

Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/ 5/1.3AH



2320254

<https://www.phoenixcontact.com/pc/products/2320254>

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Uninterruptible energy supply with IQ technology and integrated energy storage for DIN rail mounting, input 24 V DC, output: 24 V DC / 5 A, energy storage: lead AGM 1.2 Ah, incl. mounted UTA 107/30 universal DIN rail adapter

Product Description

UPS modules with integrated energy storage are particularly space saving: UPS module and energy storage are combined in one housing. It's just a case of connecting a power supply upstream.

Your advantages

- Easy handling thanks to automatic battery detection, tool-free battery replacement during operation, and communication via the IFS interface
- Reliable starting of difficult loads with the static POWER BOOST power reserve with up to 1.5 times the nominal current permanently
- Fast tripping of standard circuit breakers with SFB (selective fuse breaking) technology
- Device suitable for universal use thanks to comprehensive license package and extensive parameterization and diagnostics options

Commercial Data

Item number	2320254
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CMUQV3
Catalog Page	Page 344 (C-4-2019)
GTIN	4046356554145
Weight per Piece (including packing)	2,540 g
Weight per Piece (excluding packing)	2,137 g
Customs tariff number	85371091
Country of origin	CN

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Technical Data

Product properties

Product type	Uninterruptible power supply
Product family	QUINT USV
Disposal	Used batteries must not be thrown away with household waste, they should instead be disposed of in accordance with applicable national regulations.
IQ technology	Yes
MTBF (IEC 61709, SN 29500)	> 806000 h (40 °C)

Insulation characteristics

Protection class	III
Degree of pollution	2

Life expectancy (electrolytic capacitors)

Time	316800 h
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Input data

DC operation

Input voltage	24 V DC
Input voltage range	18 V DC ... 30 V DC
Input voltage range DC	18 V DC ... 30 V DC
Voltage type of supply voltage	DC
Buffer period	50 min. (1 A) 5 min. (5 A)
Current consumption	9.3 A (24 V DC) 9.7 mA 1.7 A 7 A
Fixed backup threshold	≤ 22.6 V DC

Output data

Efficiency	> 97.1 % (Mains operation, with charged energy storage) 97.31 %
Nominal output voltage	24 V DC
Output voltage range	18 V DC ... 30 V DC
Nominal output current (I_N)	5 A (0 °C ... 40 °C)
Output current limit	> 7.5 A (Battery operation)
Bridging time	360 s
Derating	60 °C ... 70 °C (2.5%/K)
Output power	120 W 2.5 W (Mains operation)

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Power dissipation	2.7 W (Mains operation)
	1.9 W (Mains operation)
	3.3 W (Battery operation)
	3.3 W (Battery operation)
	4.1 W (Battery operation)
Output fuse	1x 15 A
Connection in parallel	2
Connection in series	No

Mains operation

Nominal output voltage	24 V DC
Output voltage range	18 V DC ... 30 V DC ($U_{OUT} = U_{IN} - 0,1 \text{ V DC}$)
Nominal output current (I_N)	5 A (0 °C ... 40 °C)
POWER BOOST (I_{Boost})	7.5 A (0 °C ... 40 °C)
Selective Fuse Breaking (I_{SFB})	30 A (0 °C ... 40 °C)
Duration	12 ms (SFB technology)

Battery operation

Nominal output voltage	24 V DC
Output voltage range	19.2 V DC ... 27.6 V DC ($U_{OUT} = U_{BAT} - 0,5 \text{ V DC}$)
Nominal output current (I_N)	5 A (0 °C ... 40 °C)
POWER BOOST (I_{Boost})	7.5 A (0 °C ... 40 °C)
Selective Fuse Breaking (I_{SFB})	32.5 A (0 °C ... 40 °C)
Duration	15 ms (SFB technology)

Signal: Alarm

Output description	Relay
Output voltage	$\leq 30 \text{ V AC/DC}$
Continuous load current	$\leq 100 \text{ mA}$

Signal: Battery charge

Output description	Relay
Output voltage	$\leq 30 \text{ V AC/DC}$
Continuous load current	$\leq 100 \text{ mA}$

Signal: Battery mode

Output description	Relay
Output voltage	$\leq 30 \text{ V AC/DC}$
Continuous load current	$\leq 100 \text{ mA}$

Signal

Continuous load current	$\leq 200 \text{ mA}$
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Energy storage

