TRIO-UPS-2G/1AC/1AC/120V/750VA - Uninterruptible power supply

2905908

https://www.phoenixcontact.com/gb/products/2905908

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1AC/1AC/750 VA uninterruptible power supply with integrated battery, lead AGM, VRLA technology, 24 V DC, 4 Ah for 120 V AC applications.

Product description

UPS modules with integrated battery are particularly space-saving: the UPS module and battery are combined in one housing. The TRIO AC UPS ensures seamless transition to battery operation thanks to the pure sine curve. Connected industrial PCs can be shut down safely via the integrated USB interface.

Your advantages

- Smooth transition, thanks to the pure sine curve: the sine generated in battery operation is synchronous with the mains previously used for supply
- Space saving: Combination of UPS module and battery in the same housing
- Long buffer times with integrated VRLA battery, can be extended with additional battery module
- USB interface for connection to higher-level controllers such as industrial PCs
- Startup from energy storage possible, even without mains input

Commercial data

Item number	2905908
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CMUO15
Product key	CMUO15
Catalog page	Page 332 (C-4-2019)
GTIN	4055626007397
Weight per piece (including packing)	6,359 g
Weight per piece (excluding packing)	6,098 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Notes

General

Note on the battery	This product contains a battery with a limited shelf life that must be charged every few months. The product packaging indicates when the battery must be started up or recharged. The general shelf life can be found in the technical data area under “Latest startup”.

Input data

AC operation

Input voltage	120 V AC
Input voltage range	96 V AC ... 138 V AC
Voltage type of supply voltage	AC
Frequency range (f_N)	45 Hz ... 55 Hz
	55 Hz ... 65 Hz
Current consumption	6 A (max.)
Power factor (cos phi)	0.8
Input fuse	10 A 400 V gRL
Permissible backup fuse	B10 B16 Listed breaker

Digital Control (configurable)

Designation	Remote
Low signal	Connection to SGnd with < 2.7 kΩ
High signal	Open (> 35 kΩ between Remote and SGnd)

Digital Control Low-Active (configurable)

Battery-operated start 120 V AC low signal	Connection to SGnd with < 2.7 kΩ
Battery-operated start 120 V AC high signal	Open (> 200 kΩ between Bat.-Start and SGnd)

Output data

Classification according to IEC 62040-3	VFD-SS-311
Efficiency	> 95 % (100% load, with charged battery)
	~ 81 % (100 % load)
Nominal output voltage	120 V AC
Form of output voltage	Pure sine
Nominal output current (I_N)	6 A
Bridging time	60 s
UPS connection in parallel	no
UPS connection in series	no
Apparent power	750 VA
Nominal power	600 W (Real power)

Crest factor	2.8
Switch-over time	< 10 ms
Connection in parallel	no
Connection in series	No

Mains operation

Nominal output voltage	120 V AC
Nominal output current (I_N)	6 A (750 VA)

Battery operation

Nominal output voltage	120 V AC
Nominal output current (I_N)	6 A (750 VA)
Frequency (after automatic detection in mains operation)	50 Hz
	60 Hz

Signal: Alarm

Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA

Signal: Battery mode

Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA

Signal: Ready

Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA

Signal:

Signal ground SGnd	Reference potential for Bat.-Mode, Ready, Remote, and Bat.-Start

Energy storage

Nominal voltage U_N	24 V DC
Charging current	0.7 A ... 1.1 A
Nominal capacity	4 Ah
Nominal capacity range	4 Ah
Charging time	7 h
Buffer period	20 min. (100 W)
	4 min. (300 W)
	1 min. (600 W)
Latest startup date (battery only)	6 Months (0 °C ... 20 °C)
Latest startup (battery only) - range	6 Months ... 3 Months (20 °C ... 30 °C)
	3 Months ... 1 Months (30 °C ... 40 °C)
Battery technology	Lead rechargeable battery module
Memory medium	Lead rechargeable battery module
Accumulator type	2x Panasonic UP-VW1220P1 / BB Battery HR4.2-12FR

