

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.



QUINT UPS with IQ Technology, for DIN rail mounting, input: 24 V DC, output: 24 V DC / 40 A, charging current: 5 A

## Product Description

The intelligent QUINT UPS for integration into established industrial networks: your systems continue to be supplied with uninterrupted power, even in the event of a mains failure. The battery management system with IQ Technology and a powerful battery charger ensures superior system availability.

## Your advantages

- Easy integration into networks using PROFINET, EtherNet/IP, EtherCAT<sup>®</sup> and USB interfaces
- Evaluation of state of health (SOH) and state of charge (SOC), thanks to the intelligent battery management system (BMS)
- Automatic recognition of the battery capacities and technologies (VRLA-WTR, LI-ION)
- Monitoring of output current and voltage, as well as manual connection and disconnection of the system
- SFB Technology selectively trips standard miniature circuit breakers. Loads connected in parallel continue working.

## Commercial Data

Item number	2907077
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CMU
Product Key	CMUI43
Catalog Page	Page 325 (C-4-2019)
GTIN	4055626170053
Weight per Piece (including packing)	733 g
Weight per Piece (excluding packing)	733 g
Customs tariff number	85371091
Country of origin	CN

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Technical Data

### Input data

Input voltage	24 V DC
Input voltage range	18 V DC ... 30 V DC
Electric strength, max.	35 V DC (Protected against polarity reversal)
Internal input fuse	no
Typical national grid voltage	24 V DC
Voltage type of supply voltage	DC
Inrush current	≤ 9 A (≤ 4 ms)
Reverse polarity protection	yes
Fixed backup threshold	22 V DC 30 V DC
Dynamic activation threshold	> 1 V / 100 ms
Switch-on time	max. 3 s
Switch-on time during battery operation (Bat.-Start)	8 s
Voltage drop, input/output	0.5 V DC
Current consumption $I_N$ ( $U_N$ , $I_{OUT} = I_N$ , $I_{charge} = 0$ )	40.1 A
Current consumption $I_{max}$ ( $U_N$ , $I_{OUT} = I_{Stat.Boost}$ , $I_{charge} = max$ )	51.2 A
Current consumption $I_{No-Load}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = 0$ )	50 mA
Current consumption $I_{charge}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = max$ )	6.1 A
Power consumption $P_N$ ( $U_N$ , $I_{OUT} = I_N$ , $I_{charge} = 0$ )	965 W
Power consumption $P_{max}$ ( $U_N$ , $I_{OUT} = I_{Stat.Boost}$ , $I_{charge} = max$ )	1120 W
Power consumption $P_{No-Load}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = 0$ )	1.3 W
Power consumption $P_{charge}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = max$ )	147 W

### Signal state Bat.-Start

Connection labeling	3.8 (+)
Channel	DI (digital input)
State	Bat.-Mode
State condition	Low level (30 ms)
Signal - state assignment	low - active
Reference potential	3.9 (SGnd, identical to 1.2, 2.2, 4.2)
LED status indicator	Yellow (Bat.-Mode)

### Signal state PS Boost

Connection labeling	3.7 (+)
Channel (configurable)	DI (digital input) default, AI (analog input)
State (configurable)	Charging current reduced
State condition	Low level
Signal - state assignment	low - active
Unit signal	I (mA)
Reference potential	3.9 (SGnd, identical to 1.2, 2.2, 4.2)

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Signal state Remote

Connection labeling	3.6 (+)
Channel	DI (digital input)
State (configurable)	Disconnection
State condition	Low level
Signal - state assignment	low - active
Reference potential	3.9 (SGnd, identical to 1.2, 2.2, 4.2)
LED status indicator	Green, flashing (DC OK)

