QUINT4-UPS/1AC/1AC/1KVA - Uninterruptible power supply

2320283

https://www.phoenixcontact.com/us/products/2320283

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Uninterruptible power supply with IQ technology for DIN rail mounting. Input: 120/230 V AC, output: 120/230 V AC/1 kVA. Provides information regarding the state of charge, remaining runtime, and service life of the rechargeable battery module at any time, thereby increasing system availability.

Product description

Supply AC loads reliably with the uninterruptible power supply from the QUINT range for DIN rails. Due to the online topology, the AC UPS delivers a pure sine curve in mains and battery operation. Combine the online UPS with various UPS-BAT energy storage devices. The USB interface makes it convenient to shut down your PC.

Your advantages

- Smooth transition due to online topology
- Pure sine curve in mains and battery operation
- USB interface for connecting to industrial PCs, for example
- Startup from energy storage possible, even without mains input
- Can be switched in parallel for redundancy and increased performance

Commercial data

Item number	2320283
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM22
Product key	CMUI15
Catalog page	Page 331 (C-4-2019)
GTIN	4055626244563
Weight per piece (including packing)	5,630 g
Weight per piece (excluding packing)	5,151 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Input data

AC operation

Input voltage	100 V AC -10 % / +20 %
	110 V AC -10 % / +20 %
	120 V AC -10 % / +20 %
	130 V AC -10 % / +20 %
	200 V AC -20 % / +20 %
	210 V AC -20 % / +20 %
	220 V AC -20 % / +20 %
	230 V AC -20 % / +15 %
	240 V AC -20 % / +10 %
Input voltage range	90 V AC ... 264 V AC
Input voltage range AC	184 V AC ... 264 V AC
	96 V AC ... 144 V AC
Typical national grid voltage	120 V AC
	230 V AC
Voltage type of supply voltage	AC
AC frequency range	45 Hz ... 65 Hz
Buffer period	1 h (38 AH)
Current consumption	10.4 A (100 V AC)
	10.5 A (110 V AC)
	10.5 A (120 V AC)
	9.7 A (130 V AC)
	6.4 A (200 V AC)
	6 A (210 V AC)
	5.7 A (220 V AC)
	5.5 A (230 V AC)
	5.3 A (240 V AC)
Variable connect threshold	Can be configured using UPS-CONF software
Power factor (cos phi)	0.9
Bypass fuse	T 15 A / 250 V (MDA -15-R)
Permissible backup fuse	B16 230 V AC
	20 A (120 V AC, Listed breaker)

Digital Control (configurable)

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

Digital Control Low-Active (configurable)

Battery-operated start 120 V AC low signal	Connection to SGnd with < 2.7 kΩ

Battery-operated start 120 V AC high signal	Open (> 200 kΩ between Bat.-Start and SGnd)

Output data

Classification according to IEC 62040-3	VFI-SS-111
Efficiency	> 92 % (120 V AC)
	> 94 % (230 V AC)
Nominal output voltage	100 V AC
	110 V AC
	120 V AC
	130 V AC
	200 V AC
	210 V AC
	220 V AC
	230 V AC
	240 V AC
Form of output voltage	Pure sine
Nominal output current (I_N)	7.8 A (100 V AC)
	8.1 A (110 V AC)
	8.3 A (120 V AC)
	7.7 A (130 V AC)
	5 A (200 V AC)
	4.8 A (210 V AC)
	4.5 A (220 V AC)
	4.3 A (230 V AC)
	4.2 A (240 V AC)
POWER BOOST (I_{Boost})	13 A (120 V AC)
	7 A (230 V AC)
Output power	778 VA (700 W)
	889 VA (800 W)
	1000 VA (900 W)
	1000 VA (900 W)
	1000 VA (900 W)
	1000 VA (900 W)
	1000 VA (900 W)
	1000 VA (900 W)
	1000 VA (900 W)
Apparent power	1 kVA ($U_N \geq 120$ V AC)
Nominal power	900 W ($U_N \geq 120$ V AC)
Maximum no-load power dissipation	typ. 17 W (120 V AC)
	typ. 25 W (230 V AC)
Power loss nominal load max.	typ. 79 W (120 V AC)
	typ. 55 W (230 V AC)
Crest factor	2.8
Switch-over time	0 ms

