

QUINT4-CAP/24DC/3.8/1KJ/PT - DC UPS with integrated capacity



2320526

<https://www.phoenixcontact.com/us/products/2320526>

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QUINT DC UPS with integrated capacitor, with maintenance-free energy storage based on double-layer capacitor, DIN rail mounting, input: 24 V DC, output: 24 V DC / 3.8 A / 1 kJ

Product description

The QUINT capacity module combines an electronic switch-over unit and energy storage in the same housing. The capacity module stores the energy required to bridge mains failures in maintenance-free double-layer capacitors. Long mains buffering is possible depending on the required load current.

Your advantages

- Maintenance-free with a long service life
- Space savings, thanks to the compact design
- Long buffer time, thanks to high memory capacity

Commercial data

Item number	2320526
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM21
Product key	CMUIC3
GTIN	4055626246925
Weight per piece (including packing)	605 g
Weight per piece (excluding packing)	454 g
Customs tariff number	85322900
Country of origin	CN

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Technical data

Input data

DC operation

Input voltage	24 V DC (SELV)
Input voltage range	22.5 V DC ... 30 V DC
Fixed backup threshold	< 22 V DC
Current consumption I_{\max} (U_N , $I_{OUT} = I_{\text{Stat.Boost}}$, $I_{\text{Charge}} = \max$)	4.3 A
Current consumption $I_{\text{No-Load}}$ (U_N , $I_{OUT} = 0$, $I_{\text{charge}} = 0$)	0.08 A
Current consumption I_{charge} (U_N , $I_{OUT} = 0$, $I_{\text{charge}} = \max$)	0.43 A
Buffer time	9 s (3.8 A) 30 s (1 A)
Charging time	4 min (0.43 A)
Recharging time	3 min (0.43 A)

Output data

Efficiency	> 97 % (with charged energy storage device)
Connection in parallel	yes max. 2 (with decoupling module)
Connection in series	no

Mains operation

Output voltage	24 V DC (depending on the input voltage)
Output current I_N	3.8 A
Output power P_{OUT} (U_N , $I_{OUT} = I_N$)	91.2 W
Maximum no-load power dissipation	< 2 W

Battery operation

Output voltage	24 V DC
Output current I_N	3.8 A

Energy storage

General

Capacity	1 kJ
Storage medium	Double-layer capacitor
Buffer time	9 s (3.8 A) 30 s (1 A)

Connection data

Conductor connection

Connection method	Push-in connection
rigid	0.2 mm ² ... 2.5 mm ²

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flexible	0.2 mm ² ... 2.5 mm ²
flexible with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
flexible with ferrule with plastic sleeve	0.25 mm ² ... 2.5 mm ²
rigid (AWG)	24 ... 14
Stripping length	10 mm

Conductor connection

Connection method	Push-in connection
rigid	0.2 mm ² ... 2.5 mm ²
flexible	0.2 mm ² ... 2.5 mm ²
flexible with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
flexible with ferrule with plastic sleeve	0.25 mm ² ... 2.5 mm ²
rigid (AWG)	24 ... 14
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rigid (AWG)	24 ... 14
Stripping length	10 mm

Signaling

Signal state Remote

Connection labeling	3.3
State (configurable)	Remote
State condition	Remote

Signal state UIN OK

Connection labeling	3.1
Switching output	Transistor output, active
State (configurable)	U _{in} OK
Output voltage	24 V (U _N - 1 V (typical))
Output can be loaded	20 mA
LED status indicator	green (U _{in} OK)
Signal threshold	Input voltage in the valid range

Signal state Ready

Connection labeling	3.2
Switching output	Transistor output, active
State (configurable)	Ready
State condition (configurable)	State of charge = 100% or buffer mode

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Output voltage	24 V ($U_N - 1$ V (typical))
Output can be loaded	20 mA
LED status indicator	green (Ready)

Signal ground SGnd

Connection labeling	3.4
Function	Signal ground
Reference potential	U_{In} OK (3.1), Ready (3.2), Remote (3.3)

Electrical properties

Insulation voltage input, output / housing	500 V
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Product properties

Product type	DC UPS with integrated capacitor
Product family	QUINT DC UPS with integrated capacitor
MTBF (IEC 61709, SN 29500)	996550 h (40 °C)
	1631804 h (25 °C)
	449865 h (60 °C)

Insulation characteristics

Protection class	III
Overvoltage category	II
Degree of pollution	2

Dimensions

Item dimensions

Width	85 mm
Height	102.5 mm
Depth	90 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
Assembly note	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	Any, on NS 35 DIN rail

Material specifications

Housing material	Plastic
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Environmental and real-life conditions

Ambient conditions

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Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 60 °C
Ambient temperature (start-up type tested)	-40 °C
Maximum altitude	≤ 4000 m
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	≤ 95 %

