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TRIO UPS

Product Description

UPS modules with integrated energy storage are particularly space saving: UPS module and energy storage 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

- Space saving: UPS module and energy storage combined in one housing
- USB interface for connection to higher-level controllers such as industrial PCs
- ✓ Startup from energy storage possible, even without mains input



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	6,098.000 g
Custom tariff number	85371091
Country of origin	Germany

Technical data

Dimensions

Width	210 mm
Height	170 mm
Depth	136 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

Ambient conditions



Technical data

Ambient conditions

Ambient temperature (operation)	0 °C 40 °C
Ambient temperature (storage/transport)	-15 °C 40 °C (with charged energy storage device)
Max. permissible relative humidity (operation)	≤ 95 % (25 °C, non-condensing)
Maximum altitude	≤ 3000 m (> 2000 m, observe derating)
Vibration (operation)	5Hz100Hz, 0.7g (EN60068-2-6)
Shock	20g in all directions (EN 60068-2-27)
	30g in each space direction with UWA 130
Degree of pollution	3
Climatic class	3K3 (in acc. with EN 60721)

Input data

Nominal input voltage	120 VAC
Input voltage range	96 VAC 138 VAC
Frequency range	45 Hz 55 Hz
	55 Hz 65 Hz
Current consumption	6 A
Permissible backup fuse	B10 B16 Listed breaker

Connection data, input

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm²
Conductor cross section flexible min.	0.2 mm²
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

Output data

Apparent power	750 VA
Rated Power (Real Power)	600 W
Power factor (cos phi)	0.8
Crest factor	2.8
Switch-over time	< 10 ms
Classification according to IEC 62040-3	VFD-SS-311

Output data (mains operation)

Nominal output voltage (U _N)	120 VAC
Nominal output current (I _N)	6 A (750 VA)

Output data (battery operation)

Nominal output voltage (U _N)	120 VAC
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Technical data

Output data (battery operation)

Nominal output current (I _N)	6 A (750 VA)
Form of output voltage	Pure sine
Frequency (after automatic detection in mains operation)	50 Hz
	60 Hz

Connection data, output

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid 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

General data

Efficiency	> 95 % (with charged energy storage device)
MTBF (IEC 61709, SN 29500)	> 206000 h (40°C)
Degree of protection	IP20
Protection class	I
Type of housing	DX51D+AZ (steel sheet / Galvalume)
Hood version	PC + ABS
Input fuse	10 A 400 V gRL
Weight	5.7 kg

Energy storage

Battery technology	Lead rechargeable battery module
Accumulator type	2x Panasonic UP-VW1220P1
Capacity	3.4 Ah
Battery fuse	40 A, 32 V
Charging time	7 h
Service life	6 Years 9 Years (20°C)
Latest startup	6 Months (0°C 20°C)
Buffer period	20 min. (100 W)
	4 min. (300W)
	1 min. (600W)
Can be extended with external battery	1x 24 V 3.4 Ah

Connection data for the external battery

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	10 mm²



Technical data

Connection data for the external battery

Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	6 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	8
Stripping length	15 mm

Status and diagnostics indicator / signal outputs - Alarm

Switching output	Transistor output, active
Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA
Status display	LED red

Status and diagnostics indicator / signal outputs - Battery Mode

Switching output	Transistor output, active
Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA
Status display	Yellow LED

Status and diagnostics indicator / signal outputs - Ready

Switching output	Transistor output, active
Output voltage	24 V (SELV)
Continuous load current	≤ 20 mA

Status and diagnostics indicator / signal outputs - Battery Charge

Status display	Yellow LED
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Status and diagnostics indicator / signal outputs - AC OK,

P>Pn, Remote

Status display	Green LED
Status display	Oreen LLD

Status and diagnostics indicator /signal outputs - Service

Status display	LED red
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Connection data for signaling

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid 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



Technical data

Remote control

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

Battery-operated start (bat. start)

Low signal	Connection to SGnd with < 2.7 kΩ
High signal	Open (> 200 kΩ between bat. start and SGnd)

Interfaces

Interface	MINI-USB type B
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Device combinations

UPS connection in parallel	no
UPS connection in series	no

Standards

Standard uninterruptible power supply systems	EN62040-1
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Conformance/approvals

UL approvals	UL/C-UL Recognized UL 1778
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EMC data

Conformance with EMC Directive 2014/30/EU
Conformance with Low Voltage Directive 2014/35/EC
EN 61000-4-2
6 kV (Test Level 3)
8 kV (Test Level 3)
EN61000-4-3
80 MHz 3 GHz
10 V/m
Criterion A
EN61000-4-4
2 kV (Test Level 3 - asymmetrical)
2 kV (Test Level 3 - asymmetrical)
2 kV (Test Level 3 - asymmetrical)
2 kV (Test Level 3 - asymmetrical)
2 kV (Test Level 3 - asymmetrical)
Criterion A (B for USB)
EN61000-4-5
1 kV (Test Level 2 - symmetrical)
2 kV (Test Level 3 - asymmetrical)
1 kV (Test Level 2 - symmetrical)
2 kV (Test Level 3 - asymmetrical)



Technical data

EMC data

Signal	1 kV (Test Level 2 - asymmetrical)	
Comments	Criterion A	
Conducted interference	EN61000-4-6	
Frequency range	0.15 MHz 80 MHz	
Voltage	10 V	
Comments	Criterion A	
Power frequency magnetic field	EN 61000-4-8	
Frequency	60 Hz	
Test field strength	100 A/m	
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

China RoHS	Environmentally Friendly Use Period = 3
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

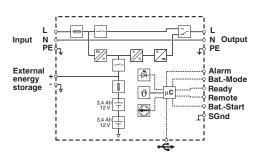
Drawings

Pictogram Pictogram





Block diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27040705



Classifications

eCl@ss

eCl@ss 11.0	27040705
eCl@ss 4.0	27040600
eCl@ss 4.1	27040600
eCl@ss 5.0	27040600
eCl@ss 5.1	27040600
eCl@ss 6.0	27040600
eCl@ss 7.0	27040602
eCl@ss 8.0	27040602
eCl@ss 9.0	27040705

ETIM

ETIM 5.0	EC000382
ETIM 6.0	EC000382
ETIM 7.0	EC000382

UNSPSC

UNSPSC 13.2	39121011
UNSPSC 18.0	39121011
UNSPSC 19.0	39121011
UNSPSC 20.0	39121011
UNSPSC 21.0	39121011

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / EAC / DNV GL / cULus Recognized

Ex Approvals

UL Recognized / cUL Recognized / cULus Recognized

Approval details

UL Recognized



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 342453



Approvals

cUL Recognized	. A1	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 342453
EAC	ERE	F	RU*DE*08.B.01873/19
DNV GL	AMERICA OF THE STREET	https://approvalfinder.dnvgl.com/	TAA00002JM
cULus Recognized	c FL us		

Accessories

Accessories

Assembly adapter

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 - QUINT-BAT/24DC/ 3.4AH - 2866349



Energy storage device, lead AGM, VRLA technology, 24 V DC, 3.4 Ah. Connection via pin cable lug, 14 mm.



Accessories

Uninterruptible power supply replacement battery - UPS-BAT-KIT-VRLA 2X12V/3,4AH - 2908233



Replacement battery for UPS-BAT/VRLA... energy storage

Data cable preassembled

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



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

Device protection

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

Fuse

Fuse - FUSE 10A/400V GRL - 2908358



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

Fuse - FUSE 40A/32V ATOF - 2908357



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



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