## Output data

Efficiency	typ. 98 %
Number of outputs	1
Short-circuit-proof	yes
No-load proof	yes
Switch-over time	0 ms
Output current limit	In mains mode according to connected upstream current limiting device > 45 A (Battery operation)
Power dissipation	2.8 W (Mains operation)
	13 W (Mains operation)
	3.51 W (Battery operation)
	16.4 W (Battery operation)
UPS connection in parallel	no
UPS connection in series	no
Energy storage device connection in parallel	Yes, 5 (observe line protection)
Energy storage device connection in series	no

## Mains operation

Output voltage	24 V DC ( $U_{OUT} = U_{IN} - 0.5 \text{ V DC}$ )
Output voltage range	18 V DC ... 30 V DC
	18 V DC ... 32 V DC
Output current $I_N$	40 A
Static Boost ( $I_{Stat.Boost}$ )	45 A
Dynamic Boost ( $I_{Dyn.Boost}$ )	60 A (5 s)
Selective Fuse Breaking ( $I_{SFB}$ )	215 A (15 ms)
Output power $P_{OUT}$ ( $U_N, I_{OUT} = I_N$ )	960 W
Output power $P_{OUT}$ ( $U_N, I_{OUT} = I_{stat.Boost}$ )	1080 W

## Battery operation

Output voltage	24 V DC ( $U_{OUT} = U_{BAT} - 0.5 \text{ V DC}$ )
Output voltage range	19 V DC ... 32 V DC
Output current $I_N$	40 A
Static Boost ( $I_{Stat.Boost}$ )	45 A
Dynamic Boost ( $I_{Dyn.Boost}$ )	60 A (5 s)
Selective Fuse Breaking ( $I_{SFB}$ )	215 A (15 ms)

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

Output power $P_{OUT}$ ( $U_N$ , $I_{OUT} = I_N$ )	960 W
Output power $P_{OUT}$ ( $U_N$ , $I_{OUT} = I_{stat.Boost}$ )	1080 W

Signal supply 24 V DC, 20 mA, SGnd

Connection labeling	3.1 (+), 3.9 (SGnd)
Reference potential	3.9 (SGnd, identical to 1.2, 2.2, 4.2)

Signal state Alarm

Connection labeling	3.2, 3.3
Channel	DO (digital output)
Switching voltage	max. 30 V AC/DC
Switch contact (floating)	OptoMOS
State (configurable)	Group alarm
State condition (configurable)	Alarm threshold
Current carrying capacity	max. 100 mA
State - signal assignment	NC (Normally Closed)
LED status indicator	red (Alarm)

Signal state Bat. mode

Connection labeling	3.4 (+)
Channel	DO (digital output)
Semiconductor output	MOSFET
State (configurable)	Bat.-Mode
State condition (configurable)	$U_{IN} < 18$ V DC, $U_{IN} > 30$ V DC, Bat.-Start
State - signal assignment	active - high
Reference potential	3.9 (SGnd, identical to 1.2, 2.2, 4.2)
LED status indicator	Yellow (Bat.-Mode)

Signal state Ready

Connection labeling	3.5 (+)
Channel	DO (digital output)
Semiconductor output	MOSFET
State (configurable)	Ready
State condition (configurable)	SOC = 100 %
State - signal assignment	active - high
Reference potential	3.9 (SGnd, identical to 1.2, 2.2, 4.2)
LED status indicator	Green (state of charge - SOC)

Energy storage

Nominal voltage $U_N$	24 V DC
End-of-charge voltage (temperature-compensated)	25 V DC ... 32 V DC
End-of-charge voltage (configurable)	27.6 V DC
Charging current (configurable)	max. 5 A
Nominal capacity (without additional charger)	7 Ah ... 135 Ah
Max. capacity	135 Ah
Charging time	500 min. (38 Ah)

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

Buffer time	33 min. (38 Ah)
Deep discharge protection (configurable)	19.2 V DC
Battery technology	VRLA, VRLA-WTR, LI-ION
Charge characteristic curve	IU <sub>0</sub> U
IQ-Technology	yes
Temperature sensor	yes
Temperature compensation (configurable)	42 mV/K

