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

2907990

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CRA-READY



Battery charger QUINT CHARGER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 10 A, adjustable from 19.2 V DC ... 28.6 V DC. The product is being prepared for compliance with the Cyber Resilience Act (CRA).

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.

ELEKTROGERÄTE RÜCKNAHME

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)	980 g

Customs tariff number	85044095
Country of origin	CN

Technical data

Notes

Note on application

Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Product properties

Product type	Charger
Product family	QUINT CHARGER
MTBF (IEC 61709, SN 29500)	> 500000 h (230 V AC, at 40 °C)
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

Insulation characteristics

Protection class	I
Overvoltage category (EN 61010-1)	II
Degree of pollution	2

Electrical properties

Number of phases	1

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

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
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 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.	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

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.	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 mm²
Conductor cross-section, rigid max.	1.5 mm²
Conductor cross-section flexible min.	0.2 mm²
Conductor cross-section flexible max.	1.5 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.	1.5 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.	1.5 mm²
Conductor cross-section AWG min.	24
Conductor cross-section AWG max.	16
Stripping length	8 mm

Interfaces

Interface	MINI-USB type B

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
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

UL

Identification	UL Listed UL 61010

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

Conducted interference

Standards/regulations	EN 61000-4-6

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

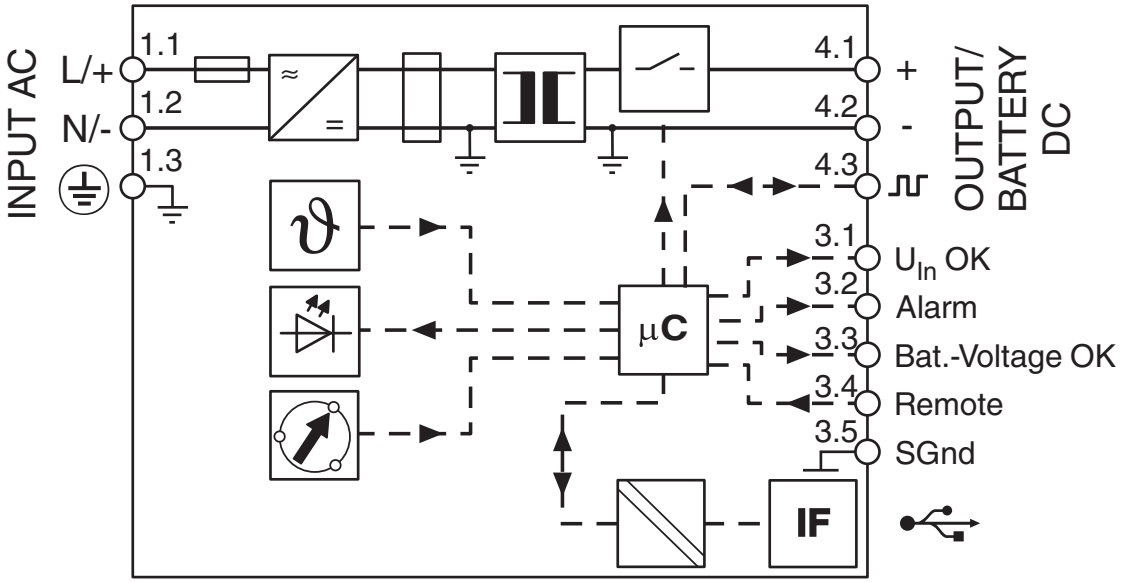
Standard – Safety extra-low voltage	IEC 61010 (SELV) / (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - safety for equipment for measurement, control, and laboratory use	IEC 61010-1

Mounting

Mounting type	DIN rail mounting

Drawings

Block diagram



Block diagram

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																															2x																								
2 A																														2x																								
3 A																												2x	2x	2x																								
5 A																							2x	2x	2x	2x	2x	2x																								
7 A																				2x	2x	2x	2x	2x	2x																												
10 A																			2x	2x	2x	2x	2x																														
15 A																	2x	2x	2x																																		
20 A																	2x	2x																																		
25 A																	2x																																		
30 A																2x																																		
35 A														2x	2x	2x																																		
40 A													2x	2x	2x	2x																																		

