

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



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 |

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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) |

Insulation characteristics

| | |
|---------------------|---|
| Protection class | I |
| Degree of pollution | 2 |

Electrical properties

| | |
|------------------|------|
| Number of phases | 1.00 |
|------------------|------|

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 |
|-------------|------------------|

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 (for 230 V AC) |
| Power loss nominal load max. | < 35 W (for 230 V AC) |

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| | |
|------------------------|----|
| 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 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

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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 |
|-----------|-----------------|

Signaling

Signal output: Transistor output, active

| | |
|---------------------------|--------------------|
| Signalization designation | U _{In} OK |
| Status display | Green LED |

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Signal output: Transistor output, active

| | |
|---------------------------|-----------------|
| Signalization designation | Bat.-Voltage OK |
| Status display | Green LED |

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 |

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UL

| | |
|----------------|--------------------|
| Identification | UL Listed UL 61010 |
|----------------|--------------------|

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 |
|-----------------|-----------------|

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 | 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 |
|-----------------------|--------------|

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 |
|------------|----|

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

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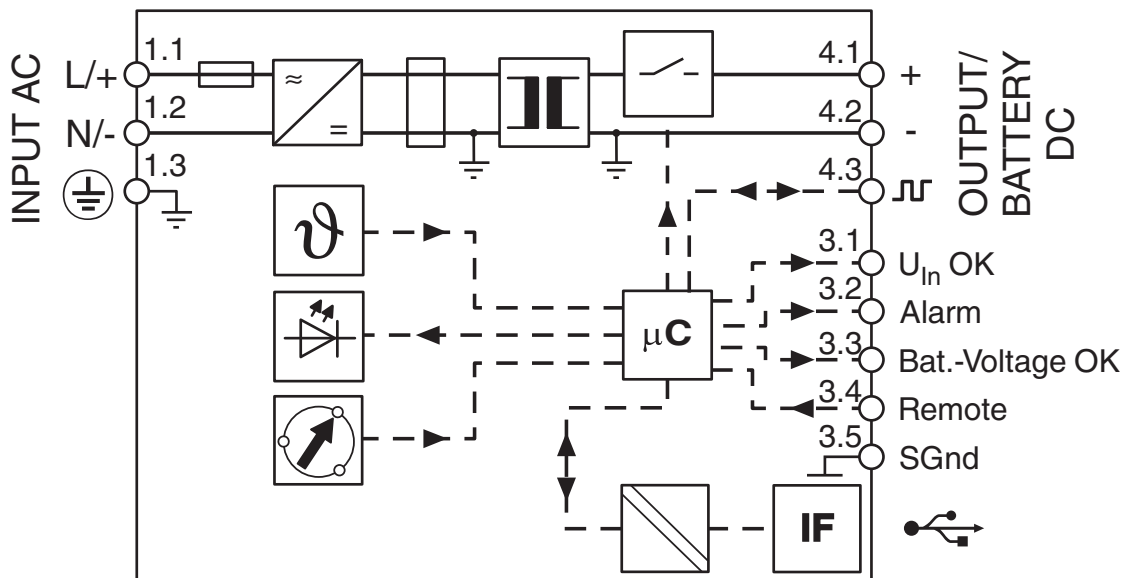


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Drawings

Block diagram



Block diagram

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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

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001184 |
|----------|----------|

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 |

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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.

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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



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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

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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



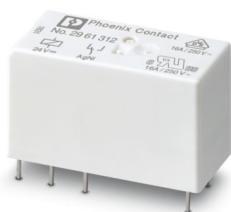
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REL-MR- 24DC/21HC - Single relay

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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