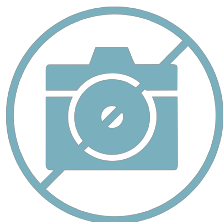


Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Primary-switched power supply unit, QUINT POWER, Screw connection, SFB Technology (Selective Fuse Breaking), input: 3-phase, output: 24 V DC / 20 A

Product Description

QUINT POWER power supplies with maximum functionality

QUINT POWER circuit breakers magnetically and therefore quickly trip at six times the nominal current, for selective and therefore cost-effective system protection. The high level of system availability is additionally ensured, thanks to preventive function monitoring, as it reports critical operating states before errors occur.

Reliable starting of heavy loads takes place via the static power reserve POWER BOOST. Thanks to the adjustable voltage, all ranges between 5 V DC ... 56 V DC are covered.

Your advantages

- Reliable starting of difficult loads
- High level of system availability even in the event of permanent phase failure
- Preventive function monitoring



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 1 pc |
| GTIN | |
| GTIN | 4046356152907 |

Technical data

Dimensions

| | |
|----------------------------------|--------|
| Width | 69 mm |
| Height | 130 mm |
| Depth | 122 mm |
| Width with alternative assembly | 122 mm |
| Height with alternative assembly | 130 mm |
| Depth with alternative assembly | 72 mm |

Ambient conditions

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Technical data

Ambient conditions

| | |
|--|--|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60 °C Derating: 2.5 %/K) |
| Ambient temperature (start-up type tested) | -40 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Max. permissible relative humidity (operation) | 95 % (at 25 °C, non-condensing) |
| Climatic class | 3K3 (in acc. with EN 60721) |
| Degree of pollution | 2 |
| Installation height | 5000 m |

Input data

| | |
|--|---|
| Nominal input voltage range | 3x 400 V AC ... 500 V AC |
| Input voltage range | 3x 320 V AC ... 575 V AC |
| | 2x 360 V AC ... 575 V AC |
| | 450 V DC ... 800 V DC |
| AC frequency range | 45 Hz ... 65 Hz |
| Frequency range DC | 0 Hz |
| Discharge current to PE | < 3.5 mA |
| Current consumption | 3x 1.6 A (400 V AC) |
| | 3x 1.3 A (500 V AC) |
| | 0.9 A (600 V DC) |
| Nominal power consumption | 783 VA |
| Inrush current | < 20 A (typical) |
| Mains buffering time | > 20 ms (400 V AC) |
| | > 30 ms (500 V AC) |
| Recommended breaker for input protection | 6 A ... 16 A (AC: Characteristics B, C, D, K) |
| Power factor (cos phi) | 0.66 |
| Type of protection | Transient surge protection |
| Protective circuit/component | Varistor, gas-filled surge arrester |

Output data

| | |
|--|---|
| Nominal output voltage | 24 V DC \pm 1 % |
| Setting range of the output voltage (U_{Set}) | 18 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted) |
| Nominal output current (I_N) | 20 A (-25 °C ... 60 °C, U_{OUT} = 24 V DC) |
| POWER BOOST (I_{Boost}) | 26 A (-25 °C ... 40 °C permanent, U_{OUT} = 24 V DC) |
| Selective Fuse Breaking (I_{SFB}) | 120 A (12 ms) |
| Derating | 60 °C ... 70 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | yes |
| Feedback voltage resistance | max. 35 V DC |
| Protection against overvoltage at the output (OVP) | < 35 V DC |
| Control deviation | < 1 % (change in load, static 10 % ... 90 %) |

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Technical data

Output data

| | |
|--|---|
| | < 3 % (change in load, dynamic 10 % ... 90 %) |
| | < 0.1 % (change in input voltage ± 10 %) |
| Residual ripple | < 40 mV _{PP} (with nominal values) |
| Output power | 480 W |
| Typical response time | < 0.16 s |
| Peak switching voltages nominal load | < 40 mV _{PP} (at nominal values, 20 MHz) |
| Maximum power dissipation in no-load condition | 11 W |
| Power loss nominal load max. | 40 W |

General

| | |
|---------------------------------|---|
| Net weight | 1.5 kg |
| Operating voltage display | Green LED |
| Efficiency | > 93 % (at 400 V AC and nominal values) |
| MTBF (IEC 61709, SN 29500) | > 900000 h (25 °C) |
| | > 534000 h (40 °C) |
| | > 250000 h (60 °C) |
| Insulation voltage input/output | 4 kV AC (type test) |
| | 2 kV AC (routine test) |
| Insulation voltage input / PE | 3.5 kV AC (type test) |
| | 2 kV AC (routine test) |
| Insulation voltage output / PE | 500 V DC (routine test) |
| Degree of protection | IP20 |
| Protection class | I |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | alignable: P _N $\geq 50\%$, 5 mm horizontally, 15 mm next to active components, 50 mm vertically alignable: P _N < 50%, 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom |

