

2907990

<https://www.phoenixcontact.com/us/products/2907990>

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Battery charger QUINT CHARGER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 10 A

Commercial data

Item number	2907990
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM21
Product key	CMUI13
GTIN	4055626289434
Weight per piece (including packing)	1,238 g
Weight per piece (excluding packing)	942 g
Customs tariff number	85044095
Country of origin	CN

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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Technical data

Product properties

Product type	Charger
Product family	QUINT CHARGER
MTBF (IEC 61709, SN 29500)	> 500000 h (230 V AC, at 40 °C)

Data management status

Article revision	01
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Insulation characteristics

Protection class	I
Degree of pollution	2

Electrical properties

Number of phases	1.00
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Input data

AC operation

Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
Derating	< 90 V AC (2.5 %/V)
Frequency range (f_N)	50 Hz ... 60 Hz \pm 10 %
Current consumption	2.7 A (100 V AC) 1.2 A (240 V AC)
Input fuse	6.3 A (internal (device protection), slow-blow)
Recommended breaker for input protection	10 A ... 16 A (AC: Characteristic B, C, D, K, or comparable)

DC operation

Input voltage range	110 V DC ... 250 V DC
Current consumption	2.4 A (110 V DC) 1.1 A (250 V DC)

Digital Control (configurable)

Designation	Remote / Service
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Output data

Efficiency	89 % 91 %
Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	19.2 V DC ... 28.6 V DC
Nominal output current (I_N)	10 A
Residual ripple	< 20 mV _{PP}
Short-circuit-proof	yes
No-load proof	yes
Output power	240 W

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Maximum no-load power dissipation	< 4 W (at 230 V AC)
Power loss nominal load max.	< 35 W (at 230 V AC)
Connection in parallel	no
Connection in series	no

Signal: U_{In} OK

Output voltage	24 V DC
Continuous load current	20 mA
Signal ground SGnd	Reference ground signal contacts

Signal: Bat.-Voltage OK

Output voltage	24 V DC
Continuous load current	20 mA
Signal ground SGnd	Reference ground signal contacts

Signal: Alarm

Output voltage	24 V DC
Continuous load current	20 mA
Signal ground SGnd	Reference ground signal contacts

Energy storage

Nominal voltage U _N	24 V DC
Charging voltage	max. 32 V DC
Charging current	typ. 10 A
Nominal capacity range	7 Ah ... 300 Ah
Battery technology	VRLA, VRLA-WTR, LI-ION (LiFePO ₄)
Charge characteristic curve	IU

Connection data

Input

Connection method	Screw connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Single conductor/flexible terminal point with ferrule with plastic sleeve, min.	0.2 mm ²
Single conductor/flexible terminal point with ferrule with plastic sleeve, max.	2.5 mm ²
Single conductor/flexible terminal point with ferrule without plastic sleeve, min.	0.2 mm ²
Single conductor/flexible terminal point with ferrule without plastic sleeve, max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	6.5 mm

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Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Output

Connection method	Screw connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Single conductor/flexible terminal point with ferrule with plastic sleeve, min.	0.2 mm ²
Single conductor/flexible terminal point with ferrule with plastic sleeve, max.	2.5 mm ²
Single conductor/flexible terminal point with ferrule without plastic sleeve, min.	0.2 mm ²
Single conductor/flexible terminal point with ferrule without plastic sleeve, max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	6.5 mm
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signal

Connection method	Push-in connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Single conductor/flexible terminal point with ferrule with plastic sleeve, min.	0.2 mm ²
Single conductor/flexible terminal point with ferrule with plastic sleeve, max.	1.5 mm ²
Single conductor/flexible terminal point with ferrule without plastic sleeve, min.	0.2 mm ²
Single conductor/flexible terminal point with ferrule without plastic sleeve, max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

Interfaces

Interface	MINI-USB type B
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Signaling

Signal output: Transistor output, active

Signalization designation	U _{In} OK
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Status display	LED (green)
Signal output: Transistor output, active	
Signalization designation	Bat.-Voltage OK
Status display	LED (green)
Signal output: Transistor output, active	
Signalization designation	Alarm
Status display	LED (red)
Signal output	
Signalization designation	Reference potential for the signal inputs and outputs

Dimensions

Width	60 mm
Height	130 mm
Depth	126 mm

Installation dimensions

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

Alternative assembly

Width	123 mm
Height	130 mm
Depth	63 mm

Material specifications

Housing material	Metal
Hood version	High-grade steel plate
Side element version	Aluminum

