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

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

ELEKTROGERÄTE RÜCKNAHME

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

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} = $I_{Stat.Boost}$, I_{Charge} = max)	4.3 A
Current consumption $I_{No-Load}$(U_N, I_{OUT} = 0, I_{charge} = 0)	0.08 A
Current consumption I_{charge} (U_N, I_{OUT} = 0, I_{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 mm² ... 2.5 mm²

flexible	0.2 mm² ... 2.5 mm²
flexible with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²
flexible with ferrule with plastic sleeve	0.25 mm² ... 2.5 mm²
rigid (AWG)	24 ... 14
Stripping length	10 mm

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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

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

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

Environmental and real-life conditions

Ambient conditions

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

UL

Identification	UL Listed UL 61010-2-201

UL

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

UL

Identification	UL 121201

CSA

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

CSA

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

CSA

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

CSA

Identification	CSA C22.2 No. 213-17

UL NEC

Identification	UL 1310 class 2 (buffer mode)

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

Noise emission

Standards/regulations	EN 61000-6-3

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 B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3

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

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

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

Conducted interference

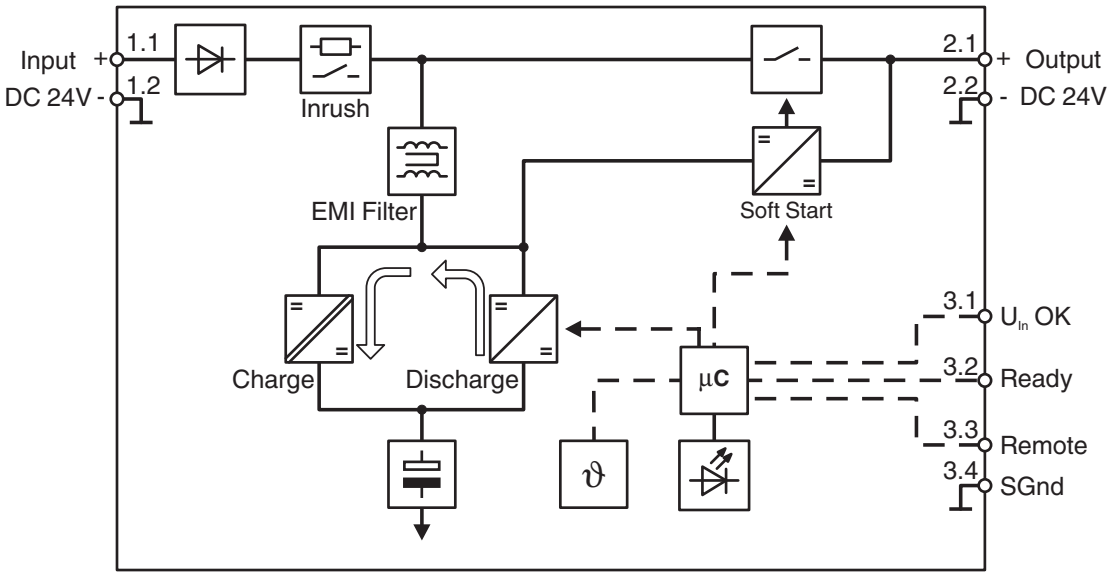
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

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



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.

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2320571 QUINT4-CAP/24DC/10/8KJ/PT

2320539 QUINT4-CAP/24DC/5/4KJ/PT

QUINT4-CAP/24DC/20/16KJ/...

QUINT CAP buffer times

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2320526

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

cULus Listed
Approval ID: 20180522-E123528

cUL Listed
Approval ID: E199827

UL Listed
Approval ID: E199827

Classifications

ECLASS

ECLASS-13.0	27040705
ECLASS-15.0	27040705

ETIM

ETIM 10.0	EC000382

UNSPSC

UNSPSC 21.0	26111700

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

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