Nominal voltage U_N	24 V DC
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End-of-charge voltage	24 V DC ... 29 V DC (temperature compensated)
Charging current	0.36 A
Nominal capacity	1.2 Ah
Buffer period	50 min. (1 A) 5 min. (5 A)
Latest startup date (battery only)	3 Months (0 °C ... 20 °C) 1 Months (30 °C ... 40 °C)
Latest startup (battery only) - range	1 Months ... 3 Months (20 °C ... 30 °C)
Battery technology	VRLA-AGM
Memory medium	VRLA-AGM Battery 1.2 Ah
Accumulator type	2x BB Battery BP1.2-12FR (from UPS V/C-level 05)
Disposal	Used batteries must not be thrown away with household waste, they should instead be disposed of in accordance with applicable national regulations.
IQ technology	Yes
Temperature sensor	yes
Network management	Yes

Connection data

Input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 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.	20
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M4
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 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.	20
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M4
Tightening torque, min	0.5 Nm

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Tightening torque max	0.6 Nm
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Signal

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 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
Screw thread	M4
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Interfaces

Interface	IFS (Interface system data port)
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LED signaling

Types of signaling	LED
	Relay contact
	Interface/software

Signal output

Signalization designation	Power In OK
Status display	LED
Note on status display	Static to
	Static to

Signal output: Switching output

Signalization designation	Alarm
Status display	LED
Note on status display	Static to
Color	red
Note on status display	Static to

Signal output: Switching output

Signalization designation	Battery charge
Status display	LED bar graph
Note on status display	dynamic
Color	red/green
Note on status display	dynamic

Signal output: Switching output

Signalization designation	Battery mode
Status display	LED
Note on status display	Static to

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Color	yellow
Note on status display	Static to

Dimensions

Width	88 mm
Height	138 mm
Depth	125 mm

Installation dimensions

Installation distance right/left	5 mm / 5 mm
Installation distance top/bottom	50 mm / 50 mm

Material specifications

Color	aluminium
Housing material	Metal
Type of housing	Steel sheet, zinc-plated
Side element version	Galvanized sheet steel, closed
Housing material	Steel sheet, zinc-plated

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (storage/transport)	-20 °C ... 40 °C
Ambient temperature (charge)	0 °C ... 40 °C
Ambient temperature (discharge)	-20 °C ... 50 °C
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	≤ 95 % (25 °C, non-condensing)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) 15 Hz ... 150 Hz, 2.3g t _v = 90 min.

Approval data

UL approvals	UL/C-UL Recognized UL 60950-1 UL Listed UL 508
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EMC data

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
EMC requirements for noise emission	EN 61000-6-3 EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1 EN 61000-6-2

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Noise immunity	EN 61000-6-2:2005
Electrostatic discharge	
Standards/regulations	EN 61000-4-2
Electrostatic discharge	
Contact discharge	8 kV (Test Level 4)
Discharge in air	15 kV (Test Level 4)
Comments	Criterion A
Electromagnetic HF field	
Standards/regulations	EN 61000-4-3
Electromagnetic HF field	
Frequency range	80 MHz ... 1 GHz
Test field strength	20 V/m
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m
Frequency range	2 GHz ... 3 GHz
Test field strength	3 V/m
Comments	Criterion A
Fast transients (burst)	
Standards/regulations	EN 61000-4-4
Fast transients (burst)	
Input	2 kV (Test Level 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	2 kV (Test Level 4 - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	
Standards/regulations	EN 61000-4-5
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 A
Conducted interference	
Standards/regulations	EN 61000-4-6
Conducted interference	
I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A

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Voltage	10 V (Test Level 3)
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Emitted interference

Standards/regulations	EN 61000-6-3
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
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.

Standards and regulations

Rail applications	EN 50121-4
Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
	EN 61558-2-17

Mounting

Mounting type	DIN rail mounting
Assembly instructions	alignable: horizontal 5 mm, vertical 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