## Connection data

### Input

Position	1.x
----------	-----

### Conductor connection

Connection method	Screw connection
rigid	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
flexible	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
flexible with ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
rigid (AWG)	8 ... 6 (Cu)
Stripping length	10 mm (rigid/flexible)
Tightening torque	1.2 Nm ... 1.5 Nm
Drive form screw head	Slotted L

### Output

Position	2.x
----------	-----

### Conductor connection

Connection method	Screw connection
rigid	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
flexible	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
flexible with ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
rigid (AWG)	8 ... 6 (Cu)
Stripping length	10 mm (rigid/flexible) 8 mm (Ferrule)
Tightening torque	1.2 Nm ... 1.5 Nm
Drive form screw head	Slotted L

### Signal

Position	3.x
----------	-----

### Conductor connection

Connection method	Push-in connection
rigid	0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup>
flexible	0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

	0.5 mm <sup>2</sup> (recommended)
flexible with ferrule with plastic sleeve	0.2 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
rigid (AWG)	24 ... 16 (Cu)
Stripping length	8 mm (rigid/flexible)

## LED signaling

Types of signaling	DC OK (green)
	Alarm (red)
	Bat.-Mode (yellow)
	SOC (red, green)
	Data (red, green)

## Product properties

Product type	Uninterruptible power supply
MTBF (IEC 61709, SN 29500)	> 1980000 h (25 °C)
	> 1205000 h (40 °C)
	> 604200 h (60 °C)
Environmental protection directive	RoHS Directive 2011/65/EU
	WEEE
	Reach

## Insulation characteristics

Protection class	III (without PE)
Degree of pollution	2

## Life expectancy (electrolytic capacitors)

Time	126720 h
------	----------

## Dimensions

Width	47 mm
Height	130 mm
Depth	125 mm

## Installation dimensions

Installation distance right/left (active)	5 mm / 5 mm ( $P_{Out} \geq 50\%$ )
Installation distance right/left (passive)	0 mm / 0 mm ( $P_{Out} \geq 50\%$ )
Installation distance right/left (active, passive)	0 mm / 0 mm ( $P_{Out} \leq 50\%$ )
Installation distance top/bottom (active)	50 mm / 50 mm ( $P_{Out} \geq 50\%$ )
Installation distance top/bottom (passive)	40 mm / 20 mm ( $P_{Out} \geq 50\%$ )
Installation distance top/bottom (active, passive)	40 mm / 20 mm ( $P_{Out} \leq 50\%$ )

## Alternative assembly

Width	123 mm
Height	130 mm
Depth	49 mm

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Mounting

Mounting type	DIN rail mounting
Mounting position	On horizontal DIN rail NS 35/7.5 and NS 35/15 acc. to EN 60715

## Material specifications

Flammability rating according to UL 94 (housing / terminal blocks)	V0
Housing material	Metal
Hood version	Stainless steel X6Cr17
Side element version	Aluminum AlMg3

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (start-up type tested)	-40 °C
Maximum altitude	≤ 4000 m
Climatic class	3K3 (EN 60721)
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	2.3g

## Standards and regulations

### Overvoltage category

EN 61010-1	II (≤ 4000 m)
EN 61010-2-201	II (≤ 4000 m)

### Protective extra-low voltage

Standards/specifications	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)

## Approval data

### UL approval

Identification	UL/C-UL Listed UL 61010-1
----------------	---------------------------

### UL approval

Identification	UL/C-UL Listed UL 61010-2-201
----------------	-------------------------------

### UL approval

Identification	UL/C-UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location)
----------------	---

### CSA

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

Identification	CAN/CSA-C22.2 No. 61010-1-12
CSA	
Identification	CAN/CSA-IEC 61010-2-201
CSA	
Identification	CAN/CSA-C22.2 No. 213 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location)
CB scheme	
Identification	IEC 61010-1
	IEC 61010-2-201
DNV	
Identification	Class Guideline DNVGL-CG-0339
Note	Location classes: Temperature D (see Application/Limitation), Humidity B, Vibration A/C, EMC B

