

# QUINT4-UPS/1AC/1AC/500VA/USB - Uninterruptible power supply



1067327

<https://www.phoenixcontact.com/us/products/1067327>

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QUINT AC-USV, IQ Technology, DIN rail mounting, input: 120 V AC / 230 V AC, output: 120 V AC / 230 V AC / 500 VA.

## Commercial data

Item number	1067327
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM23
Product key	CMUI15
GTIN	4055626736082
Weight per piece (including packing)	3,062 g
Weight per piece (excluding packing)	2,724 g
Customs tariff number	85371091
Country of origin	DE

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## Technical data

### Input data

Input voltage	120 V AC
	230 V AC
Input voltage range	90 V AC ... 264 V AC
Nominal input voltage range	100 V AC ... 240 V AC
Typical national grid voltage	120 V AC
Voltage type of supply voltage	AC
Frequency range ( $f_N$ )	45 Hz ... 65 Hz
Permissible backup fuse	max. 25 A
Current consumption	6.9 A (100 V AC)
	2.86 A (240 V AC)
	19 A (24 V DC)

### Output data

Efficiency	> 97 % (100 % load, with charged energy storage)
	~ 87 % (100 % load )
Apparent power	500 VA
Real power	400 W
Power factor (cos phi)	0.8
Crest factor	2.8
Switch-over time	< 10 ms
UPS classification	VFD-SS-311
Connection in parallel	no
Connection in series	No
Overload capability Mains operation	in accordance with internal fuse
Overload capability Battery operation	105 % (Permanent)
	120 % ... 150 % (20 s / 5 s, then shutdown)

### Mains operation

Output voltage	120 V AC
	230 V AC
Nominal output current ( $I_N$ )	4.17 A (120 V AC)
	2.17 A (230 V AC)
Maximum no-load power dissipation	typ. 9 W (120 V AC)
	typ. 10 W (230 V AC)
Power loss nominal load max.	typ. 10 W (120 V AC)
	typ. 11 W (230 V AC)
Nominal output frequency	60 Hz $\pm$ 5 Hz
	50 Hz $\pm$ 5 Hz
Output fuse	10 A 400 V gRL

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## Battery operation

Output voltage	120 V AC $\pm 2$ %
	230 V AC $\pm 2$ %
Form of output voltage	Pure sine
Maximum no-load power dissipation	approx. 23 W (120 V AC)
	approx. 24 W (230 V AC)
Power loss nominal load max.	approx. 57 W (120 V AC)
	approx. 54 W (230 V AC)
Nominal output frequency	60 Hz
	50 Hz
	$\pm 5$ % (grid-guided)
	$\pm 0.5$ % (self-guided)
Total harmonic distortion factor (THD)	< 3 % (linear load)
	< 8 % (non-linear load)
Electronic current limitation	> 2,5 x I <sub>N</sub> (> 200 ms)

## Energy storage

### Input

Input voltage	24 V DC
Deep discharge protection	20 V DC ... 24 V DC (can be parameterized)
Nominal capacity range	3.4 Ah ... 200 Ah (5x 40 Ah)
Charging current	max. 5 A
End-of-charge voltage	24 V DC ... 31 V DC (temperature compensated)

### General

Battery technology	VRLA, VRLA-WTR, LI-ION (see section: Ordering data)
Charge characteristic curve	IU <sub>0</sub> U
Permissible backup fuse	50 A

## Interfaces

Interface	USB (Modbus/RTU)
Number of interfaces	1
Connection method	MINI-USB Type B
Connection marking	5.1
Locking	Screw
Transmission physics	USB 2.0
Maximum cable length	3 m
Electrical isolation	yes

## Signaling

### Signal input Bat.-Start

Low signal	Connection to SGnd with < 2.7 k $\Omega$
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High signal	Open (> 200 kΩ between Bat.-Start and SGnd)
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## Signal input Remote

Low signal	Connection to SGnd with < 2.7 kΩ
High signal	Open (> 35 kΩ between Remote and SGnd)

## Signal output Alarm

Position	3.x
Signalization designation	Alarm
Position marking	3.1 (Alarm)
Switching output	Transistor output, active
Output voltage	24 V
Continuous load current	≤ 20 mA
LED status indicator	red

## Signal output Battery Mode

Position	3.x
Signalization designation	Bat.-Mode
Position marking	3.2 (Bat.-Mode)
Switching output	Transistor output, active
Output voltage	24 V
Continuous load current	≤ 20 mA
LED status indicator	yellow