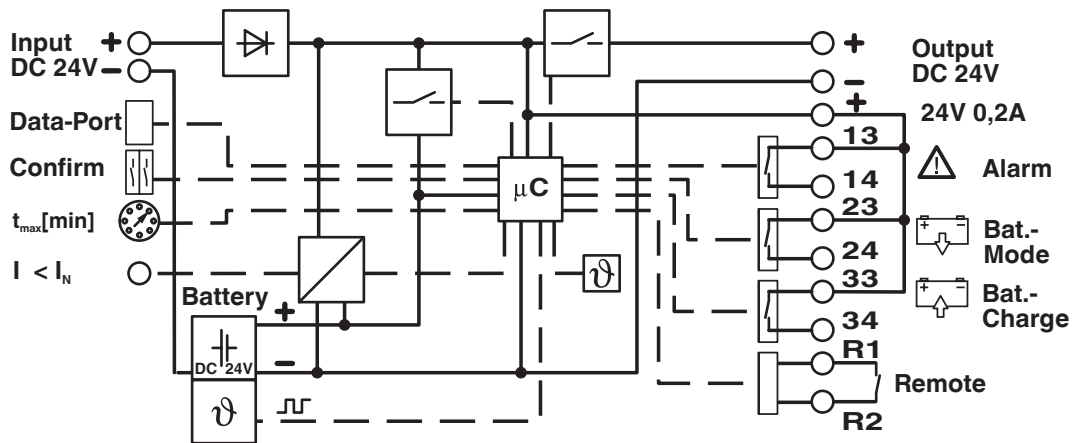
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Drawings

Block diagram



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Approvals



cUL Recognized
Approval ID: FILE E 211944



UL Recognized
Approval ID: FILE E 211944



EAC
Approval ID: EAC-Zulassung



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



UL Listed
Approval ID: FILE E 123528



cUL Listed
Approval ID: FILE E 123528



KC
Approval ID: R-R-PCK-2320254



cUL Listed
Approval ID: FILE E 199827



UL Listed
Approval ID: FILE E 199827

cULus Recognized

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27040705
ECLASS-10.0.1	27040705
ECLASS-11.0	27040705

ETIM

ETIM 8.0	EC000382
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UNSPSC

UNSPSC 21.0	39121000
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 3
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Data cable

Data cable - IFS-USB-DATACABLE - 2320500

<https://www.phoenixcontact.com/pc/products/2320500>

Used for communicating between industrial PCs and Phoenix Contact devices with the 12-pos. IFS data port, such as QUINT UPS or TRIO UPS.



Data cable

Data cable - IFS-RS232-DATACABLE - 2320490

<https://www.phoenixcontact.com/pc/products/2320490>

Data cable for communication between devices with a D-SUB 9 RS-232 connection and Phoenix Contact devices with the 12-pos. IFS data port such as QUINT UPS-IQ or TRIO UPS.



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Data cable

Data cable - IFS-MINI-DIN-DATACABLE - 2320487

<https://www.phoenixcontact.com/pc/products/2320487>



Data cable for communication, e.g., between Phoenix Contact type ILC 1xx Inline controllers and Phoenix Contact devices with the 12-pos. IFS data port, such as QUINT UPS-IQ UPS or TRIO UPS

Data cable

Data cable - IFS-OPEN-END-DATACABLE - 2320450

<https://www.phoenixcontact.com/pc/products/2320450>



Data cable with open cable ends for communication, e.g., between a Phoenix Contact Inline communication terminal (IB IL RS UNI-PAC, 2700893) and Phoenix Contact devices with the 12-pos. IFS data port, such as QUINT UPS-IQ or TRIO UPS

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Mounting adapter

Mounting adapter - QUINT-PS-ADAPTERS7/1 - 2938196

<https://www.phoenixcontact.com/pc/products/2938196>

Assembly adapter for QUINT-PS... power supply on S7-300 rail

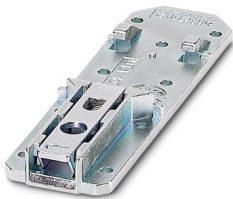


Mounting adapter

Mounting adapter - UTA 107/30 - 2320089

<https://www.phoenixcontact.com/pc/products/2320089>

Universal DIN rail adapter



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Mounting adapter

Mounting adapter - UWA 182/52 - 2938235

<https://www.phoenixcontact.com/pc/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.

Fuse

Fuse - FUSE 15A/32V FKS ATO - 2908361

<https://www.phoenixcontact.com/pc/products/2908361>



Fuse, nominal current: 15 A, length: 19 mm, width: 5 mm, height: 13 mm

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Memory block

Memory block - IFS-CONFSTICK-L - 2901103

<https://www.phoenixcontact.com/pc/products/2901103>



Multi-functional memory block with handle for the INTERFACE system; for easy storage and back up of the configuration.

Uninterruptible power supply replacement battery

Uninterruptible power supply replacement battery - UPS-BAT-KIT/PB/2X12V/1.2AH - 1283114

<https://www.phoenixcontact.com/pc/products/1283114>



Replacement battery, VRLA-AGM, 2x12 V DC, 1.2 Ah. Only for 1274520 UPS-BAT/PB/24DC/1.2AH and 2320254 QUINT-UPS/24DC/24DC/5/1.3AH from V/C 05

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