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 4000 m (> 2000 m, observe derating)
Climatic class	3K3 (EN 60721)
Max. permissible relative humidity (operation)	≤ 95 % (at +25 °C, non-condensing)
Shock	30g, 18 ms in accordance with IEC 60068-2-27
Vibration (operation)	2 Hz ... 15 Hz, ±2.5 mm amplitude; 15 Hz ... 150 Hz, 2.3g

Approvals

UL approvals	UL Listed UL 61010-1
	UL/C-UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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UL

Identification	UL Listed UL 61010
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EMC data

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Interference emission	Interference emission in accordance with EN 61000-6-3 (residential and commercial) and EN 61000-6-4 (industrial)
Noise immunity	Immunity in accordance with EN 61000-6-2 (industrial)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	EN 61000-6-3 (Class B)
Noise emission	EN 61000-6-3 (Class B)

Harmonic currents

Frequency range	0 kHz ... 2 kHz
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Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Comments	Criterion A

Electromagnetic HF field

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

Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A

Fast transients (burst)

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

Input	2 kV (Test Level 3 - asymmetrical)
Output	1 kV (Test Level 2 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion B

Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
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Surge voltage load (surge)

Input	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	0.5 kV (Test Level 1 - symmetrical)
	1 kV (Test Level 1 - asymmetrical)

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Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V (Test Level 3)

Criteria

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

Standards and regulations

Standard – Safety extra-low voltage	IEC 61010 (SELV) / (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - safety for equipment for measurement, control, and laboratory use	IEC 61010-1

Overvoltage category

EN 61010-1	II
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Mounting

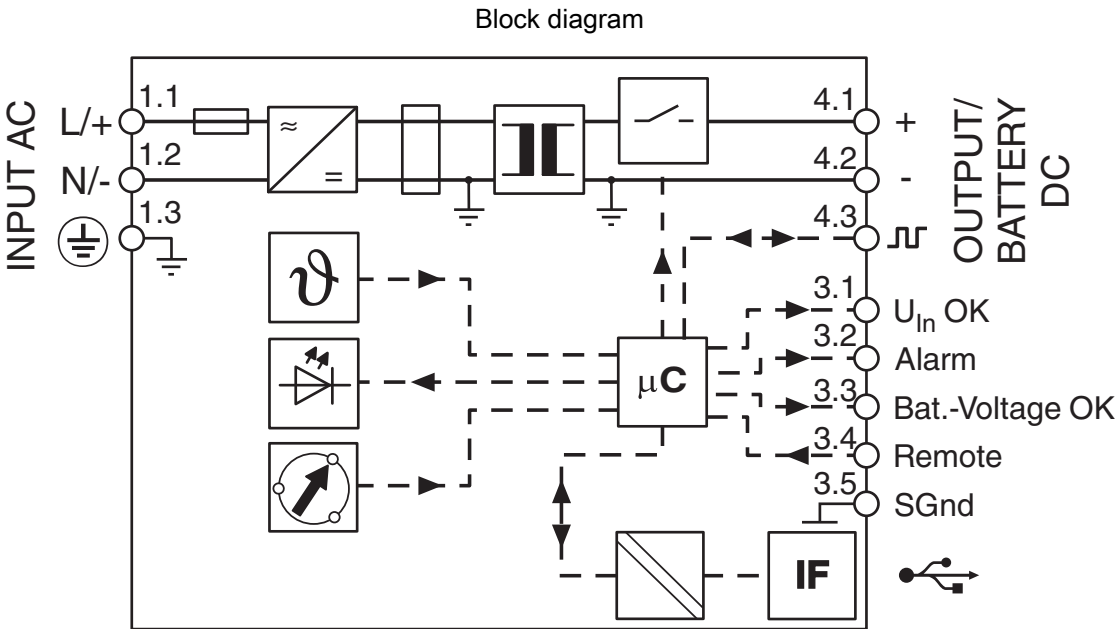
Mounting type	DIN rail mounting
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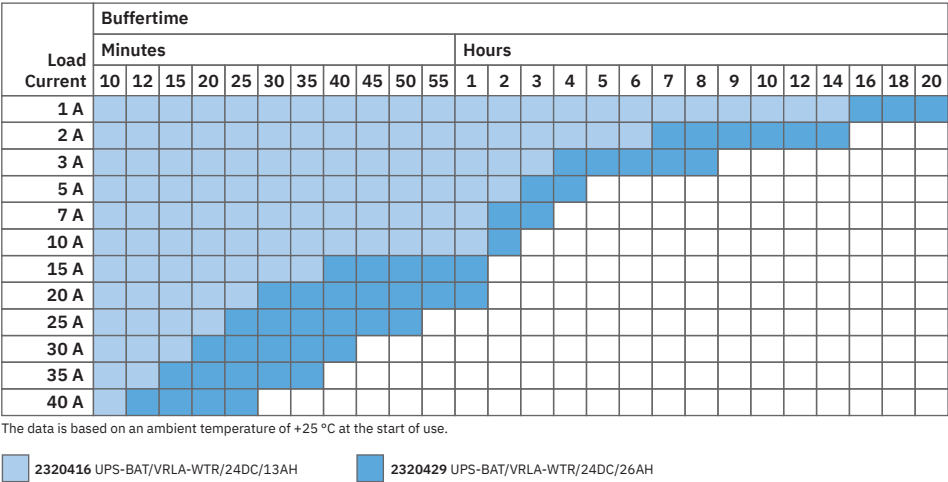
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Drawings



