

# QUINT4-BUFFER/24DC/20 - Buffer module



2907913

<https://www.phoenixcontact.com/us/products/2907913>

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QUINT buffer module with maintenance-free capacitor-based energy storage for DIN rail mounting, input: 24 V DC, output: 24 V DC/20 A, including mounted UTA 107 universal DIN rail adapter.

## Product description

Bridge failures lasting several seconds with the buffer modules from the QUINT range for DIN rails. The QUINT BUFFER combines an electronic switch-over unit and maintenance-free, capacitor-based energy storage in the same housing.

## Your advantages

- Space savings, thanks to the compact design
- Maintenance-free due to electrolytic capacitors
- Thanks to soft start, can also be used with power supplies in the low power range

## Commercial data

Item number	2907913
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM21
Product key	CMUIE3
GTIN	4055626309040
Weight per piece (including packing)	1,049 g
Weight per piece (excluding packing)	760.55 g
Customs tariff number	85322200
Country of origin	CN

## Technical data

### Input data

Input voltage range	22.5 V DC ... 30 V DC
Fixed backup threshold	< 22 V DC
Voltage type of supply voltage	DC
Current consumption $I_{\max}$ ( $U_N$ , $I_{OUT} = I_{Stat.Boost}$ , $I_{Charge} = \max$ )	26 A (max.)
Current consumption $I_{No-Load}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = 0$ )	0.2 A (No-load)
Current consumption $I_{charge}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = \max$ )	0.6 A (charging process)
Buffer time	0.2 s (20 A)
	2 s (2 A)

### Output data

Efficiency	> 98 % (with charged energy storage device)
Connection in parallel	no
Connection in series	no

### Mains operation

Output voltage	24 V DC (depending on the input voltage)
Output current $I_N$	20 A
Power loss nominal load max.	< 6 W

### Buffer mode

Output voltage	typ. 22 V DC
Output current $I_N$	20 A (depending on output current)
Static Boost ( $I_{Stat.Boost}$ )	25 A
Power loss nominal load max.	< 6 W

## Energy storage

### Input

Nominal capacity	1 mAh
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### General

IQ-Technology	no
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## Signaling

### Signal state UIN OK

Connection labeling	3.1, 3.2
Switching output	Electronic relays (OptoMOS)
State (configurable)	$U_{in}$ OK
Output voltage	30 V DC
Output can be loaded	200 mA
LED status indicator	green ( $U_{in}$ OK)
Signal threshold	Input voltage in the valid range

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## Signal state Ready

Connection labeling	3.3
Switching output	Transistor output, active
State (configurable)	Ready
State condition (configurable)	State of charge = 100% or buffer mode
Output voltage	24 V ( $U_N - 2$ V (typical))
Output can be loaded	20 mA

## Signal ground SGnd

Connection labeling	3.4
Function	Signal ground
Reference potential	3.3 Ready

## Electrical properties

Insulation voltage input, output / housing	500 V
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## Product properties

Product type	Buffer module
Product family	QUINT BUFFER
MTBF (IEC 61709, SN 29500)	2497464 h (40 °C)

## Insulation characteristics

Protection class	Special application (SELV input voltage, hazardous voltages are generated in the device).
Overvoltage category	I
Degree of pollution	2

## Life expectancy (electrolytic capacitors)

Current	20 A
Temperature	30 °C
Time	288935 h

## Life expectancy (electrolytic capacitors)

Current	20 A
Temperature	40 °C
Time	144468 h

## Life expectancy (electrolytic capacitors)

Current	20 A
Temperature	45 °C
Time	102154 h

## Life expectancy (electrolytic capacitors)

Current	20 A
Temperature	50 °C
Time	72234 h

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## Life expectancy (electrolytic capacitors)

Current	20 A
Temperature	60 °C
Time	36117 h

## Dimensions

### Item dimensions

Width	56 mm
Height	130 mm
Depth	125 mm

### Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

## Mounting

Assembly note	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

## Material specifications

Housing material	Metal
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 40 °C Derating: 1 %/K / > 60 °C Derating: 2.5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 70 °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 %