Connection in parallel	yes, 2
Connection in series	No

Mains operation

Nominal output voltage	120 V AC ±2 %
	230 V AC ±2 %
Nominal output current (I_N)	8.3 A
	4.3 A (230 V AC)
POWER BOOST (I_{Boost})	13 A
	7 A

Battery operation

Nominal output voltage	120 V AC ±2 %
	230 V AC ±2 %
Nominal output current (I_N)	4.3 A (230 V AC)
	8.3 A (120 V AC)
POWER BOOST (I_{Boost})	7 A (230 V AC)
	13 A (120 V AC)
Nominal output frequency	± 60 Hz ±0.5 % (At an input frequency of 55 Hz to < 65 Hz)
	± 50 Hz ±0.5 % (At an input frequency of 45 Hz to < 55 Hz)

Signal: AC OK

Output voltage	24 V
Continuous load current	≤ 20 mA

Signal: Alarm

Output voltage	24 V
Continuous load current	≤ 20 mA

Signal: Battery mode

Output voltage	24 V
Continuous load current	≤ 20 mA

Signal: Ready

Output voltage	24 V
Continuous load current	≤ 20 mA

Signal: $P>P_n$

Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA

Energy storage

Nominal voltage U_N	2x 24 V DC
End-of-charge voltage	58 V (temperature compensated)
Charging current	5 A
Nominal capacity range	3.4 Ah ... 190 Ah (5x 38 Ah)
Battery technology	VRLA, VRLA-WTR

Charge characteristic curve	IU_0U
Permissible backup fuse	50 A / ≥ 58 V

Connection data

Input

Connection method	Screw connection
Conductor cross section, rigid min.	0.2 mm²
Conductor cross section, rigid max.	6 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
Single conductor/flexible terminal point with ferrule with plastic sleeve, min.	0.25 mm²
Single conductor/flexible terminal point with ferrule with plastic sleeve, max.	4 mm²
Single conductor/flexible terminal point with ferrule without plastic sleeve, min.	0.25 mm²
Single conductor/flexible terminal point with ferrule without plastic sleeve, max.	4 mm²
Conductor cross section AWG min.	30
Conductor cross section AWG max.	10
Stripping length	8 mm
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Output

Connection method	Screw connection
Conductor cross section, rigid min.	0.2 mm²
Conductor cross section, rigid max.	6 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
Single conductor/flexible terminal point with ferrule with plastic sleeve, min.	0.25 mm²
Single conductor/flexible terminal point with ferrule with plastic sleeve, max.	4 mm²
Single conductor/flexible terminal point with ferrule without plastic sleeve, min.	0.25 mm²
Single conductor/flexible terminal point with ferrule without plastic sleeve, max.	4 mm²
Conductor cross section AWG min.	30
Conductor cross section AWG max.	10
Stripping length	8 mm
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signal

Connection method	Screw connection
Conductor cross section, rigid min.	0.2 mm²

Conductor cross section, rigid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Single conductor/flexible terminal point with ferrule with plastic sleeve, min.	0.2 mm²
Single conductor/flexible terminal point with ferrule with plastic sleeve, max.	2.5 mm²
Single conductor/flexible terminal point with ferrule without plastic sleeve, min.	0.2 mm²
Single conductor/flexible terminal point with ferrule without plastic sleeve, max.	2.5 mm²
Conductor cross section AWG min.	30
Conductor cross section AWG max.	12
Stripping length	8 mm
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Interfaces

Interface	MINI-USB type B
Features	lockable
Maximum cable length	3 m

Signaling

Types of signaling	LED
	Active switching output

Signal output: Transistor output, active

Signalization designation	AC OK
Status display	LED
Color	green

Signal output: Transistor output, active

Signalization designation	Alarm
Status display	LED
Color	red

Signal output: Transistor output, active

Signalization designation	Battery mode
Status display	LED
Color	yellow

Signal output: Transistor output, active

Signalization designation	Ready

Signal output: Transistor output, active

Signalization designation	$P>P_n$
Status display	LED
Color	green

Signal output

Signalization designation	Reference potential for the signal inputs and outputs

Electrical properties

Number of phases	1.00

Product properties

Product type	AC UPS
Product family	QUINT AC-USV
MTBF (IEC 61709, SN 29500)	217546 h (230 V AC, at 40 °C)

