

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

2907990

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



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

Product description

With the QUINT CHARGER, the additional charger for QUINT DC UPS, both lead and lithium batteries can be charged more quickly. The temperature-optimized charging process increases the service life of the battery module, while the higher charging current reduces the charging time. The two devices communicate via system communication, the coordinated system for optimized battery charging. The charging parameters are configured via the USB interface. The battery status is indicated via LEDs and signal contacts.

Commercial data

Item number	2907990
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CMUI13
GTIN	4055626289434
Weight per piece (including packing)	1,238 g
Weight per piece (excluding packing)	980 g
Customs tariff number	85044095
Country of origin	CN

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Technical data

Product properties

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

Insulation characteristics

Protection class	I
Degree of pollution	2

Electrical properties

Number of phases	1
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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 ±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
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

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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
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Output	

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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
Status display	LED (green)

Signal output: Transistor output, active

Signalization designation	Bat.-Voltage OK
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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
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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

UL

Identification	UL Listed UL 61010
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EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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)
Conducted noise emission	
Standards/regulations	EN 61000-6-3 (Class B)
Noise emission	
Standards/regulations	EN 61000-6-3 (Class B)
Harmonic currents	
Frequency range	0 kHz ... 2 kHz
Electrostatic discharge	
Standards/regulations	EN 61000-4-2
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
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
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
Surge voltage load (surge)	
Input	2 kV (Test Level 4 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 1 - symmetrical)

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Signal	2 kV (Test Level 3 - asymmetrical)
Comments	1 kV (Test Level 2 - asymmetrical) Criterion B
Conducted interference	

Standards/regulations	EN 61000-4-6
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Conducted interference	
Input/output/signal	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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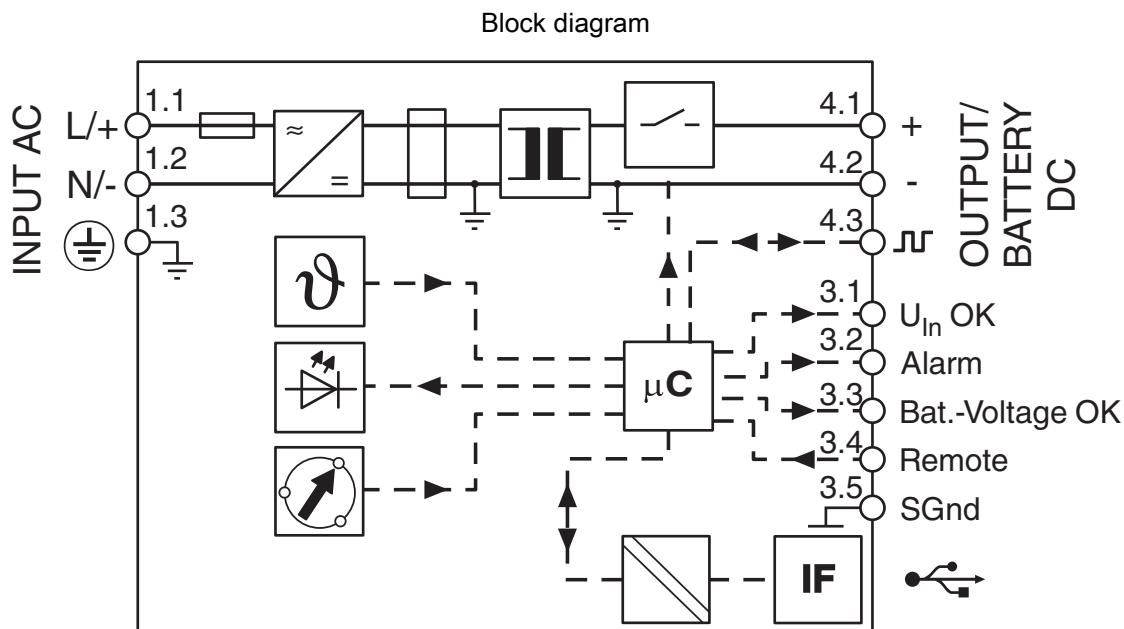
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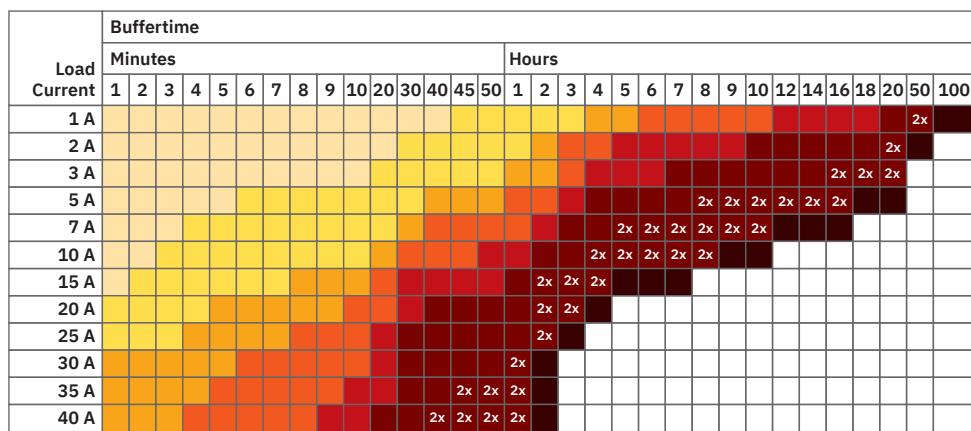
<https://www.phoenixcontact.com/pc/products/2907990>

