

Uninterruptible power supply - TRIO-UPS-2G/3AC/24DC/20 - 2906367

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Uninterruptible power supply with integrated power supply unit. For lead AGM energy storage with 3.4 Ah to 38 Ah nominal capacity. Input: 3-phase, output: 24 V DC/20 A. Push-in connection technology


Product Description

Supply DC loads reliably and save space with the TRIO uninterruptible power supplies. An input grid is no longer necessary for startup. Connected industrial PCs can be shut down easily via the integrated USB interface.

Your advantages

- ✓ Space saving: Combination of UPS module and power supply in the same housing
- ✓ Long buffer times, thanks to large selection of VRLA energy storage systems
- ✓ USB interface for connection to higher-level controllers such as industrial PCs
- ✓ Startup from energy storage possible, even without mains input
- ✓ Universal range of possible applications, thanks to a comprehensive package of approvals and an extended temperature range
- ✓ Easy installation, thanks to push-in connection technology

Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 055626 068053 |
| GTIN | 4055626068053 |
| Weight per Piece (excluding packing) | 2,007.000 g |
| Weight per piece (including packing) | 2,008.000 g |
| Custom tariff number | 85044030 |
| Country of origin | China |

Technical data

Dimensions

| | |
|---------------------------------|--------|
| Width | 88 mm |
| Height | 130 mm |
| Depth | 160 mm |
| Width with alternative assembly | 160 mm |

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Technical data

Dimensions

| | |
|----------------------------------|--------|
| Height with alternative assembly | 130 mm |
| Depth with alternative assembly | 88 mm |

Ambient conditions

| | |
|---|--|
| Degree of protection | IP20 |
| Inflammability class in acc. with UL 94 (housing / terminal blocks) | V0 |
| 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 (in acc. with EN 60721) |
| Degree of pollution | 2 |
| Installation height | ≤ 4000 m (> 2000 m, observe derating) |

Input data

| | |
|---------------------------------|-----------------------------|
| Inrush current limiting/ I^2t | < 0.76 A ² s |
| Mains buffering time | ≥ 25 ms (400 V AC) |
| Typical response time | 200 ms |
| Input fuse, integrated | 6.3 A (slow-blow, internal) |

Output data

| | |
|---|--|
| Nominal output voltage | 24 V DC |
| Setting range of the output voltage (U_{Set}) | 24 V DC ... 28 V DC (> 24 V constant capacity) |
| Nominal output current (I_N) | 20 A |
| Dynamic Boost ($I_{Dyn.Boost}$) | 30 A |
| Derating | > 60 °C (2.5%/K of $P_{Out,nom.}$) |
| Control deviation | < 0.3 % (Static load change 10 % ... 90 %) |
| Maximum power dissipation in no-load condition | < 3.6 W (400 V AC) |
| Efficiency | typ. 93 % (400 V AC) |
| | typ. 92 % (480 V AC) |
| | typ. 94 % (Battery operation) |
| Residual ripple | < 20 mV |
| Connection in parallel | yes, with diode module uncoupled |
| Surge protection against internal surge voltages | < 30 V DC |
| Feedback voltage resistance | ≤ 35 V DC |

General

| | |
|---------------------------------|---------------------------------|
| Net weight | 1.71 kg |
| Insulation voltage input/output | 4 kV AC (type test) |
| | 2 kV AC (routine test) |
| Protection class | I |
| MTBF (IEC 61709, SN 29500) | > 1108720 h (400 V AC, at 25°C) |
| | > 680194 h (400 V AC, at 40°C) |

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Technical data

General

| | |
|-----------------------|--|
| | > 323816 h (400 V AC, at 60°C) |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | alignable: horizontally 0 mm, vertically 50 mm |

Connection data, input

| | |
|---------------------------------------|---------------------|
| Connection method | Push-in connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 4 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 2.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 12 |
| Stripping length | 10 mm |

Connection data, output

| | |
|---------------------------------------|---------------------|
| Connection method | Push-in connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 10 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 6 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 8 |
| Stripping length | 15 mm |

Connection data for signaling

| | |
|---------------------------------------|---------------------|
| Connection method | Push-in connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 1.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 1.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 16 |
| Stripping length | 8 mm |

Charging process

| | |
|-----------------------------|----------------------------------|
| Charge characteristic curve | I _U U |
| Charge current | 0.5 A ... 3 A (-25 °C ... 60 °C) |

Standards

| | |
|-------------------------------------|--------------|
| EMC requirements for noise immunity | EN 61000-6-1 |
| | EN 61000-6-2 |
| EMC requirements for noise emission | EN 61000-6-3 |
| | EN 61000-6-4 |

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Technical data

Standards

| | |
|--|---------------------------|
| Standard - safety for equipment for measurement, control, and laboratory use | IEC 61010-1 |
| Standard – Safety extra-low voltage | IEC 61010 (SELV) / (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |
| Standard - power supply devices for low voltage with DC output | EN 61204-3 |

