

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 |
| Catalog Page | Page 345 (C-4-2019) |
| GTIN | 4055626309200 |
| Weight per Piece (including packing) | 1,416 g |
| Weight per Piece (excluding packing) | 1,328 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 , $I_{OUT} = I_{\text{Stat.Boost}}$, $I_{\text{charge}} = \max$) | 46 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 , $I_{OUT} = 0$, $I_{\text{charge}} = \max$) | 0.8 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 |
| Static Boost ($I_{\text{Stat.Boost}}$) | 45 A (15 ms) |
| Dynamic Boost ($I_{\text{Dyn.Boost}}$) | 60 A (5 s) |
| 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 ($I_{\text{Stat.Boost}}$) | 45 A |

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 |
| LED status indicator | green (U_{in} OK) |

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| | |
|------------------|----------------------------------|
| 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 | 2 mAh |
| IQ-Technology | no |

Electrical properties

| | |
|--|-------|
| Insulation voltage input, output / housing | 500 V |
|--|-------|

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)

| | |
|------|---------|
| Time | 71660 h |
|------|---------|

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

Material specifications

| | |
|------------------|-------|
| Housing material | Metal |
|------------------|-------|

Environmental and real-life conditions

Ambient conditions

| | |
|----------------------|------|
| Degree of protection | IP20 |
|----------------------|------|

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| | |
|--|---|
| 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

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

Approval data

UL

| | |
|----------------|------------------|
| Identification | UL Listed UL 508 |
|----------------|------------------|

UL

| | |
|----------------|-------------------------------|
| Identification | UL/C-UL Recognized UL 60950-1 |
|----------------|-------------------------------|

EMC data

| | |
|-------------------------------------|---|
| 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 |
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise emission | EN 55016 |
| | 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 A |

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)

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| | |
|-----------------------|--------------|
| 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 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 |
|-----------------------|--------------|

Conducted interference

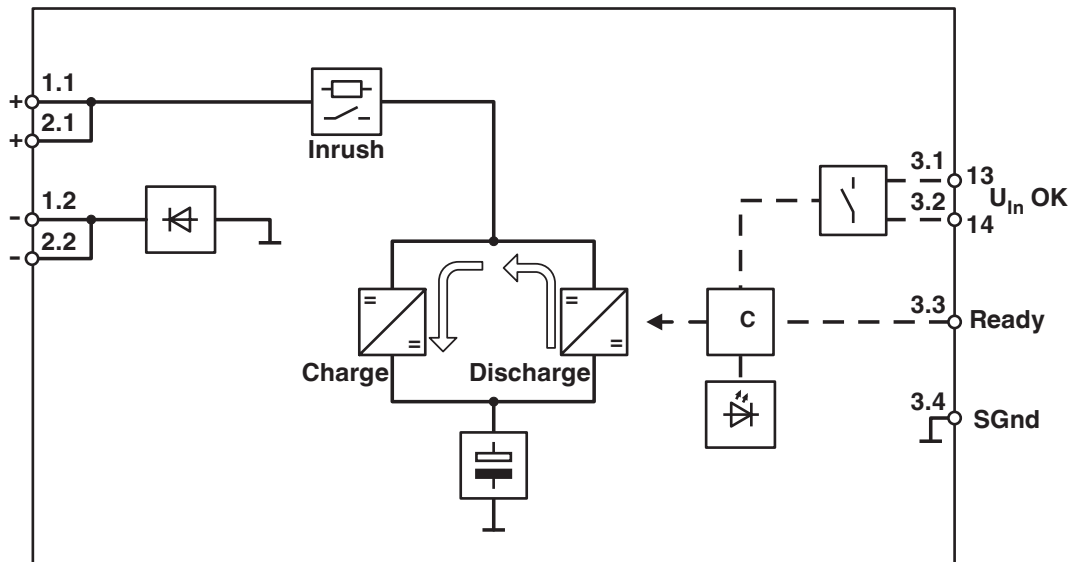
| | |
|-----------------|---------------------|
| Frequency range | 0.15 MHz ... 80 MHz |
| Comments | Criterion A |
| Voltage | 10 V |

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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27040692 |
| ECLASS-12.0 | 27040692 |
| ECLASS-13.0 | 27040692 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002850 |
|----------|----------|

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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