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

1274119 UPS-BAT/PB/24DC/12AH

1474660 UPS-BAT/PB/24DC/110AH

1274117 UPS-BAT/PB/24DC/4AH

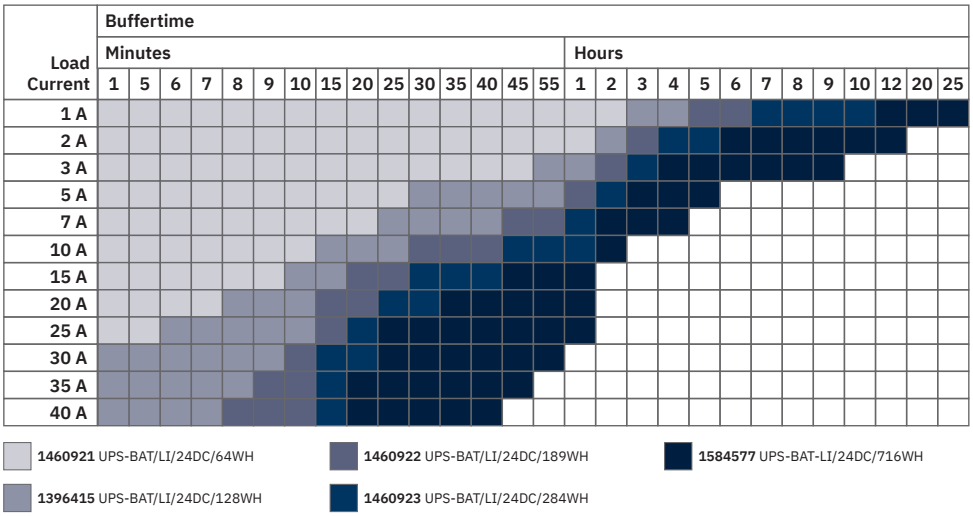
1348516 UPS-BAT/PB/24DC/20AH

1274118 UPS-BAT/PB/24DC/7AH

1354641 UPS-BAT/PB/24DC/40AH

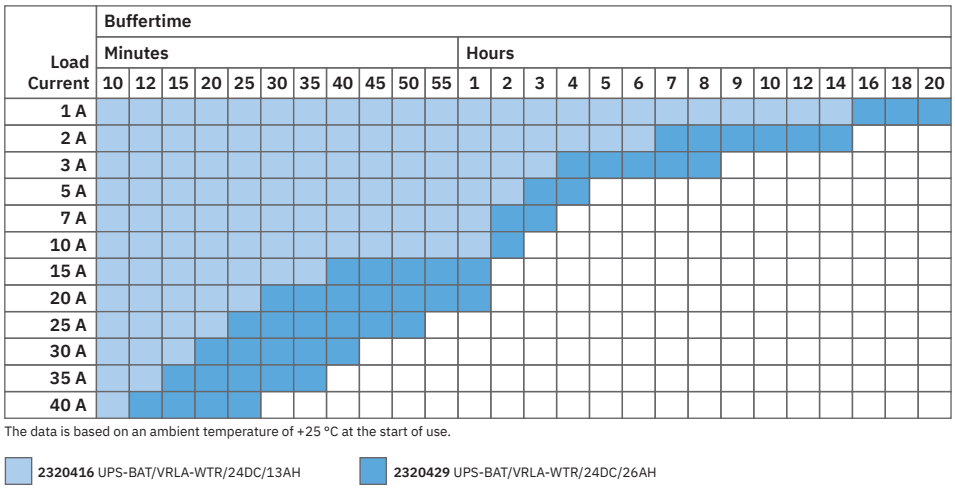
QUINT DC UPS buffer times for PB battery module

Graphic



QUINT DC UPS buffer times for LI battery module

Graphic



QUINT DC UPS buffer times and VRLA-WTR battery module

Approvals

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

Classifications

ECLASS

ECLASS-13.0	21052901
ECLASS-15.0	21052901

ETIM

ETIM 10.0	EC001184

UNSPSC

UNSPSC 21.0	26111700

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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