	c
TRIO-PS-2G/3AC/72DC/14	1076188	•	•																		•				b
TRIO-PS-2G/230AC-400DC/48DC/5	1157806	•	•																		•				e
TRIO3-PS/1AC/24DC/10/4C/IOL	1252696	•	•				•	•												•	•			•	c
TRIO3-PS/1AC/24DC/20/8C/IOL	1252697	•	•				•	•												•	•			•	c
TRIO3-PS/3AC/24DC/20/8C/IOL	1362791	•	•				•	•												•	•			•	c
TRIO3-PS/3AC/24DC/40/8C/IOL	1362792	•	•				•	•												•	•			•	c
TRIO3-PS/1AC/24DC/5/CO	1523018	•	•				•				•									•	•			•	c
TRIO3-PS/1AC/24DC/10/CO	1523019	•	•				•				•									•	•			•	c
TRIO3-PS/1AC/24DC/20/CO	1523020	•	•				•				•									•	•			•	c

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

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		UL					CSA	Ship						Ex										
		CE/UKCA	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/IECEX	CCC-Ex	IEC 60335-1 household standard	PoE standard IEEE 802.3 (145.4.1 insulation)	SEMI F47-0706 Compliance	CB Scheme	Railway standard EN 50155, 50121-4	Startup at -40°C	Installation altitude
<b>UNO POWER power supplies</b>																								
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
UNO2-PS/1AC/24DC/120W	1110466	•	•		•															•	•		•	a
UNO-PS/1AC/24DC/150W	2904376	•	•	•	•															•	•			c
UNO2-PS/1AC/24DC/240W	1096432	•	•		•															•	•		•	a
UNO2-PS/1AC/24DC/480W	2910105	•	•		•															•	•		•	a
UNO2-PS/1AC/24DC/960W	1110043	•	•		•															•	•		•	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
UNO2-PS/1AC/48DC/240W	1110155	•	•		•												•			•	•		•	a
UNO-PS/2AC/24DC/90W/C2LPS	2904371	•	•	•	•	•														•	•			b

# Approvals for power supplies

		UL		CSA	Ship																			
		CE/UKCA	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	KNX standard ISO/IEC 14543-3	PoE standard IEEE 802.3 (145.4.1 insulation)	IEC 60335-1 household standard	LED-standard EN 61347-2-13	Charging systems for electric vehicles ICE 61851-21-2	SEMI F47-0706 Compliance	Transformer standard 61558-1/2-16	CB Scheme	Startup at -40°C	Installation altitude
<b>STEP POWER power supplies</b>																								
STEP3-PS/1AC/24DC/0.63/PT	1088495	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/24DC/1.3/PT	1088494	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/24DC/2.5/PT	1088491	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/24DC/3.75/PT/FL	1088486	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/24DC/4/PT	1040066	•	•			•										•		•	•	•	•			b
STEP3-PS/1AC/24DC/5/PT	1088478	•	•			•										•		•	•	•	•			b
STEP3-PS/1AC/5DC/3/PT	1170954	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/12DC/1.3/PT	1170952	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/12DC/2.5/PT	1170953	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/12DC/5/PT	1170955	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/15DC/4/PT	1170956	•	•			•	•									•		•	•	•	•			b
STEP3-PS/1AC/48DC/2.5/PT	1285035	•	•			•									•	•		•	•	•	•			c
STEP3-PS/1AC/24DC/3.75/PT/LED	1285036	•	•			•	•									•	•	•	•	•	•			b
STEP3-PS/1AC/24DC/3.75/PT/CO	1321105	•	•			•	•									•		•	•	•	•	•		b
STEP3-PS/1AC/5DC/3/PT/USB-A	1335699	•	•			•	•									•		*	•	•	•			b
STEP3-PS/1AC/5DC/3/PT/USB-C	1335698	•	•			•	•									•		*	•	•	•			b
STEP3-PS/1AC/KNX/640/LPT	1477019	•	•											•				•	•	•	•			c
<b>IP67 POWER power supplies</b>																								
TRIO-PS67/1AC/24DC/3.75/INC	1278302	•	•				•															•		b
TRIO-PS67/1AC/24DC/3.75/M12	1278165	•	•				•															•		b
TRIO-PS67/1AC/24DC/3.75/M12-A	1376306	•	•				•															•		b
TRIO-PS67/1AC/24DC/3.75/IPD	1278301	•	•				•															•		b
TRIO-PS67/1AC/24DC/8/INC	1065976	•	•																			•	•	b
TRIO-PS67/1AC/24DC/10/M12	1111634	•	•																			•	•	b
TRIO-PS67/1AC/24DC/10/M12/5P	1395808	•	•																			•	•	b
TRIO-PS67/1AC/24DC/10/IPD	1111664	•	•																			•	•	b