Drawings



Block diagram

Graphic



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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Graphic

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

1460921 UPS-BAT/LI/24DC/64WH

1460922 UPS-BAT/LI/24DC/189WH

1396415 UPS-BAT/LI/24DC/128WH

1460923 UPS-BAT/LI/24DC/284WH

QUINT DC UPS buffer times for LI battery module

Graphic

Load Current	Buffertime																								
	Minutes										Hours														
	10	12	15	20	25	30	35	40	45	50	55	1	2	3	4	5	6	7	8	9	10	12	14	16	18
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.

2320416 UPS-BAT/VRLA-WTR/24DC/13AH

2320429 UPS-BAT/VRLA-WTR/24DC/26AH

QUINT DC UPS buffer times and VRLA-WTR battery module

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

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2907990>



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

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Classifications

ECLASS

ECLASS-13.0	21052901
ECLASS-15.0	21052901

ETIM

ETIM 10.0	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)
	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)
SCIP	70a8babf-618a-4ebb-a523-f7c857425fa1

EF3.1 Climate Change

CO2e kg	81.89 kg CO2e
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Accessories

MINI-SCREW-USB-DATACABLE - Data cable

2908217

<https://www.phoenixcontact.com/pc/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/pc/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/pc/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/LI/24DC/284WH - Battery module

1460923

<https://www.phoenixcontact.com/pc/products/1460923>



Battery module (device with battery), Lithium-Ion (LiFePO₄), 24 V DC, 284 Wh. 3 x 1532141 are required as replacement batteries.

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



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UPS-BAT/LI/24DC/189WH - Battery module

1460922

<https://www.phoenixcontact.com/pc/products/1460922>



Battery module (device with battery), Lithium-Ion (LiFePO₄), 24 V DC, 189 Wh.
2 x 1532141 are required as replacements batteries.

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

1274118

<https://www.phoenixcontact.com/pc/products/1274118>



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

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



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

1274119

<https://www.phoenixcontact.com/pc/products/1274119>

Battery module (device with battery), 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/pc/products/1348516>

Battery module (device with battery), 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/pc/products/1354641>

Battery module (device with battery), 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/pc/products/1474660>

Battery module (device with battery), 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/pc/products/2320416>

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



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

2320429

<https://www.phoenixcontact.com/pc/products/2320429>

Battery module (device with battery), lead AGM, VRLA technology 24 V DC, 26 Ah, tool-free battery change, 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/pc/products/1396415>



Battery module (device with battery), 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. 2 x 1446073 are required as replacement batteries.

RIF-1-BPT/2X21 - Relay base

2900931

<https://www.phoenixcontact.com/pc/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

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

2961312

<https://www.phoenixcontact.com/pc/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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