

# Uninterruptible power supply - QUINT4-UPS/24DC/24DC/5/ USB - 2906991

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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 / 5 A, charging current: 1.5 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.

## Why buy this product

- ✓ 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.

## Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 171234
GTIN	4055626171234

## Technical data

### Dimensions

Width	35 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	123 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	37 mm

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## Technical data

### 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 (Protected against polarity reversal)
Internal input fuse	no
Inrush surge current	≤ 7 A (≤ 4 ms)
Reverse polarity protection	yes
Fixed connect threshold	22 V DC
Switch-on time	max. 3 s
Voltage drop, input/output	0.3 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 ( $I_{Stat.Boost}$ )	6.25 A
Dynamic Boost ( $I_{Dyn.Boost}$ )	10 A (5 s)
Selective Fuse Breaking ( $I_{SFB}$ )	30 A (15 ms)

### Output data (battery operation)

Output voltage range	19 V DC ... 32 V DC
Static Boost ( $I_{Stat.Boost}$ )	6.25 A
Dynamic Boost ( $I_{Dyn.Boost}$ )	10 A (5 s)

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## Technical data

### Output data (battery operation)

Selective Fuse Breaking ( $I_{SFB}$ )	30 A (15 ms)
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### 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	40 Ah
Nominal capacity (without additional charger)	0.8 Ah ... 30 Ah
Charging current (configurable)	max. 1.5 A
Charging time	2.5 h (3.4 Ah)
Buffer time	25 min. (3.4 Ah)
Temperature compensation (configurable)	42 mV/K
Charge characteristic curve	$IU_0U$
Temperature sensor	yes
IQ-Technology	yes

### General data

Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
MTBF (IEC 61709, SN 29500)	> 1430000 h (25 °C)
	> 916900 h (40 °C)
	> 480100 h (60 °C)
Weight	0.5 kg
Environmental protection directive	RoHS
	WEEE
	Reach

### Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Single conductor/terminal point, stranded, with ferrule, min.	0.2 mm <sup>2</sup>
Single conductor/terminal point, stranded, with ferrule, max.	2.5 mm <sup>2</sup>
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

### Connection data, output

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## Technical data

### Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Single conductor/terminal point, stranded, with ferrule, min.	0.2 mm <sup>2</sup>
Single conductor/terminal point, stranded, with ferrule, max.	2.5 mm <sup>2</sup>
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

### Connection data for battery

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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

### Connection data for signaling

Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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 61000-6-1 (residential), EN 61000-6-2 (industrial), and EN 61000-6-5 (power station equipment zone), IEC/EN 61850-3 (energy supply)

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## Technical data

### Standards and Regulations

Standards/regulations	EN 61000-4-2
Contact discharge	4 kV (Test Level 2)
Standards/regulations	EN 61000-4-3
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
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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## Approvals

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#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

### Approval details


UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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## Approvals

EAC		RU C- DE.A*30.B.01082
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