\* 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 DC/DC converters

		UL										Ship						Ex								
		CE/UKCA	UL/C-UL listed 61010	UL/C-UL listed UL 508	UL/C-UL recognized UL 62109-1	UL/C-UL recognized UL 1741	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	DNV	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	RMRS	ATEX/UK-Ex/IECEX	CCC-Ex	CB Scheme	Railway standard EN 50155:2007	Railway standard EN 50121-4	EN 50121-3-2	Startup at -40°C	Installation altitude	
<b>QUINT POWER DC/DC converters &gt;100 W</b>																										
QUINT4-PS/24DC/24DC/5/PT	2910119	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/24DC/5/PT/CO	2910132	•	•				•				•	•	•	•	•		•	•	•				•	•	•	c
QUINT4-PS/24DC/24DC/5/SC	1046800	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/24DC/10/PT	2910120	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/24DC/10/PT/CO	2910133	•	•				•				•	•	•	•	•		•	•	•				•	•	•	c
QUINT4-PS/24DC/24DC/10/SC	1046803	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/24DC/20/PT	2910121	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/24DC/20/SC	1046805	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/24DC/20/SC/+	1046881	•	•				•				•	•	•	•	•		•	•	•				•	•	•	c
QUINT4-PS/24DC/12DC/8/PT	2910122	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/24DC/48DC/5/PT	2910123	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/48DC/24DC/5/PT	2910125	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/48DC/48DC/5/PT	2910128	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT4-PS/12DC/24DC/5/PT	2910124	•	•				•				•	•	•	•	•				•				•	•	•	c
QUINT-PS/60-72DC/24DC/10	2905009	•	•			•	•												•	•	•	•	•	•	•	d
QUINT-PS/60-72DC/24DC/10/CO	2905011	•	•			•	•												•	•	•	•	•	•	•	d
QUINT-PS/96-110DC/24DC/10	2905010	•	•			•	•												•	•	•	•	•	•	•	d
QUINT-PS/96-110DC/24DC/10/CO	2905012	•	•			•	•												•	•	•	•	•	•	•	d
<b>QUINT POWER DC/DC converters &lt;100 W</b>																										
QUINT4-PS/12-24DC/24DC/1.3/PT	1066716	•	•				•				•								•	•	•	•	•	•	•	c
QUINT4-PS/12-24DC/24DC/1.3/SC	1066703	•	•				•				•								•	•	•	•	•	•	•	c
QUINT4-PS/12-24DC/24DC/2.5/PT	1066714	•	•				•				•								•	•	•	•	•	•	•	c
QUINT4-PS/12-24DC/24DC/2.5/SC	1066718	•	•				•				•								•	•	•	•	•	•	•	c
QUINT4-PS/24-48DC/48DC/2/PT	1098676	•	•				•				•								•	•	•	•	•	•	•	c
QUINT4-PS/48-110DC/24DC/2.5/PT	1066708	•	•				•				•								•	•	•	•	•	•	•	c
QUINT4-PS/12-24DC/5-15DC/2.5/PT	1066704	•	•				•				•								•	•	•	•	•	•	•	c

# Approvals for DC/DC converters and inverters

		UL										Ship										Ex									
		CE/UKCA	UL/C-UL listed 61010	UL/C-UL listed UL 508	UL/C-UL recognized UL 62109-1	UL/C-UL recognized UL 1741	UL/C-UL recognized UL 60950	UL listed ANSI/TISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	DNV	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	RMRS	ATEX/UK-Ex/IECEX	CCC-Ex	CB Scheme	Railway standard EN 50155:2007	Railway standard EN 50121-4	EN 50121-3-2	Startup at -40°C	Installation altitude						
DC/DC converters for photovoltaic applications																															
TRIO-PS-2G/1500DC/24DC/1.5	1107892	•			•	•																					b				
TRIO-PS-2G/1500DC/24DC/8	1075240	•			•																					•	b				
UNO-PS/350-900DC/24DC/60W	2906300	•				•																			•	c					