## Signal output AC OK

Position	3.x
Signalization designation	AC OK
Position marking	3.3 (AC OK)
Switching output	Transistor output, active
Output voltage	24 V
Continuous load current	≤ 20 mA
LED status indicator	green

## Signal output Ready

Position	3.x
Signalization designation	Ready
Position marking	3.4 (Ready)
Switching output	Transistor output, active
Output voltage	24 V
Continuous load current	≤ 20 A
LED status indicator	green

## Signal output P > P<sub>N</sub>

Position	3.x
Signalization designation	P>P <sub>n</sub>

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Position marking	3.5 (P>Pn)
Switching output	Transistor output, active
Output voltage	24 V
Continuous load current	≤ 20 mA

## Signal ground SGnd

Connection labeling	3.9
Function	Signal ground
Reference potential	For signal inputs and signal outputs

## Electrical properties

Number of phases	1.00
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## Product properties

Product type	AC UPS
Product family	QUINT AC-USV
MTBF (IEC 61709, SN 29500)	445469 h (40 °C)

## Insulation characteristics

Protection class	I
Overvoltage category	II
Pollution degree	3 (≤ 130 V AC) 2 (> 200 V AC)

## Dimensions

### Item dimensions

Width	180 mm
Height	130 mm
Depth	125 mm

### Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

## Mounting

Mounting type	DIN rail mounting
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## Material specifications

Housing material	Metal
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C (> 50 °C: 2,5 % / K)

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Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 3000 m (> 2000 m: 0,6 % / 100 m)
Max. permissible relative humidity (operation)	≤ 95 %
Shock	20g in all directions (EN 60068-2-27)
Vibration (operation)	5 Hz ... 100 Hz, 0.7g (EN 60068-2-6)

## Standards and regulations

### Uninterruptible power supply systems

Standard designation	Uninterruptible power supply systems
Standards/specifications	EN 62040-1

## Approvals

### UL

Identification	UL/C-UL Recognized UL 1778
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## EMC data

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Interference emission	Noise emission in accordance with EN 62040-2
Noise immunity	Immunity in accordance with EN 62040-2
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	EN 62040-02 (Class C2)

### Electrostatic discharge

Standards/regulations	EN 61000-4-2
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### Electrostatic discharge

Contact discharge	± 6 kV
Discharge in air	± 8 kV
Comments	Criterion A

### Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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### Electromagnetic HF field

Frequency range	80 MHz ... 6 GHz
Test field strength	10 V/m
Comments	Criterion A

### Fast transients (burst)

Standards/regulations	EN 61000-4-4
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### Fast transients (burst)

Input	± 2 kV
	± 2 kV
Output	± 2 kV

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Signal	± 2 kV
	± 2 kV (USB)
Comments	Criterion A (B for USB)

## Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
Signal	1 kV (asymmetrical)
Comments	Criterion A
Input/Output	± 1 kV (symmetrical)
	± 2 kV (asymmetrical)

## Conducted interference

Standards/regulations	EN 61000-4-6
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## Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Signal	1 kV (asymmetrical)
Comments	Criterion A

## Power frequency magnetic field

Standards/regulations	EN 61000-4-8
Frequency	50 Hz
Signal	30 A/m
Comments	Criterion A

## Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

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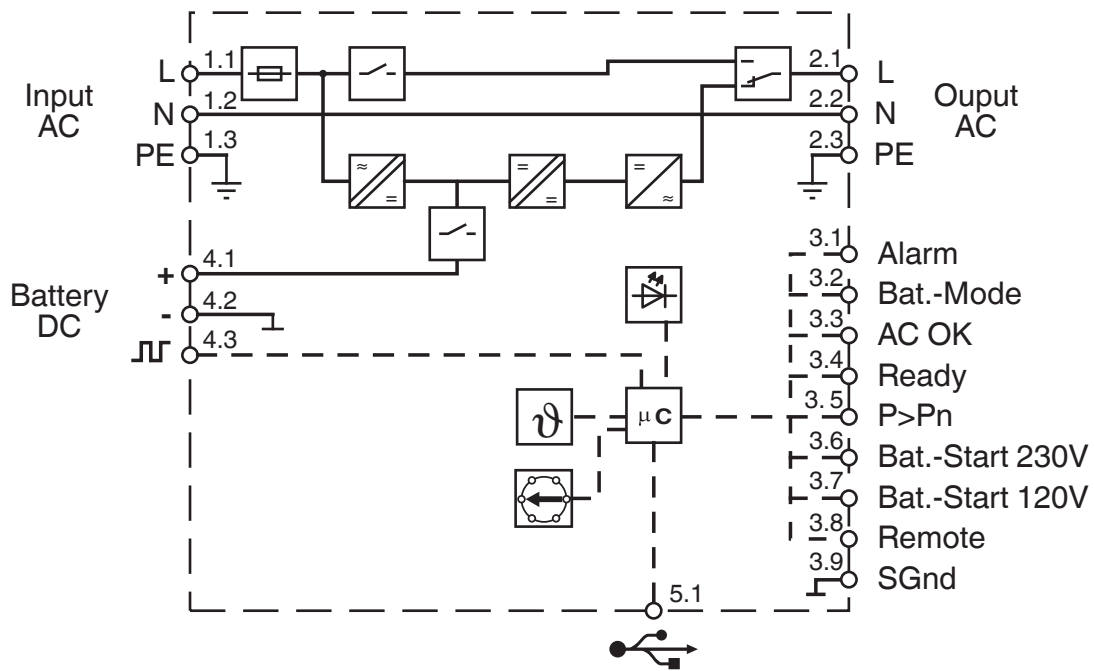


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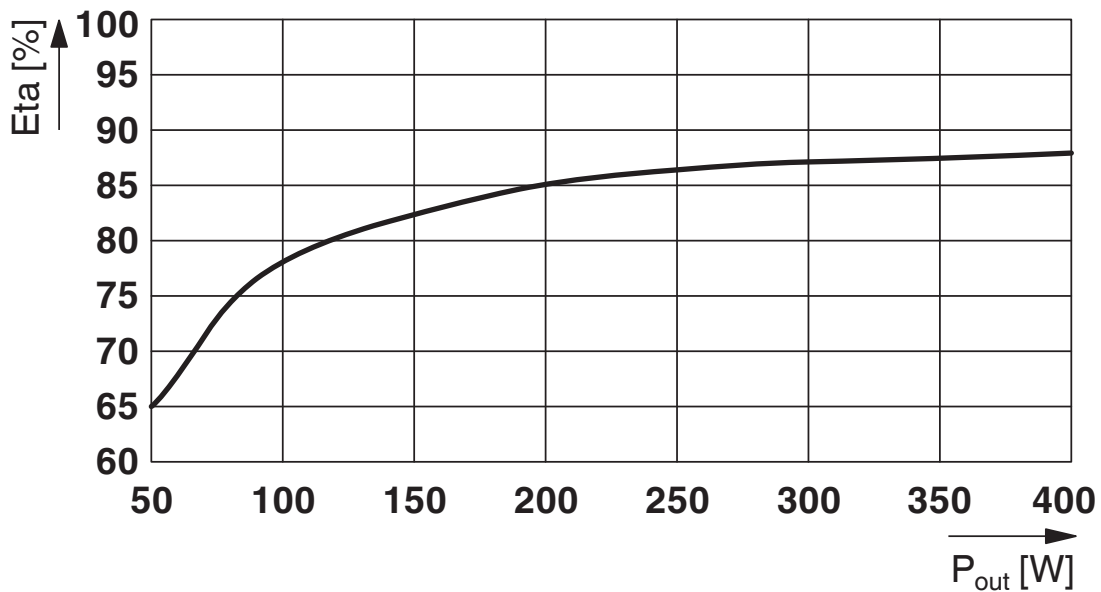
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## Drawings

