

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



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.

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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 ± 2 %
	230 V AC ± 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
	± 5 % (grid-guided)
	± 0.5 % (self-guided)
Total harmonic distortion factor (THD)	< 3 % (linear load)
	< 8 % (non-linear load)
Electronic current limitation	> 2,5 x I _N (> 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 ₀ 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 Ω
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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 $P > P_N$

Position	3.x
Signalization designation	$P > P_n$

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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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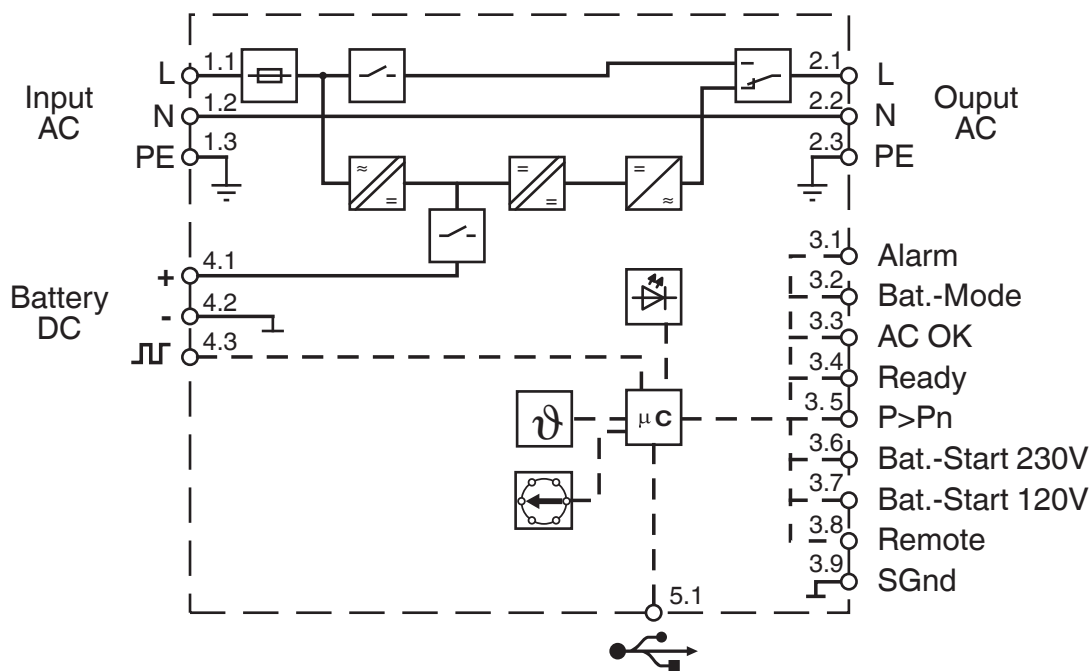


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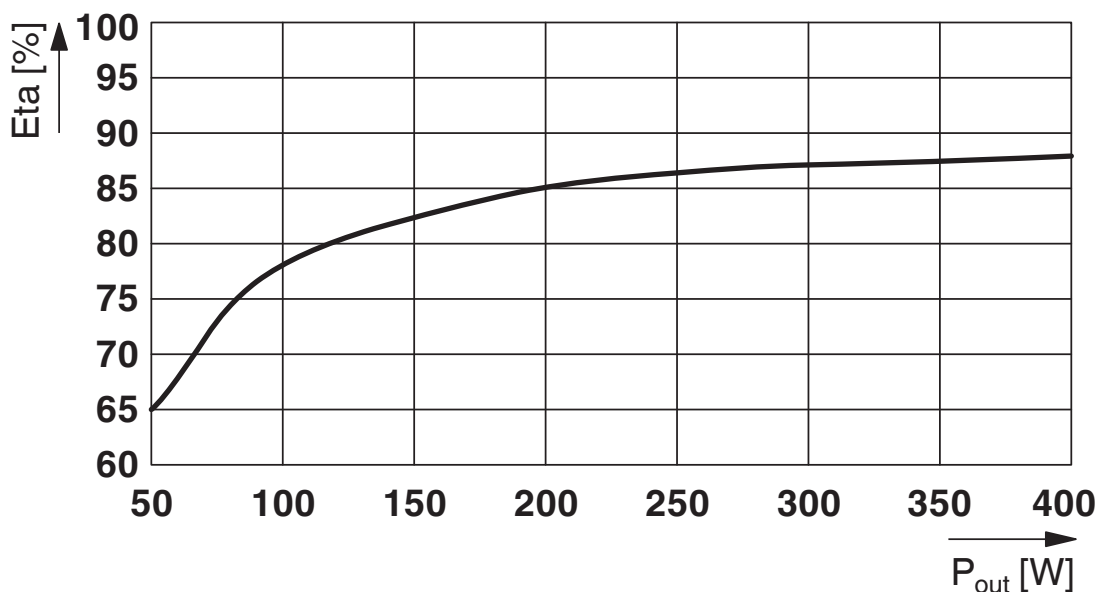
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Drawings

Block diagram



Diagram



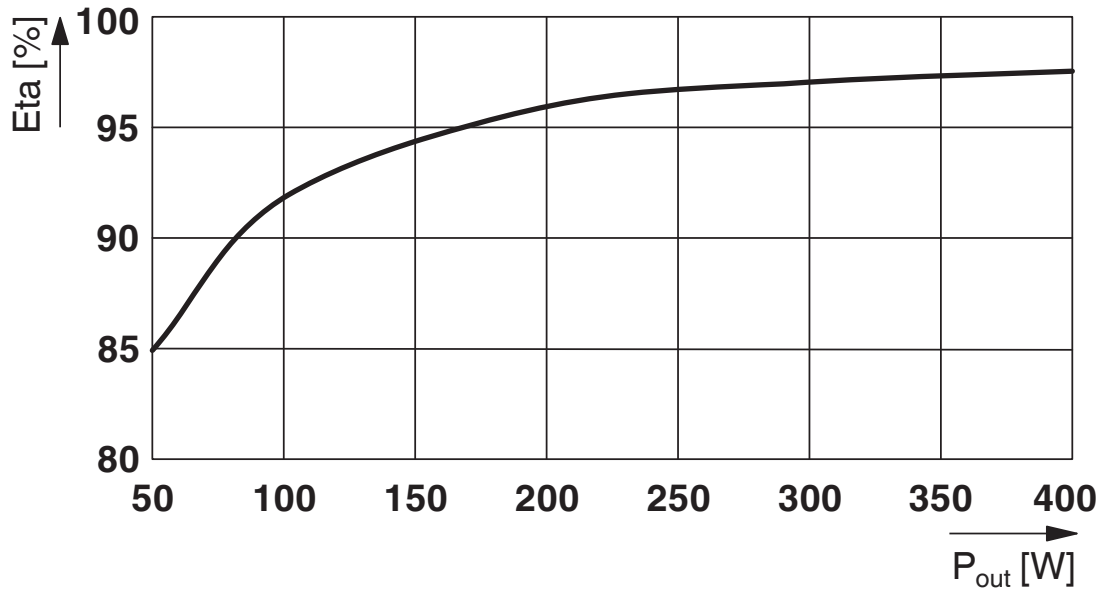
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Diagram



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