		UL										CSA		Ship										Ex									
		CE/UKCA	ANSI/UL 61010-1	ANSI/UL 61010-2-201	UL/C-UL recognized UL 60950	UL 1778	UL 121201 Class I and II, Div 2 and Class III, Div 1 and 2 Hazardous Locations	CAN/CSA-C22.2 No. 61010-1	CAN/CSA-C22.2 No. 61010-2-201	DNV	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/ IECEX	CCCEX	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme IEC 61010-1	CB Scheme IEC 61010-2-201	Startup at -40°C	Installation altitude										
Inverters for generating alternating current																																	
QUINT4-INV/24DC/1AC/600VA/USB	1067325	•	•	•		•	•	•	•	*															•	•	a						

\* 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 respective product pages.



# Approvals for redundancy modules

		UL					CSA	Ship							Ex									
		CE/UKCA	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/IECEx	CCC-Ex	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601	Startup at -40°C	Installation altitude
<b>Active redundancy modules</b>																								
QUINT4-ORING/12-24DC/2X10/2X10	1088206	•	•	•	•	•				•						•	•			•		•	•	e
QUINT4-ORING/12-24DC/2X20/2X20	1088207	•	•	•	•	•				•						•	•			•		•	•	e
QUINT-ORING/24DC/2X40/1X80	2902879	•	•	•	•	•				•	•	•	•	•	•					•		•	•	e
QUINT4-S-ORING/12-24DC/1X40	2907752	•	•	•	•	•				•										•		•	•	c
QUINT4-S-ORING/12-24DC/1X40/VP	1043418	•	•	•	•	•				•						•	•			•		•	•	c
QUINT4-S-ORING/12-24DC/1X40/+	2907753	•	•	•	•	•				•						•	•			•		•	•	c
<b>Passive redundancy modules</b>																								
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	•	•	•	•	•															•	•	•	d
STEP3-DIODE/5-24DC/2X5/1X10/PT	1283937	•	•	•	•	•				•											•	•	•	d

# Approvals for uninterruptible power supplies

		UL										CSA		Ship					Ex						
		CE/UKCA	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/ IECEx	CCC-Ex	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601	Startup at -40°C	Installation altitude	
<b>DC uninterruptible power supplies</b>																									
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
QUINT4-CHARGER/1AC/24DC/10	2907990	•	•				•																		b
QUINT-UPS/24DC/12DC/5/24DC/10	2320461	•		•	•																				e
QUINT-UPS/24DC/24DC/5/1.3AH	2320254	•		•	•		•																		e
QUINT-UPS/24DC/24DC/10/3.4AH	2320267	•		•	•		•																		e
TRIO-UPS-2G/1AC/24DC/5	2907160	•	•									•			•	•							•	•	b
TRIO-UPS-2G/1AC/24DC/10	2907161	•	•									•			•	•							•	•	b
TRIO-UPS-2G/1AC/24DC/20	1105556	•	•									•			•	•							•	•	b
TRIO-UPS-2G/3AC/24DC/20	2906367	•	•									•			•	•							•	•	b
MINI-DC-UPS/24DC/2	2866640	•	•	•			•																		c
MINI-DC-UPS/12DC/4	2866598	•	•	•			•																		d
UNO-UPS/24DC/24DC/60W	2905907	•			•																•				e
STEP-UPS/24DC/24DC/3/46WH	1081430	•		•	•																	•			e
STEP-UPS/12DC/12DC/4/46WH	1082548	•		•	•																	•			e

\* 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 respective product pages.

