

# QUINT4-BUFFER/24DC/40 - Buffer module



2908283

<https://www.phoenixcontact.com/us/products/2908283>

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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/40 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	2908283
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM21
Product key	CMUIE3
GTIN	4055626309200
Weight per piece (including packing)	1,372 g
Weight per piece (excluding packing)	980 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 $I_{\max}$ ( $U_N$ , $I_{OUT} = I_{Stat.Boost}$ , $I_{Charge} = \max$ )	46 A (max.)
Current consumption $I_{No-Load}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = 0$ )	0.2 A (No-load)
Current consumption $I_{charge}$ ( $U_N$ , $I_{OUT} = 0$ , $I_{charge} = \max$ )	0.8 A (charging process)
Buffer time	0.2 s (40 A)
	2 s (4 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 $I_N$	40 A
Power loss nominal load max.	< 9 W

### Buffer mode

Output voltage	typ. 22 V DC
Output current $I_N$	40 A (depending on output current)
Static Boost ( $I_{Stat.Boost}$ )	45 A

## Energy storage

### Input

Nominal capacity	2 mAh
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### General

IQ-Technology	no
Storage medium	Electrolytic capacitor

## 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
LED status indicator	green (Ready)

## 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)	2813895 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	72 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 IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 40 °C Derating: 0.56 %/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

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 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.

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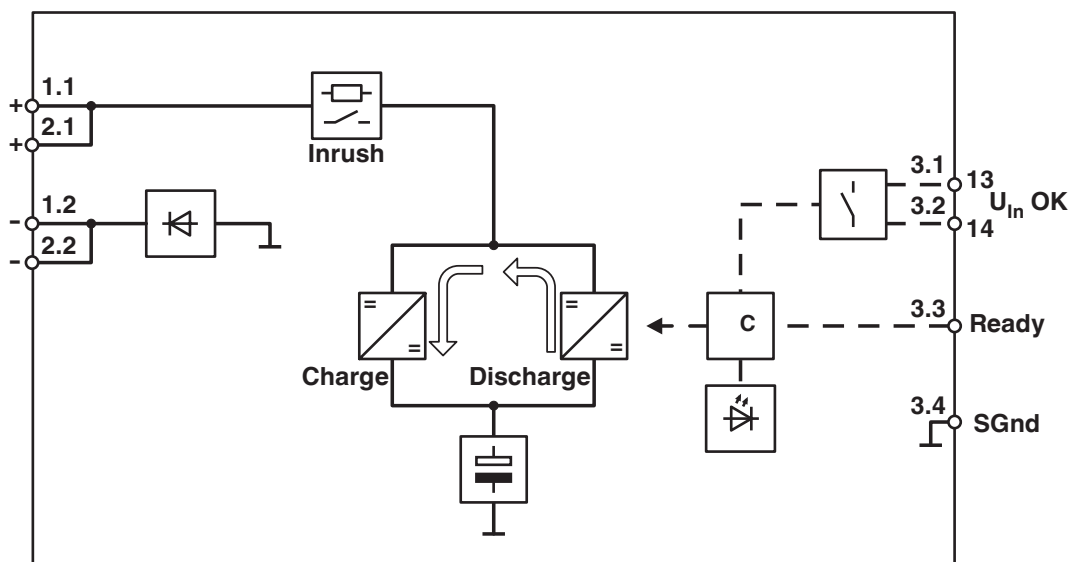


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## Drawings

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 10.0	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	e81279e6-c2ff-4854-8ec5-6cd64b3c3168

### EF3.1 Climate Change

CO2e kg	21.98 kg CO2e
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