Can be extended with external battery	1x 24 V 4 Ah
Battery fuse	40 A, 32 V

Connection data

Input

Connection method	Push-in connection
Conductor cross section, rigid min.	0.2 mm²
Conductor cross section, rigid max.	4 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	10 mm

Output

Connection method	Push-in connection
Conductor cross section, rigid min.	0.2 mm²
Conductor cross section, rigid max.	4 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	10 mm

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
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

Interfaces

Interface	MINI-USB type B
Maximum cable length	3 m

Signaling

Types of signaling	LED

Signal output: Transistor output, active

Signalization designation	Alarm
Status display	LED

Color	red

Signal output: Transistor output, active

Signalization designation	Battery mode
Status display	LED
Color	yellow

Signal output: Transistor output, active

Signalization designation	Ready

Signal output

Status display	LED
Color	green

Signal output

Signalization designation	Battery charge
Status display	LED
Color	yellow

Signal output

Signalization designation	Service
Status display	LED
Color	red

Electrical properties

Number of phases	1.00

Product properties

Product type	AC UPS
Product family	TRIO AC UPS – UPS with integrated battery
MTBF (IEC 61709, SN 29500)	> 206000 h (40 °C)

Insulation characteristics

Protection class	I
Overvoltage category	II
Degree of pollution	3

Life expectancy (electrolytic capacitors)

Time	32861 h

Dimensions

Width	210 mm
Height	170 mm
Depth	136 mm

Installation dimensions

Installation distance right/left	0 mm / 0 mm

Installation distance top/bottom	50 mm / 50 mm

Mounting

Mounting type	DIN rail mounting

Material specifications

Type of housing	DX51D+AZ (steel sheet / Galvalume)
Hood version	PC + ABS

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	0 °C ... 40 °C
Ambient temperature (storage/transport)	-15 °C ... 40 °C (with charged energy storage device)
Maximum altitude	≤ 3000 m (> 2000 m, observe derating)
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	≤ 95 % (25 °C, non-condensing)
Shock	20g in all directions (EN 60068-2-27)
	30g in each space direction with UWA 130
Vibration (operation)	5 Hz ... 100 Hz, 0.7g (EN 60068-2-6)

Standards and regulations

Standards

Standard uninterruptible power supply systems	EN 62040-1

Approvals

UL approvals	UL/C-UL Recognized UL 1778

EMC data

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Interference emission	Noise emission in accordance with EN 62040-2
Noise immunity	Immunity in accordance with EN 62040-2
	Immunity in accordance with EN 61000-6-1 (residential), EN 61000-6-2 (industrial), and EN 61000-6-5 (power station equipment zone), IEC/EN 61850-3 (power supply)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	EN 62040-02 (Class C2)

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 ... 3 GHz
Test field strength	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4

Fast transients (burst)

Input	2 kV (Test Level 3 - asymmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	2 kV (Test Level 3 - asymmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A (B for USB)

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	1 kV (Test Level 2 - 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

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Power frequency magnetic field

Standards/regulations	EN 61000-4-8
Frequency	60 Hz
Test field strength	100 A/m
Comments	Criterion A