		UL						CSA	Ship				Ex									
CE/UKCA	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/ IECEx	CCC-Ex	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601	Startup at -40°C	Installation altitude

### AC uninterruptible power supplies

QUINT-HP-UPS/120AC/1.5KVA/PT	1136804																						
QUINT-HP-UPS/230AC/1.5KVA/PT	1136811																						
QUINT-HP-UPS/120AC/2.5KVA/PT	1136813																						
QUINT-HP-UPS/230AC/2.5KVA/PT	1136815																						
QUINT4-UPS/1AC/1AC/500VA/USB	1067327	•				•	•			*									•				a
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

		UL						CSA	Ship				Ex									
CE/UKCA	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	Nippon Kaiji Kyokai	RINA	ATEX/UK-Ex/ IECEx	CCC-Ex	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601	Startup at -40°C	Installation altitude

### Uninterruptible power supplies with integrated capacitor and buffer modules

QUINT4-CAP/24DC/3.8/1KJ/PT	2320526	•	•				•	•											•		•		b
QUINT4-CAP/24DC/5/4KJ	2320539	•		•	•		•	•											•		•		b
QUINT4-CAP/24DC/10/8KJ	2320571	•		•	•		•	•											•		•		b
QUINT4-CAP/24DC/20/USB	1065635	•	•				•	•											•		•		b
QUINT4-CAP/24DC/20/PN	1076860	•	•				•	•											•		•		b
QUINT4-CAP/24DC/20/EIP	1076861	•	•				•	•											•		•		b
QUINT4-CAP/24DC/20/EC	1076858	•	•				•	•											•		•		b
STEP-CAP/24VDC/2/0.4KJ	1519633	•																					e
QUINT4-BUFFER/24DC/24DC/20	2907913	•		•	•		•	•											•		•		b
QUINT4-BUFFER/24DC/24DC/40	2909283	•		•	•		•	•											•		•		b

# Battery module approvals

		UL						CSA	Ship						Ex									
		CE/UKCA	UL/C-UL listed 61010	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	ABS – American Bureau of Shipping	BV – Bureau Veritas	LR Lloyd's Register	NK – Nippon Kaiji Kyokai	RTINA	ATEX/UK-Ex/ IECEX	CCC-Ex	DeviceNet™	SEMI F47-0706 Compliance	CB Scheme	Medical standard IEC 60601	Startup at -40°C	Installation altitude
<b>UPS-BAT/PB... battery modules</b>																								
UPS-BAT/PB/24DC/1.2AH	1274520	•	•				•				•	•	•	•							•			c
UPS-BAT/PB/24DC/4AH	1274117	•	•				•				•	•	•	•							•			c
UPS-BAT/PB/24DC/7AH	1274118	•	•				•				•	•	•	•							•			c
UPS-BAT/PB/24DC/12AH	1274119	•	•				•				•	•	•	•							•			c
UPS-BAT/PB/24DC/20AH	1348516	•	•				•				•	•	•	•							•			c
UPS-BAT/PB/24DC/40AH	1354641	•	•				•				•	•	•	•							•			c
UPS-BAT/PB/24DC/110AH	1474660	•	•				•														•			c
<b>UPS-BAT/LI... battery modules</b>																								
UPS-BAT/LI/24DC/128WH	1396415	•	•				•														•			c
<b>UPS-BAT/VRLA-WTR... battery modules</b>																								
UPS-BAT/VRLA-WTR/24DC/13AH	2320416	•		•	•		•				•	•	•	•							•			c
UPS-BAT/VRLA-WTR/24DC/26AH	2320429	•		•	•		•				•	•	•	•							•			c
<b>TRIO-BAT battery modules</b>																								
TRIO-BAT/24DC/1.2AH	1394729	•	•				•				•										•			c
TRIO-BAT/24DC/4AH	1394730	•	•				•				•										•			c
TRIO-BAT/24DC/7AH	1384031	•	•				•				•										•			c
TRIO-BAT/24DC/12AH	1394727	•	•				•				•										•			c
<b>MINI-BAT battery modules</b>																								
MINI-BAT/24DC/0.8AH	2866666	•																						c
MINI-BAT/12DC/1.6AH	2866572	•																						c
MINI-BAT/12DC/2.6AH	2866569	•																						c
<b>STEP-BAT battery modules</b>																								
STEP-BAT/LI-ION/18.5DC/46WH	1081355	•																			•			e





## Notes

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# Power Reliability – endless possibilities

## Solutions for superior system availability

Increasing electrification, networking, and automation leads to a growing dependency on reliable power supply solutions. For efficient system operation, we offer the solutions that combine surge protection, EMC filters, energy measuring devices, power supplies, and circuit breakers. Choose Phoenix Contact, a partner who provides you with holistic concepts for high system availability.



