

# Uninterruptible power supply - TRIO-UPS-2G/1AC/24DC/10 - 2907161

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Uninterruptible power supply with integrated power supply unit. For lead AGM energy storage with 1.3 Ah to 38 Ah nominal capacity. Input: 1-phase, output: 24 V DC/10 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	
GTIN	4055626166582
Weight per Piece (excluding packing)	1,700.000 g
Custom tariff number	85044030
Country of origin	China

## Technical data

### Dimensions

Width	68 mm
Height	130 mm
Depth	160 mm
Width with alternative assembly	160 mm
Height with alternative assembly	130 mm

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## Technical data

### Dimensions

Depth with alternative assembly	68 mm
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### Ambient conditions

Degree of protection	IP20
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)	≤ 93 % (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

AC input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
Inrush current limiting/ $I^2t$	< 0.2 A <sup>2</sup> s
Mains buffering	≥ 25 ms (120 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 ( $I_N$ )	10 A
Dynamic Boost ( $I_{Dyn.Boost}$ )	15 A
Derating	> 60 °C (2.5%/K of $P_{Out}$ nom.)
Control deviation	< 0.55 % (Static load change 10 % ... 90 %)
Maximum power dissipation in no-load condition	< 3 W (230 V AC)
Efficiency	typ. 90 % (120 V AC)
	typ. 91 % (230 V AC)
	typ. 96 % (Battery operation)
Residual ripple	< 20 mV
Connection in parallel	yes, with diode module uncoupled
Surge protection against internal surge voltages	< 30 V DC
Feedback resistance	≤ 35 V DC

### General

Net weight	1.34 kg
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Protection class	I
MTBF (IEC 61709, SN 29500)	> 2007013 h (230 V AC, at 25 °C)
	> 1210518 h (230 V AC, at 40 °C)
	> 575978 h (230 V AC, at 60 °C)

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## Technical data

### General

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 <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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 <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	10 mm

### Connection data for signaling

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

### Charging process

Charge characteristic curve	IU <sub>0</sub> U
Charge current	0.2 A ... 3 A (-25 °C ... 60 °C)

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Standards/regulations	EN 61000-4-2
Contact discharge	4 kV (Test Level 2)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz

# Uninterruptible power supply - TRIO-UPS-2G/1AC/24DC/10 - 2907161

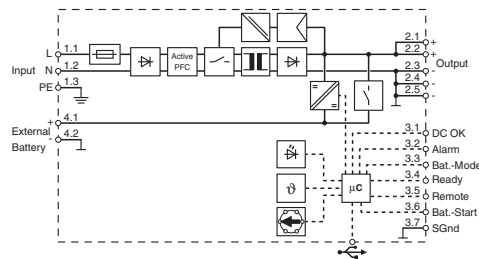
## Technical data

### Standards and Regulations

Test field strength	10 V/m (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Conducted noise emission	EN 61000-6-4 (Class A)
Standards/regulations	EN 61000-4-12
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Standard - power supply devices for low voltage with DC output	EN 61204-3
Standard – Safety extra-low voltage	IEC 61010 (SELV) / (PELV)
Standard - Safe isolation	DIN VDE 0100-410
UL approvals	UL Listed UL 61010
	UL/C-UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C
Shock	30g, 18 ms according to IEC 60068-2-27
Vibration (operation)	< 12 ... 13.2 Hz, amplitude ±1 mm, 13.2 ... 100 Hz, 0.7g in accordance with IEC 60068-2-6
Overvoltage category (EN 61010-1)	II

## Drawings

Block diagram



## Classifications

eCl@ss

eCl@ss 9.0	27040705
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ETIM

ETIM 6.0	EC000382
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## Approvals

Approvals

# Uninterruptible power supply - TRIO-UPS-2G/1AC/24DC/10 - 2907161

## Approvals

### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

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### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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## Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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EAC			RU C- DE.A*30.B.01082
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cULus Listed			
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## Accessories

### Accessories

#### Assembly adapter

Assembly adapters - UWA 130 - 2901664



2-piece universal wall adapter for securely mounting the power supply in the event of strong vibrations. The profiles that are screwed onto the side of the power supply are screwed directly onto the mounting surface. The universal wall adapter is attached on the left/right.

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## Battery unit

# Uninterruptible power supply - TRIO-UPS-2G/1AC/24DC/10 - 2907161

## Accessories

Energy storage - UPS-BAT/VRLA/24DC/1.3AH - 2320296



Energy storage device, lead AGM, VRLA technology, 24 V DC, 1.3 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

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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

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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

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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

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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

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Data cable preassembled

## Uninterruptible power supply - TRIO-UPS-2G/1AC/24DC/10 - 2907161

### 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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