Approvals

UL

Identification	UL Listed UL 61010-1
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UL

Identification	UL Listed UL 61010-2-201
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UL

Identification	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
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UL

Identification	UL 121201
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CSA

Identification	CSA C22.2 No. 223 class 2 (buffer mode)
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CSA

Identification	CAN/CSA-C22.2 No. 61010-1-12
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CSA

Identification	CAN/CSA C22.2 No. 61010-2-201:14
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CSA

Identification	CSA C22.2 No. 213-17
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UL NEC

Identification	UL 1310 class 2 (buffer mode)
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CB scheme

Identification	IEC 61010-1
	IEC 61010-2-201
	EN 61010-1
	EN 61010-2-201

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC

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Noise emission

Standards/regulations	EN 61000-6-3
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Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Frequency range	80 MHz ... 6 GHz
Test field strength	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
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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 B

Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
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Surge voltage load (surge)

Input	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 1 - asymmetrical)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

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

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Criteria

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

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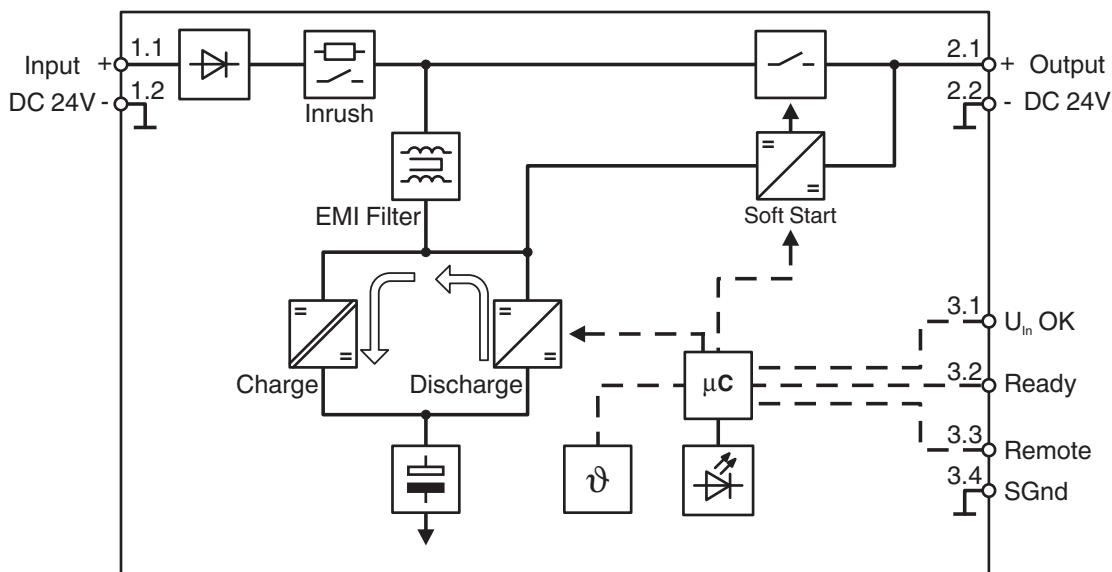


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Drawings

Block diagram



Graphic

Load Current	Buffertime																
	Seconds								Minutes								
	9	10	15	20	30	40	50	1	2	3	5	10	20	30	40	50	60
0.05 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
0.50 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
1.00 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
2.00 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
2.50 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
3.80 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
5.00 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
6.25 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
7.50 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
10.0 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
12.5 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
15.0 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
20.0 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
25.0 A	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

The data is based on an ambient temperature of +25 °C.

- █ 2320526 QUINT4-CAP/24DC/3.8/1KJ/PT
- █ 2320571 QUINT4-CAP/24DC/10/8KJ/PT
- █ 2320539 QUINT4-CAP/24DC/5/4KJ/PT
- █ QUINT4-CAP/24DC/20/16KJ/...

QUINT CAP buffer times

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Approvals

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EAC

Approval ID: RU*DE*HB54.B05799/20



cULus Listed

Approval ID: 20180522-E123528



cUL Listed

Approval ID: E199827



UL Listed

Approval ID: E199827

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Classifications

ECLASS

ECLASS-13.0	27040705
ECLASS-15.0	27040705

ETIM

ETIM 10.0	EC000382
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UNSPSC

UNSPSC 21.0	26111700
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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-25
	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.)	Diboron trioxide(CAS: 1303-86-2)
	Lead monoxide (lead oxide)(CAS: 1317-36-8)
	Lead(CAS: 7439-92-1)
SCIP	313ab9c8-36f0-4fea-99d9-5c5e525da79c

EF3.1 Climate Change

CO2e kg	20.96 kg CO2e
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