Insulation characteristics

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

Life expectancy (electrolytic capacitors)

Time	68970 h

Dimensions

Width	290 mm
Height	130 mm
Depth	125 mm

Installation dimensions

Installation distance right/left	5 mm / 5 mm
Installation distance top/bottom	50 mm / 50 mm

Mounting

Mounting type	DIN rail mounting

Material specifications

Housing material	Metal
Hood version	Sheet steel, DIN EN ISO2081 coat - Fe/Zn 18/B/TopCoat transparent blue
Side element version	Aluminum plate, DIN EN 573-3

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C (> 50 °C: 2,5 % / K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 3000 m (> 2000 m: 0,6 % / 100 m)
Climatic class	3K3 (EN 60721)

Max. permissible relative humidity (operation)	≤ 95 %
Shock	15g 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

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
	Immunity in accordance with EN 61000-6-1 (residential), EN 61000-6-2 (industrial)
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

Electrostatic discharge

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

Electromagnetic HF field

Standards/regulations	EN 61000-4-3

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

Fast transients (burst)

Input	± 2 kV
	± 2 kV
Output	± 2 kV
Signal	± 2 kV

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

Surge voltage load (surge)

Standards/regulations	EN 61000-4-5

Surge voltage load (surge)

Signal	1 kV (asymmetrical)
Comments	Criterion B
Input/Output	± 1 kV (symmetrical)
	± 2 kV (asymmetrical)

Conducted interference

Standards/regulations	EN 61000-4-6

Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Power frequency magnetic field

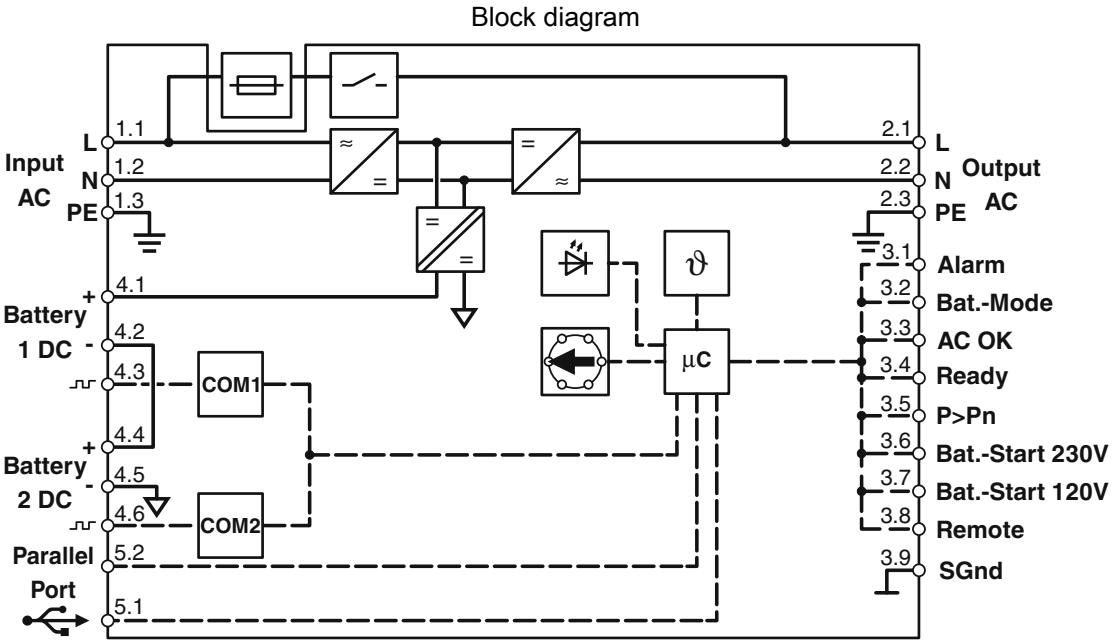
Standards/regulations	EN 61000-4-8
Frequency	50 Hz
	60 Hz
Test field strength	100 A/m
Comments	Criterion A