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Power Reliability



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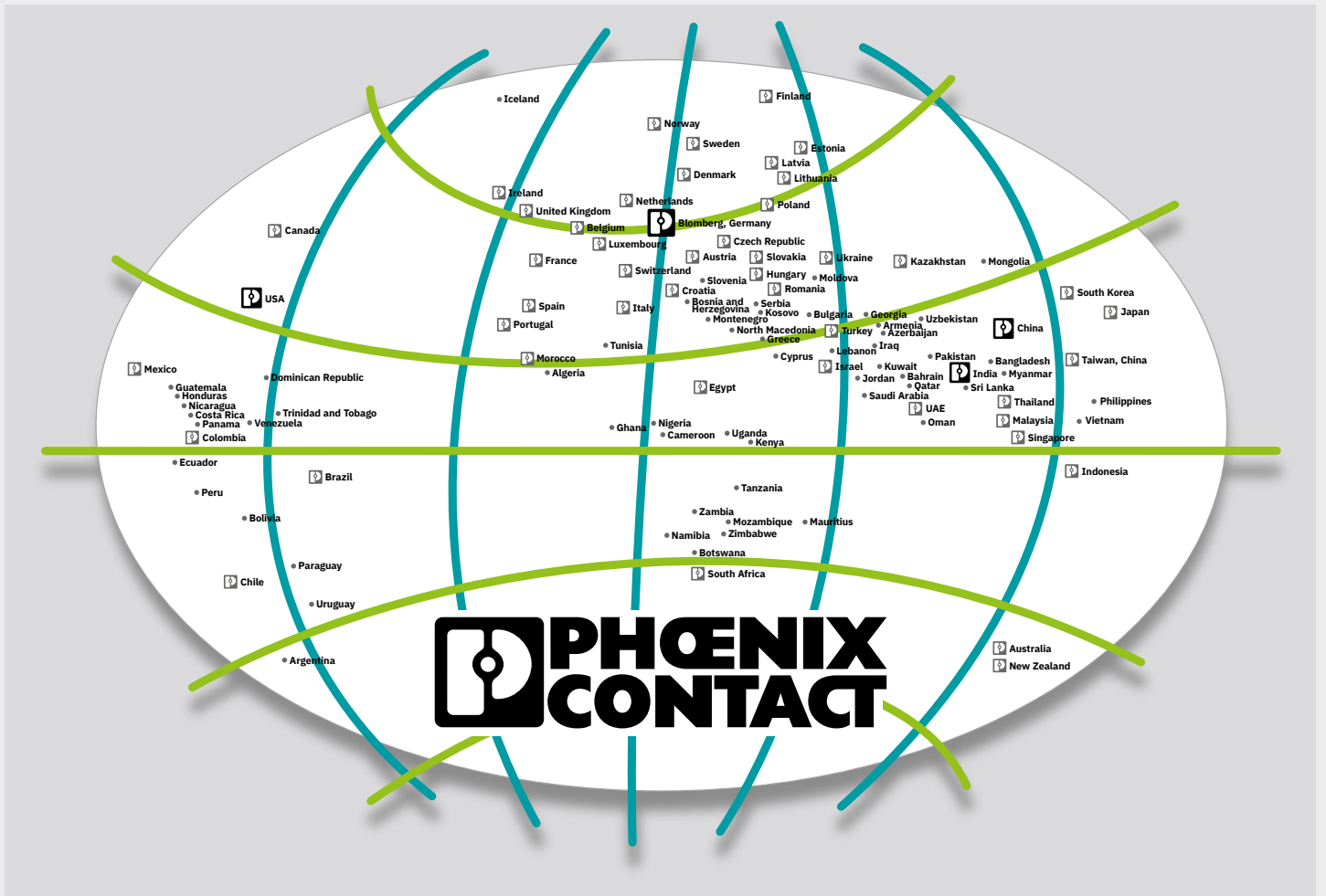
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