Conformance/approvals

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

EMC data

| | |
|-------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Low Voltage Directive | Conformance with Low Voltage Directive 2014/35/EC |
| Conducted noise emission | EN 61000-6-3 (Class B) |
| Noise emission | EN 61000-6-3 (Class B) |
| DNV GL conducted interference | Class B |
| Additional text | Area power distribution |
| DNV GL noise radiation | Class B |
| Additional text | Bridge and deck area |
| Electrostatic discharge | EN 61000-4-2 |
| Contact discharge | 6 kV (Test Level 4) |
| Discharge in air | 8 kV (Test Level 4) |
| Electromagnetic HF field | EN 61000-4-3 |
| Frequency range | 80 MHz ... 6 GHz |
| Test field strength | 10 V/m (Test Level 3) |
| Comments | Criterion A |
| Fast transients (burst) | EN 61000-4-4 |
| Input | 4 kV (Test Level 4 - asymmetrical) |
| Output | 2 kV (Test Level 3 - asymmetrical) |
| Signal | 2 kV (Test Level 4 - asymmetrical) |
| Comments | Criterion A |
| Input | 2 kV (Test Level 3 - 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 A |
| Conducted interference | EN 61000-4-6 |
| I/O/S | asymmetrical |
| Frequency range | 0.15 MHz ... 80 MHz |
| Voltage | 10 V (Test Level 3) |
| Comments | Criterion A |

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Technical data

EMC data

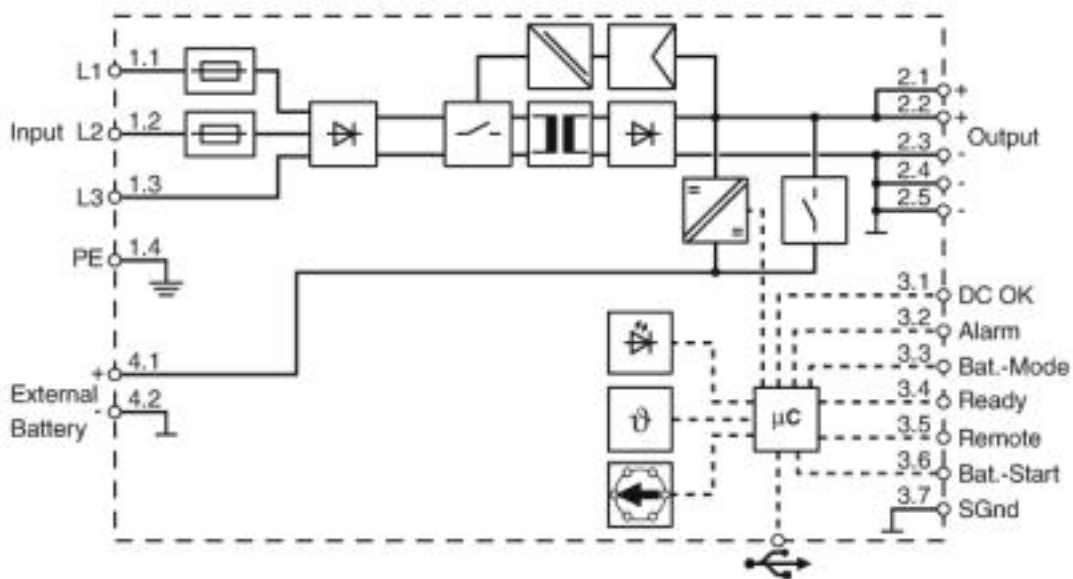
| | |
|--|--|
| Attenuated sinusoidal oscillations (ring wave) | EN 61000-4-12 |
| Input | 2 kV (symmetrical) 4 kV (asymmetrical) |
| Comments | Criterion A |
| Criterion A | Normal operating behavior within the specified limits. |
| Criterion B | Temporary impairment to operational behavior that is corrected by the device itself. |

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

Drawings

Block diagram



Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 9.0 | 27040705 |
|------------|----------|

ETIM

| | |
|----------|----------|
| ETIM 6.0 | EC000382 |
| ETIM 7.0 | EC000382 |

Approvals

Approvals

Uninterruptible power supply - TRIO-UPS-2G/3AC/24DC/20 - 2906367

Approvals

Approvals

DNV GL / BSH / UL Listed / cUL Listed / EAC / IECCEB Scheme / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

| | | | |
|-----------------|--|---|---------------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAA00002DW |
| BSH | | | 1025a |
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
| EAC | | | RU*DE*08.B.01873/19 |
| IECEE CB Scheme | | http://www.iecee.org/ | DK-69956-UL |
| cULus Listed | | | |

Accessories

Accessories

Assembly adapter

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Accessories

Assembly adapters - UWA 130 - 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.

Battery unit

Energy storage - UPS-BAT/VRLA/24DC/3.4AH - 2320306



Energy storage device, lead AGM, VRLA technology, 24 V DC, 3.4 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

Energy storage - UPS-BAT/VRLA/24DC/7.2AH - 2320319



Energy storage device, lead AGM, VRLA technology, 24 V DC, 7.2 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

Energy storage - UPS-BAT/VRLA/24DC/12AH - 2320322



Energy storage device, lead AGM, VRLA technology, 24 V DC, 12 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

Energy storage - UPS-BAT/VRLA/24DC/38AH - 2320335



Energy storage device, lead AGM, VRLA technology, 24 V DC, 38 Ah, automatic detection, and communication with QUINT UPS-IQ

Data cable preassembled

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Accessories

Data cable - MINI-SCREW-USB-DATACABLE - 2908217



Used for communication between an industrial PC and Phoenix Contact devices with USB-Mini-B connection.

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