Criteria

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

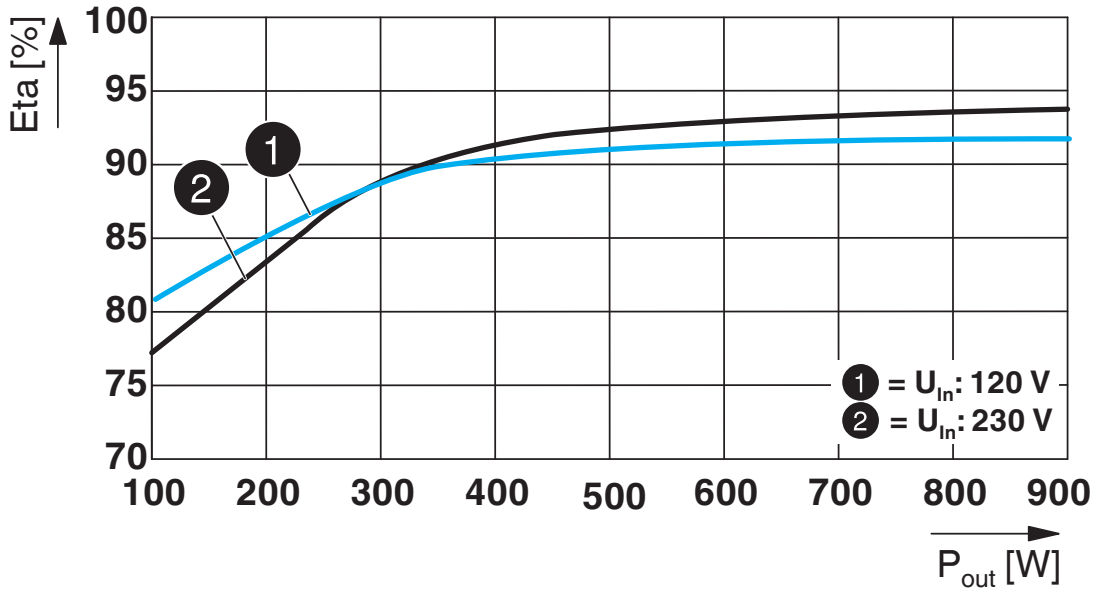
Drawings

Block diagram



Block diagram

Diagram



Efficiency

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2320283

cUL Recognized
Approval ID: FILE E 342453

UL Recognized
Approval ID: FILE E 342453

IECEE CB Scheme
Approval ID: DK-70737-UL

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

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

DNV
Approval ID: TAA00002JM

cUL Recognized
Approval ID: FILE E 359066

UL Recognized
Approval ID: FILE E 359066

cULus Recognized

cULus Recognized

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC000382

UNSPSC

UNSPSC 21.0	39121000

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

Accessories

UPS-BAT/PB/24DC/4AH - Battery module

1274117

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

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

UPS-BAT/PB/24DC/7AH - Battery module

1274118

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

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

UPS-BAT/PB/24DC/12AH - Battery module

1274119

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

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

UPS-BAT/PB/24DC/20AH - Battery module

1348516

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

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

UPS-BAT/PB/24DC/40AH - Battery module

1354641

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

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

UPS-BAT/VRLA-WTR/24DC/13AH - Battery module

2320416

https://www.phoenixcontact.com/us/products/2320416

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

UPS-BAT/VRLA-WTR/24DC/26AH - Battery module

2320429

https://www.phoenixcontact.com/us/products/2320429

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

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.

FUSE 25A/58V TAC ATO - Fuse

1021340

https://www.phoenixcontact.com/us/products/1021340

Fuse, nominal current: 25 A,

UWA 130 - Mounting adapter

2901664

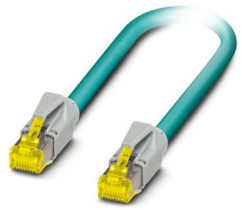
https://www.phoenixcontact.com/us/products/2901664

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.

VS-IP20/10G-IP20/10G-94F/1 - Patch cable

1418866

https://www.phoenixcontact.com/us/products/1418866



Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (Line), assembled at both ends with RJ45/IP20 connectors; outer sheath material: PUR; length: 1.0 m

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

QUINT4-UPS/1AC/1AC/1KVA - Uninterruptible power supply

2320283

https://www.phoenixcontact.com/us/products/2320283

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

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com