Block diagram

Graphic



QUINT DC UPS buffer times and VRLA-WTR battery module

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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Graphic

Load Current	Buffertime																											
	Minutes																				Hours							
	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	1	2	3	4					
1 A																												
2 A																												
3 A																												
5 A																												
7 A																												
10 A																												
15 A																												
20 A																												
25 A																												
30 A																												
35 A																												
40 A																												

The data is based on an ambient temperature of +25 °C at the start of use.

QUINT DC UPS buffer times for LI battery module

Graphic

Load Current	Buffertime																																			
	Minutes																		Hours																	
	1	2	3	4	5	6	7	8	9	10	20	30	40	45	50	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	50	100				
1 A																																				
2 A																																				
3 A																																				
5 A																																				
7 A																																				
10 A																																				
15 A																																				
20 A																																				
25 A																																				
30 A																																				
35 A																																				
40 A																																				

2x: In this case, two battery modules of the same capacity are required. The data is based on an ambient temperature of +25 °C at the start of use.

- 1274520 UPS-BAT/PB/24DC/1.2AH
- 1274117 UPS-BAT/PB/24DC/4AH
- 1274118 UPS-BAT/PB/24DC/7AH
- 1274119 UPS-BAT/PB/24DC/12AH
- 1348516 UPS-BAT/PB/24DC/20AH
- 1354641 UPS-BAT/PB/24DC/40AH
- 1474660 UPS-BAT/PB/24DC/110AH

QUINT DC UPS buffer times for PB battery module

QUINT4-CHARGER/1AC/24DC/10 - Battery charger




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Approvals


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UL Listed
Approval ID: FILE E 123528




cUL Listed
Approval ID: FILE E 123528



KC
Approval ID: R-R-PCK-2907990



cUL Listed
Approval ID: FILE E 199827



UL Listed
Approval ID: FILE E 199827

cULus Listed

cULus Listed

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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Classifications

ECLASS

ECLASS-11.0	21052901
ECLASS-12.0	21052901
ECLASS-13.0	21052901

ETIM

ETIM 9.0	EC001184
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UNSPSC

UNSPSC 21.0	26111700
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	70a8babf-618a-4ebb-a523-f7c857425fa1

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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Accessories

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.

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.

QUINT4-CHARGER/1AC/24DC/10 - Battery charger

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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.

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

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



2907990

<https://www.phoenixcontact.com/us/products/2907990>

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

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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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/PB/24DC/110AH - Battery module

1474660

<https://www.phoenixcontact.com/us/products/1474660>



Battery module, VRLA-AGM, 24 V DC, 110 Ah

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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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

QUINT4-CHARGER/1AC/24DC/10 - Battery charger

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UPS-BAT/LI/24DC/128WH - Battery module

1396415

<https://www.phoenixcontact.com/us/products/1396415>



Battery module, Lithium-Ion (LiFePO₄), 24 V DC, 128 Wh. For use with a QUINT UPS for ambient temperatures (charging) of 0°C ... 60°C and a maximum charging current of 5 A. For charging below 0°C, please note the permissible UPS V/C level.

RIF-1-BPT/2X21 - Relay base

2900931

<https://www.phoenixcontact.com/us/products/2900931>



Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

QUINT4-CHARGER/1AC/24DC/10 - Battery charger



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REL-MR- 24DC/21HC - Single relay

2961312

<https://www.phoenixcontact.com/us/products/2961312>



Plug-in miniature power relay, with power contact for high continuous currents, 1 changeover contact, input voltage 24 V DC

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