

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
Catalog Page	Page 345 (C-4-2019)
GTIN	4055626309040
Weight per Piece (including packing)	1,076.3 g
Weight per Piece (excluding packing)	997 g
Customs tariff number	85322900
Country of origin	CN

Technical Data

Input data

Input voltage	24 V DC (SELV)
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 , $I_{OUT} = I_{\text{Stat.Boost}}$, $I_{\text{charge}} = \max$)	26 A (max.)
Current consumption $I_{\text{No-Load}}$ (U_N , $I_{OUT} = 0$, $I_{\text{charge}} = 0$)	0.2 A (No-load)
Current consumption I_{charge} (U_N , $I_{OUT} = 0$, $I_{\text{charge}} = \max$)	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
Static Boost ($I_{\text{Stat.Boost}}$)	25 A (15 ms)
Dynamic Boost ($I_{\text{Dyn.Boost}}$)	30 A (5 s)
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 ($I_{\text{Stat.Boost}}$)	25 A
Power loss nominal load max.	< 6 W

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 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

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LED status indicator	green (U_{in} OK)
Signal threshold	Input voltage in the valid range

Signal ground SGnd

Connection labeling	3.4
Function	Signal ground
Reference potential	3.3 Ready

Energy storage

Nominal capacity	1 mAh
IQ-Technology	no

Connection data

Input

Position	1.x
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Conductor connection

Connection method	Screw connection
rigid	0.2 mm ² ... 6 mm ²
flexible	0.2 mm ² ... 4 mm ²
flexible with ferrule without plastic sleeve	0.2 mm ² ... 6 mm ²
flexible with ferrule with plastic sleeve	0.2 mm ² ... 4 mm ²
rigid (AWG)	30 ... 10
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm
Drive form screw head	Slotted L

Output

Position	2.x
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Conductor connection

Connection method	Screw connection
rigid	0.2 mm ² ... 6 mm ²
flexible	0.2 mm ² ... 4 mm ²
flexible with ferrule without plastic sleeve	0.2 mm ² ... 6 mm ²
flexible with ferrule with plastic sleeve	0.2 mm ² ... 4 mm ²
rigid (AWG)	30 ... 10
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm
Drive form screw head	Slotted L

Signal

Position	3.x
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Conductor connection

Connection method	Push-in connection
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rigid	0.2 mm ² ... 1.5 mm ²
flexible	0.2 mm ² ... 1.5 mm ²
flexible with ferrule without plastic sleeve	0.2 mm ² ... 1.5 mm ²
flexible with ferrule with plastic sleeve	0.2 mm ² ... 0.75 mm ²
rigid (AWG)	24 ... 16
Stripping length	8 mm

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)

Time	88224 h
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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 instructions	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

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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

Standards/specifications	IEC 60950-1/VDE 0805 (SELV)
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Approval data

UL

Identification	UL Listed UL 508
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UL

Identification	UL/C-UL Recognized UL 60950-1
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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
Noise emission	EN 55016
	EN 61000-6-3
Noise immunity	Immunity in accordance with EN 61000-6-2 (industrial)

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)

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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)
	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

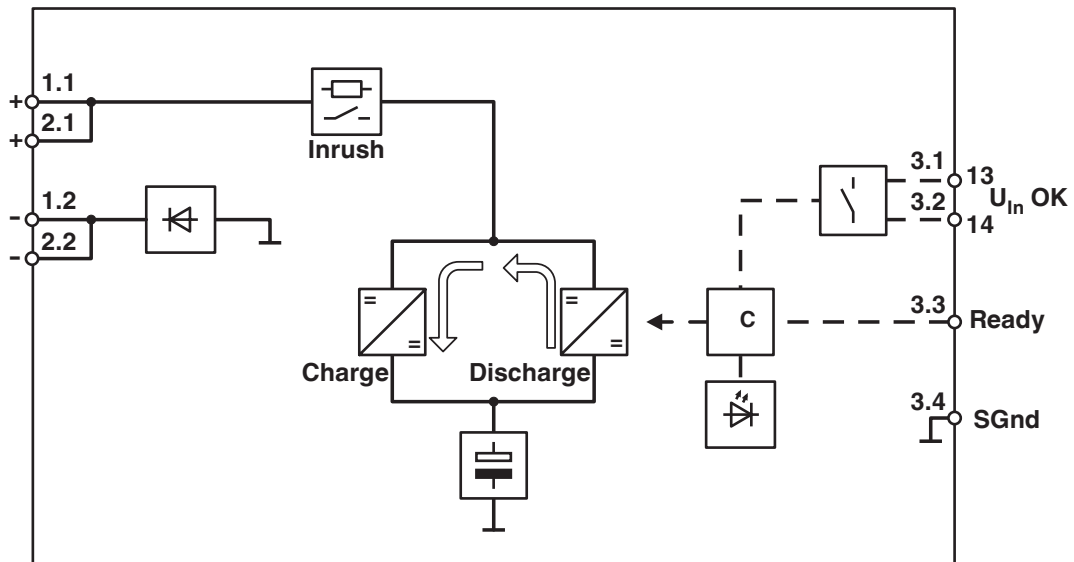
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

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



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Approvals



cUL Recognized
Approval ID: FILE E 211944



UL Recognized
Approval ID: FILE E 211944



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



UL Listed
Approval ID: FILE E 123528



cUL Listed
Approval ID: FILE E 123528



cUL Listed
Approval ID: FILE E 199827



UL Listed
Approval ID: FILE E 199827

cULus Recognized

cULus Listed

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27049201
ECLASS-11.0	27040692

ETIM

ETIM 8.0	EC002850
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UNSPSC

UNSPSC 21.0	26111700
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25; For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

UWA 130 - Mounting adapter

2901664

<https://www.phoenixcontact.com/us/products/2901664>



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.

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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