## Standards and regulations

### Electrical safety

Standard designation	Electrical safety
Standards/specifications	IEC 60950-1/VDE 0805 (SELV)

## Approvals

### UL

Identification	UL Listed UL 508
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### UL

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Identification	UL/C-UL Recognized UL 60950-1
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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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## EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
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
Noise immunity	Immunity in accordance with EN 61000-6-2 (industrial)

## Noise emission

Standards/regulations	EN 55016
	EN 61000-6-3

## 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 A

## 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 3 - asymmetrical)
Comments	Criterion A

## Surge voltage load (surge)

Input	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)

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	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion A

## Conducted interference

Standards/regulations	EN 61000-4-6
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## Conducted interference

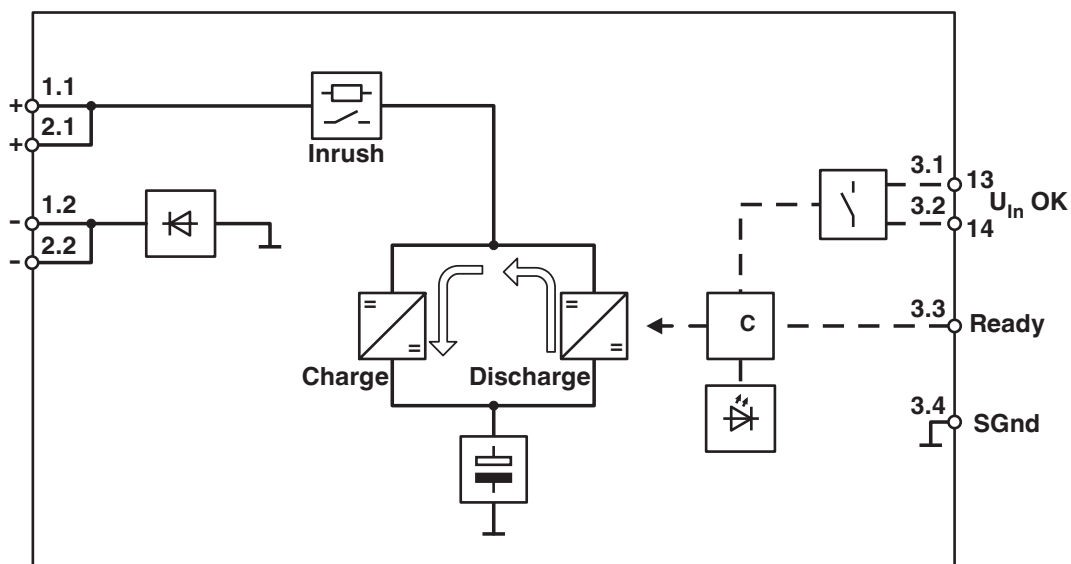
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

## 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																
	0.1	0.3	0.4	0.5	1	1.5	6	7	9	12	14	16	18	19	25	30	
0.1 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
0.25 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
0.50 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
0.75 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
5 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
10 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
20 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
30 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
40 A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

The data is based on an ambient temperature of +25 °C at the start of use.

■ 2907913 QUINT4-BUFFER/24DC/20      ■ 2908283 QUINT4-BUFFER/24DC/40

## QUINT BUFFER buffer times

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## Approvals

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**cUL Recognized**  
Approval ID: E211944



**UL Recognized**  
Approval ID: E211944



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



**UL Listed**  
Approval ID: E123528



**cUL Listed**  
Approval ID: E123528



**IECEE CB Scheme**  
Approval ID: DE/PTZ/0063



**cUL Listed**  
Approval ID: E199827



**UL Listed**  
Approval ID: E199827

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## Classifications

### ECLASS

ECLASS-13.0	27040692
ECLASS-15.0	27040692

### ETIM

ETIM 9.0	EC002850
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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	6(c), 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	bf780566-3baa-40df-a168-e05bbde8eda2

### EF3.0 Climate Change

CO2e kg	20.84 kg CO2e
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## Accessories

### UWA 130 - Mounting adapter

2901664

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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.

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### UWA 182/52 - Mounting adapter

2938235

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

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