Block diagram



Diagram





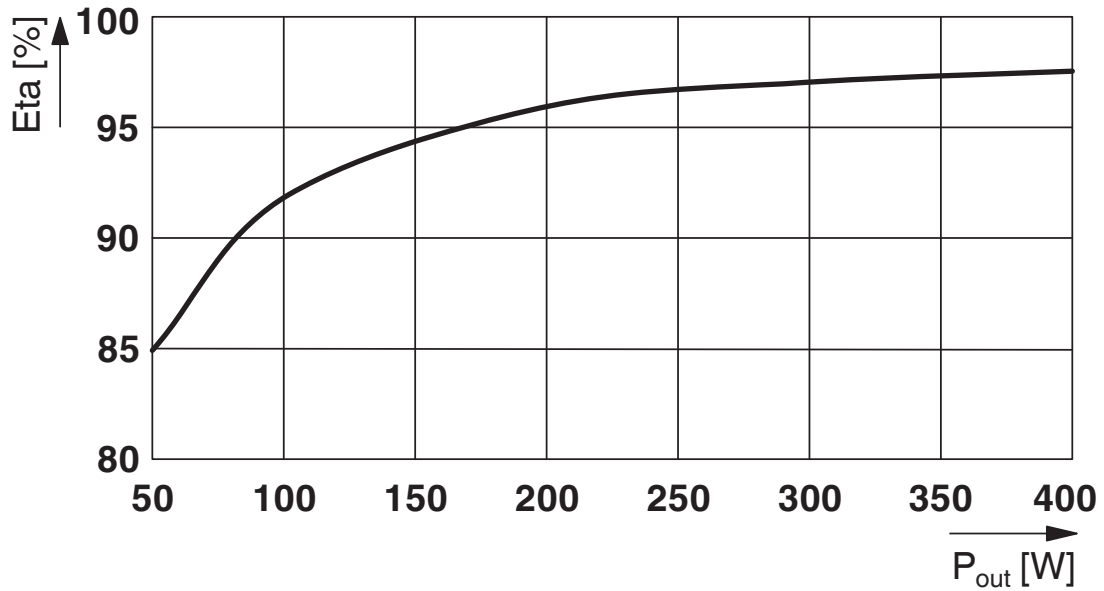
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Diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1067327>



**IECEE CB Scheme**  
Approval ID: DK-95944-UL



**cULus Recognized**  
Approval ID: FILE E 342453



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



**UL Recognized**  
Approval ID: FILE E 359066



**cUL Recognized**  
Approval ID: FILE E 359066

**cULus Recognized**

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## Classifications

### ECLASS

ECLASS-11.0	27040705
ECLASS-12.0	27040705
ECLASS-13.0	27040705

### ETIM

ETIM 9.0	EC000382
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### UNSPSC

UNSPSC 21.0	39121000
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### UPS-BAT/PB/24DC/4AH - Energy storage

1274117

<https://www.phoenixcontact.com/us/products/1274117>



Energy storage, VRLA-AGM, 24 V DC, 4 Ah, automatic detection and communication with QUINT UPS-IQ

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

1274118

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



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

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

1274119

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



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

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## MINI-SCREW-USB-DATACABLE - Data cable

2908217

<https://www.phoenixcontact.com/us/products/2908217>



Used for communication between an industrial PC and Phoenix Contact devices with USB-Mini-B connection.

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## FUSE 10A/400V GRL - Fuse

2908358

<https://www.phoenixcontact.com/us/products/2908358>



Fuse, nominal current: 10 A, length: 31.8 mm, diameter: 6.35 mm

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## UWA 130 - Mounting adapter

2901664

<https://www.phoenixcontact.com/us/products/2901664>



2-piece universal wall adapter for securely mounting the device in the event of strong vibrations. The profiles that are screwed onto the side of the device are screwed directly onto the mounting surface. The universal wall adapter is attached on the left/right.

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## UWA 182/52 - Mounting adapter

2938235

<https://www.phoenixcontact.com/us/products/2938235>



Universal wall adapter for securely mounting the device in the event of strong vibrations. The device is screwed directly onto the mounting surface. The universal wall adapter is attached on the top/bottom.

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

1348516

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



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



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## UPS-BAT/PB/24DC/40AH - Energy storage

1354641

<https://www.phoenixcontact.com/us/products/1354641>



Energy storage, VRLA-AGM, 24 V DC, 40 Ah, automatic detection and communication with QUINT UPS-IQ

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

2320416

<https://www.phoenixcontact.com/us/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

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

2320429

<https://www.phoenixcontact.com/us/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

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

2320351

<https://www.phoenixcontact.com/us/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

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

2908232

<https://www.phoenixcontact.com/us/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

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## PLT-SEC-T3-120-FM-UT - Type 3 surge protection device

2907918

<https://www.phoenixcontact.com/us/products/2907918>



Type 2/3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage: 120 V AC/DC

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## PLT-SEC-T3-230-FM-UT - Type 3 surge protection device

2907919

<https://www.phoenixcontact.com/us/products/2907919>



Type 2/3 surge protection, consisting of protective plug and base element with screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage: 230 V AC/DC

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## POWER MANAGEMENT SUITE - Configuration software

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Configuration and management software

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