## EMC data

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
Interference emission	Interference emission in accordance with EN 61000-6-3 (residential and commercial)
Noise emission	Additional basic standard EN 61000-6-5 (immunity in power station), IEC/EN 61850-3 (energy supply)
Noise immunity	Immunity in accordance with EN 61000-6-1 (residential), EN 61000-6-2 (industrial), and EN 61000-6-5 (power station equipment zone), IEC/EN 61850-3 (power supply)
	Immunity in accordance with EN 61000-6-2 (industrial)

## Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

## Electrostatic discharge

Contact discharge	8 kV (Test Level 4)
Discharge in air	15 kV (Test Level 4)
Comments	Criterion B

## Electromagnetic HF field

Standards/regulations	EN 61000-4-3
-----------------------	--------------

## Electromagnetic HF field

Frequency range	80 MHz ... 1 GHz
Test field strength	20 V/m (Test Level 3)
Frequency range	1 GHz ... 6 GHz



# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 6 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A

## Fast transients (burst)

Standards/regulations	EN 61000-4-4
-----------------------	--------------

## Fast transients (burst)

Input	4 kV (Test Level 4 - asymmetrical)
Output	4 kV (Test Level 4 - asymmetrical)
Signal	4 kV (Test Level 4 - asymmetrical)
Comments	Criterion B

## Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
Input	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion B

## Conducted interference

Standards/regulations	EN 61000-4-6
-----------------------	--------------

## Conducted interference

I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V (Test Level 3)

## Power frequency magnetic field

Standards/regulations	EN 61000-4-8
Frequency	16.67 Hz
	50 Hz
	60 Hz
Test field strength	100 A/m
Additional text	60 s
Comments	Criterion A
Frequency	50 Hz
	60 Hz
Frequency range	50 Hz ... 60 Hz
Test field strength	1 kA/m
Additional text	3 s
Frequency	0 Hz
Test field strength	300 A/m

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

Additional text	DC, 60 s
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

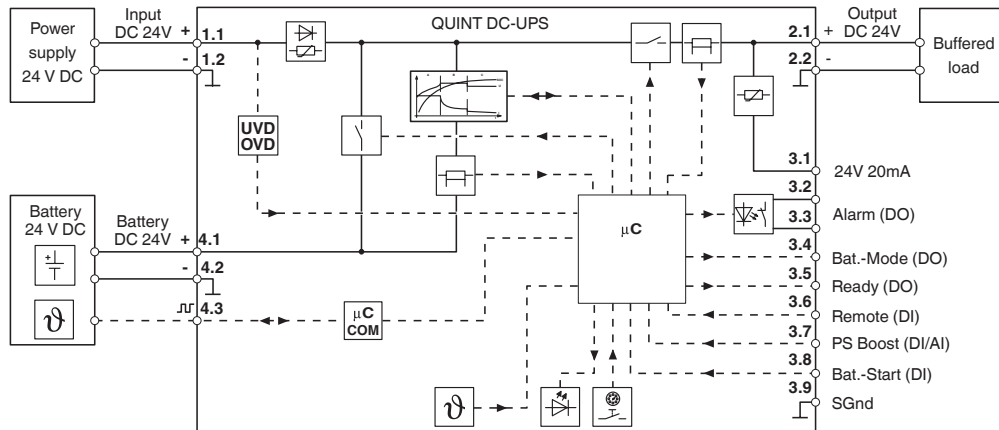
# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40