Emitted interference

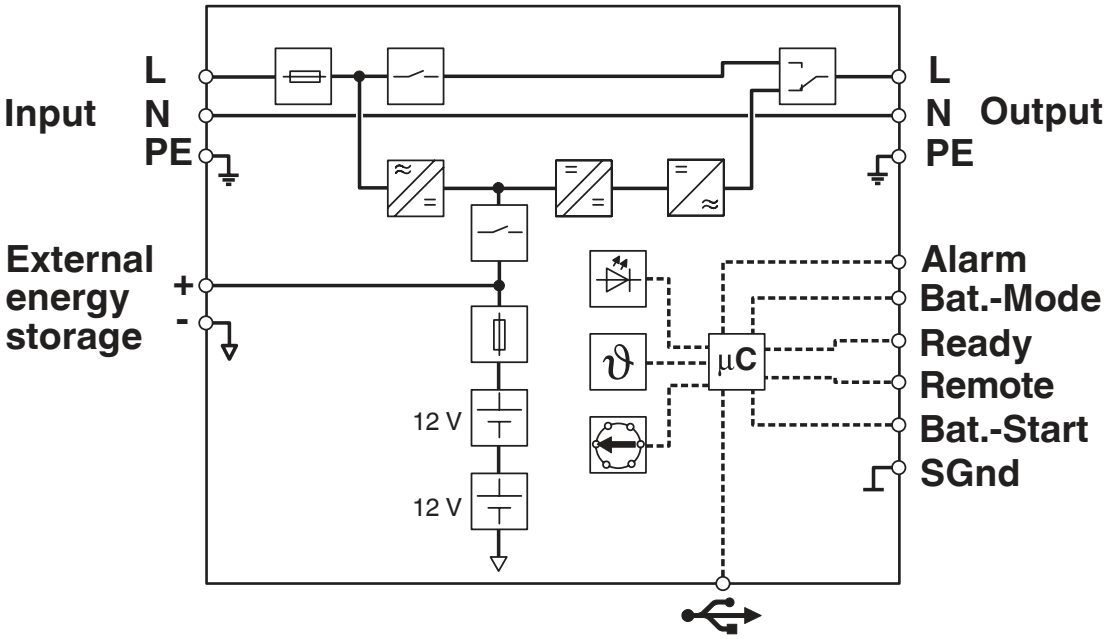
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Drawings

Block diagram



Block diagram

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/2905908

cUL Recognized
Approval ID: FILE E 342453

UL Recognized
Approval ID: FILE E 342453

EAC
Approval ID: RU S-DE.BL08.W.00764

EAC
Approval ID: RU-DE.B.00184/20

DNV
Approval ID: TAA00002JM

KC
Approval ID: R-R-PCK-2905908

cUL Recognized
Approval ID: FILE E 359066

UL Recognized
Approval ID: FILE E 359066

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Classifications

ECLASS

ECLASS-11.0	27040705
ECLASS-13.0	27040705
ECLASS-12.0	27040705

ETIM

ETIM 9.0	EC000382

UNSPSC

UNSPSC 21.0	39121000

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-3
	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)

Accessories

QUINT-BAT/24DC/ 3.4AH - Battery module

2866349

https://www.phoenixcontact.com/gb/products/2866349

Battery module, lead AGM, VRLA technology, 24 V DC, 4 Ah. Connection via pin cable lug.

UPS-BAT-KIT/PB/2X12V/4AH - Uninterruptible power supply replacement battery

1283116

https://www.phoenixcontact.com/gb/products/1283116

Replacement battery, VRLA-AGM, 2x12 V DC, 4 Ah. Only for 1274117 UPS-BAT/PB/24DC/4AH, 2320267 QUINT-UPS/24DC/24DC/10/3.4AH from V/C 06, 2905908 TRIO-UPS-2G/1AC/1AC/120V/750VA, and 2905909 TRIO-UPS-2G/1AC/1AC/230V/750VA

UPS-BAT/PB/24DC/4AH - Battery module

1274117

https://www.phoenixcontact.com/gb/products/1274117

Battery module, VRLA-AGM, 24 V DC, 4 Ah, automatic detection and communication with QUINT UPS-IQ

MINI-SCREW-USB-DATACABLE - Data cable

2908217

https://www.phoenixcontact.com/gb/products/2908217

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

PLT-SEC-T3-120-FM-UT - Type 3 surge protection device

2907918

https://www.phoenixcontact.com/gb/products/2907918

Type 2/3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage: 120 V AC/DC

UWA 130 - Mounting adapter

2901664

https://www.phoenixcontact.com/gb/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.

FUSE 10A/400V GRL - Fuse

2908358

https://www.phoenixcontact.com/gb/products/2908358

Fuse, nominal current: 10 A, length: 31.8 mm, diameter: 6.35 mm

FUSE 40A/32V ATOF - Fuse

2908357

https://www.phoenixcontact.com/gb/products/2908357

Fuse, nominal current: 40 A, length: 19 mm, width: 5 mm, height: 18.8 mm

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