

Uninterruptible power supply - QUINT4-UPS/24DC/24DC/20/ USB - 2907072

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QUINT UPS with IQ Technology, USB communication interface (Modbus/RTU), for DIN rail mounting, input: 24 V DC, output: 24 V DC / 20 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® 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.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 0 5 5 6 2 6 1 7 1 2 8 9
GTIN	4055626171289
Weight per Piece (excluding packing)	0.698 kg
Custom tariff number	85371091
Country of origin	China

Technical data

Dimensions

Width	40 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	123 mm

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Technical data

Dimensions

Height with alternative assembly	130 mm
Depth with alternative assembly	42 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2.5 %/K)
Ambient temperature (start-up type tested)	-40 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Climatic class	3K3 (EN 60721)
Degree of pollution	2
Installation height	≤ 4000 m

Input data

Input voltage	24 V DC
Input voltage range	18 V DC ... 30 V DC
Electric strength, max.	35 V DC
Internal input fuse	no
Inrush current	≤ 8 A (≤ 4 ms)
Reverse polarity protection	yes
Fixed backup threshold	22 V DC
Switch-on time	max. 3 s
Voltage drop, input/output	0.4 V DC

Output data (general)

Short-circuit-proof	yes
No-load proof	yes
Switch-over time	0 ms
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
Efficiency	typ. 98 %

Output data (mains operation)

Output voltage range	18 V DC ... 30 V DC
	18 V DC ... 32 V DC
Static Boost ($I_{Stat.Boost}$)	25 A
Dynamic Boost ($I_{Dyn.Boost}$)	30 A (5 s)
Selective Fuse Breaking (I_{SFB})	120 A (15 ms)

Output data (battery operation)

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Technical data

Output data (battery operation)

Output voltage range	19 V DC ... 32 V DC
Static Boost (I _{Stat.Boost})	25 A
Dynamic Boost (I _{Dyn.Boost})	30 A (5 s)
Selective Fuse Breaking (I _{SFB})	120 A (15 ms)

Energy storage (battery)

Battery technology	VRLA, VRLA-WTR, LI-ION
End-of-charge voltage (temperature-compensated)	25 V DC ... 32 V DC
End-of-charge voltage	32 V DC
Max. capacity	135 Ah
Nominal capacity (without additional charger)	3 Ah ... 100 Ah
Charging current (configurable)	5 A
Charging time	202.5 h
Buffer time	19 min. (12 Ah)
Temperature compensation (configurable)	42 mV/K
Charge characteristic curve	IU ₀ U
Deep discharge protection	19.2 V DC
Temperature sensor	yes
IQ-Technology	yes

General data

Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
MTBF (IEC 61709, SN 29500)	> 1405000 h (25 °C)
	> 910000 h (40 °C)
	> 481200 h (60 °C)
Life expectancy (electrolytic capacitors)	192072 h
Weight	0.6 kg
Environmental protection directive	RoHS
	WEEE
	Reach

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
Single conductor/terminal point, stranded, with ferrule, min.	0.2 mm ²
Single conductor/terminal point, stranded, with ferrule, max.	4 mm ²
Conductor cross section AWG min.	30
Conductor cross section AWG max.	10

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Technical data

Connection data, input

Stripping length	8 mm
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Connection data output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
Single conductor/terminal point, stranded, with ferrule, min.	0.2 mm ²
Single conductor/terminal point, stranded, with ferrule, max.	4 mm ²
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

Connection data for battery

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	30
Conductor cross section AWG max.	12
Stripping length	6.5 mm
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Standard designation	Safety extra-low voltage
Standards/regulations	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)
Noise emission	Additional basic standard EN 61000-6-5 (immunity in power station), IEC/EN 61850-3 (energy supply)
Noise immunity	Immunity according to EN 61000-6-2 (industrial)
Standards/regulations	EN 61000-4-2
Contact discharge	4 kV (Test Level 2)
Standards/regulations	EN 61000-4-3

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Technical data

Standards and Regulations

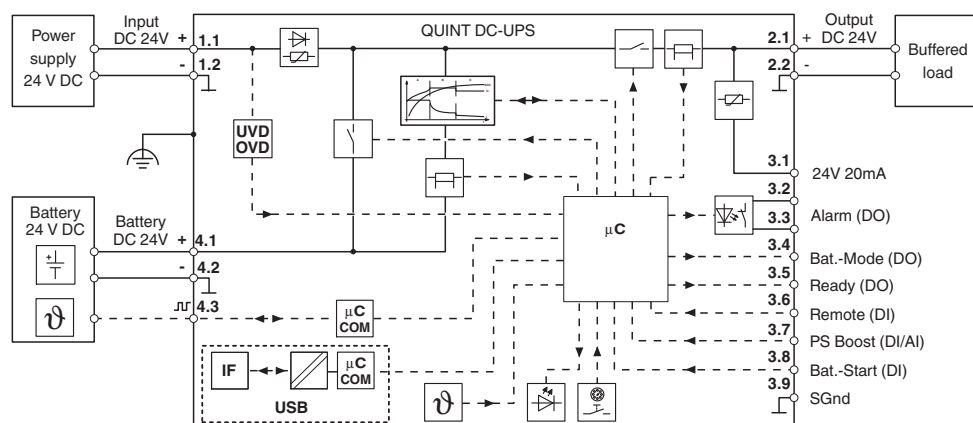
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1.4 GHz ... 2 GHz
Test field strength	3 V/m (Test Level 2)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Standards/regulations	EN 61000-4-8
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Standard – Safety extra-low voltage	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)
UL approvals	UL/C-UL Listed UL 61010-1
	UL/C-UL Listed UL 61010-2-201
	UL/C-UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	2.3g

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Drawings

Block diagram



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Classifications

eCl@ss

eCl@ss 5.1	27242213
eCl@ss 8.0	27242209
eCl@ss 9.0	27040705

ETIM

ETIM 5.0	EC000599
ETIM 6.0	EC000382
ETIM 7.0	EC000382

UNSPSC

UNSPSC 13.2	39121004
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Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed


Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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EAC		RU C- DE.A*30.B.01082
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cULus Listed		
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Accessories

Accessories

Battery unit

Energy storage - UPS-BAT/VRLA/24DC/3.4AH - 2320306



Energy storage device, lead AGM, VRLA technology, 24 V DC, 3.4 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

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

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



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



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

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

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

Energy storage - UPS-BAT/LI-ION/24DC/120WH - 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 - UPS-BAT/LI-ION/24DC/924WH - 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

Configuration and diagnostics

Configuration software - UPS-CONF - 2320403



Configuration software for QUINT UPS IQ and TRIO UPS uninterruptible power supplies (available for free under Downloads).

Data cable preassembled

Data cable - MINI-SCREW-USB-DATACABLE - 2908217



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