2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Drawings

Block diagram



# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Approvals



**EAC**

Approval ID: RU S-DE.BL08.W.00764



**UL Listed**

Approval ID: FILE E 123528



**cUL Listed**

Approval ID: FILE E 123528



**EAC**

Approval ID: RU-DE.B.00184/20

**ABS**

Approval ID: 21-2174010-PDA

**DNV**

Approval ID: TAA00002K4



**RINA**

Approval ID: ELE382621XG



**cUL Listed**

Approval ID: FILE E 199827



**UL Listed**

Approval ID: FILE E 199827

**cULus Listed**

**cULus Listed**

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Classifications

### ECLASS

ECLASS-9.0	27040705
ECLASS-10.0.1	27040705
ECLASS-11.0	27040705

### ETIM

ETIM 8.0	EC000382
----------	----------

### UNSPSC

UNSPSC 21.0	39121000
-------------	----------

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40

2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Accessories

### Energy storage

Energy storage - UPS-BAT/PB/24DC/7AH - 1274118

<https://www.phoenixcontact.com/in/products/1274118>



Energy storage, VRLA-AGM, 24 V DC, 7 Ah, automatic detection and communication with QUINT UPS-IQ

---

### Energy storage

Energy storage - UPS-BAT/PB/24DC/12AH - 1274119

<https://www.phoenixcontact.com/in/products/1274119>



Energy storage, VRLA-AGM, 24 V DC, 12 Ah, automatic detection and communication with QUINT UPS-IQ

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Energy storage

Energy storage - UPS-BAT/VRLA/24DC/20AH - 1109004

<https://www.phoenixcontact.com/in/products/1109004>



Energy storage, lead AGM, VRLA technology, 24 V DC, 20 Ah, automatic detection and communication with QUINT UPS-IQ

---

## Energy storage

Energy storage - UPS-BAT/VRLA/24DC/7.2AH - 2320319

<https://www.phoenixcontact.com/in/products/2320319>



Energy storage device, lead AGM, VRLA technology, 24 V DC, 7.2 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ



# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40

2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Energy storage

Energy storage - UPS-BAT/VRLA/24DC/12AH - 2320322

<https://www.phoenixcontact.com/in/products/2320322>



Please use the following item in new systems: 1274119.

Energy storage device, lead AGM, VRLA technology, 24 V DC, 12 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

---

## Energy storage

Energy storage - UPS-BAT/VRLA/24DC/38AH - 2320335

<https://www.phoenixcontact.com/in/products/2320335>



Energy storage device, lead AGM, VRLA technology, 24 V DC, 38 Ah, automatic detection, and communication with QUINT UPS-IQ

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Energy storage

Energy storage - UPS-BAT/VRLA-WTR/24DC/13AH - 2320416

<https://www.phoenixcontact.com/in/products/2320416>



Energy storage device, lead AGM, VRLA technology, 24 V DC, 13 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

---

## Energy storage

Energy storage - UPS-BAT/VRLA-WTR/24DC/26AH - 2320429

<https://www.phoenixcontact.com/in/products/2320429>



Energy storage device, lead AGM, VRLA technology, 24 V DC, 26 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40

2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Energy storage

Energy storage - UPS-BAT/LI-ION/24DC/120WH - 2320351

<https://www.phoenixcontact.com/in/products/2320351>



Energy storage device, LI-ION technology, 24 V DC, 120 Wh, for ambient temperatures of -20°C ... 60°C, automatic detection and communication with QUINT UPS-IQ

---

## Energy storage

Energy storage - UPS-BAT/LI-ION/24DC/924WH - 2908232

<https://www.phoenixcontact.com/in/products/2908232>



Energy storage device, LI-ION technology, 24 V DC, 924 Wh, for ambient temperatures of -25 °C ... 60 °C, automatic detection and communication with QUINT UPS-IQ

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/40



2907077

<https://www.phoenixcontact.com/in/products/2907077>

## Energy storage

Energy storage - UPS-BAT/PB/24DC/20AH - 1348516

<https://www.phoenixcontact.com/in/products/1348516>



Energy storage, VRLA-AGM, 24 V DC, 20 Ah, automatic detection and communication with QUINT UPS-IQ

---

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.

A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420

[info@phoenixcontact.co.in](mailto:info@phoenixcontact.co.in)