

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 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 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 |

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) |
| Signal threshold | Input voltage in the valid range |

Signal ground SGnd

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| | |
|---------------------|---------------|
| Connection labeling | 3.4 |
| Function | Signal ground |
| Reference potential | 3.3 Ready |

Energy storage

Input

| | |
|------------------|-------|
| Nominal capacity | 1 mAh |
|------------------|-------|

General

| | |
|---------------|----|
| 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) | 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 |
|------|---------|

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 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

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

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 |
| Noise immunity | Immunity in accordance with EN 61000-6-2 (industrial) |
| 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

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| | |
|---------------------|------------------|
| 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 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. |

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002850 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26111700 |
|-------------|----------|

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Environmental product compliance

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