Connection data, input

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 18 |
| Conductor cross section AWG max. | 10 |
| Stripping length | 7 mm |
| Screw thread | M4 |

Connection data, output

| | |
|------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Technical data

Connection data, output

| | |
|---------------------------------------|---------------------|
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 12 |
| Conductor cross section AWG max. | 10 |
| Stripping length | 7 mm |
| Screw thread | M4 |

Connection data for signaling

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 6 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 4 mm ² |
| Conductor cross section AWG min. | 18 |
| Conductor cross section AWG max. | 10 |
| Screw thread | M4 |

Standards and Regulations

| | |
|--|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise immunity | EN 61000-6-2 |
| Connection in acc. with standard | CSA |
| Standards/regulations | EN 61000-4-2 |
| Contact discharge | 4 kV (Test Level 2) |
| Standards/regulations | EN 61000-4-3 |
| Frequency range | 80 MHz ... 1 GHz |
| Test field strength | 10 V/m (Test Level 3) |
| Frequency range | 1.4 GHz ... 2 GHz |
| Test field strength | 3 V/m (Test Level 2) |
| Standards/regulations | EN 61000-4-4 |
| Comments | Criterion B |
| Standards/regulations | EN 61000-6-3 |
| | EN 61000-4-6 |
| Frequency range | 0.15 MHz ... 80 MHz |
| Voltage | 10 V (Test Level 3) |
| Low Voltage Directive | Conformance with Low Voltage Directive 2014/35/EC |
| Standard - Electrical safety | IEC 61010-2-201 (SELV) |
| Standard - Safety extra-low voltage | IEC 61010-1 (SELV) |
| | IEC 61010-2-201 (PELV) |
| Standard - Safe isolation | IEC 61010-2-201 |
| Standard - Protection against shock currents, basic requirements for protective separation in electrical equipment | EN 50178 |

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Technical data

Standards and Regulations

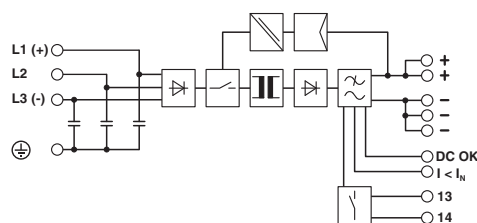
| | |
|--|--|
| Standard – Limitation of mains harmonic currents | EN 61000-3-2 |
| Standard - Equipment safety | GS (tested safety) |
| Standard - Approval for medical use | IEC 60601-1, 2 x MOOP |
| Shipbuilding approval | DNV GL (EMC B), ABS, LR, RINA, NK, BV |
| UL approvals | UL Listed UL 508 |
| | UL/C-UL Recognized UL 60950-1 (3-wire + PE, star net) |
| | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |
| Shock | 18 ms, 30g, in each space direction (according to IEC 60068-2-27) |
| Vibration (operation) | < 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) |
| | 15 Hz ... 150 Hz, 2.3g, 90 min. |
| Approval - requirement of the semiconductor industry with regard to mains voltage dips | SEMI F47-0706 Compliance Certificate |
| Certificate | CB Scheme |
| Rail applications | EN 50121-4 |
| Overvoltage category (EN 62477-1) | III |

Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 25; |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

Block diagram



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27040701 |
| eCl@ss 11.0 | 27040701 |
| eCl@ss 4.0 | 27040700 |
| eCl@ss 4.1 | 27040700 |
| eCl@ss 5.0 | 27049000 |
| eCl@ss 5.1 | 27049000 |
| eCl@ss 6.0 | 27049000 |

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 7.0 | 27049002 |
| eCl@ss 9.0 | 27040701 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000599 |
| ETIM 6.0 | EC002540 |
| ETIM 7.0 | EC002540 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211502 |
| UNSPSC 7.0901 | 39121004 |
| UNSPSC 11 | 39121004 |
| UNSPSC 12.01 | 39121004 |
| UNSPSC 13.2 | 39121004 |
| UNSPSC 18.0 | 39121004 |
| UNSPSC 19.0 | 39121004 |
| UNSPSC 20.0 | 39121004 |
| UNSPSC 21.0 | 39121004 |

Approvals

Approvals

Approvals

DNV GL / CSA / BV / LR / NK / ABS / BSH / RINA / UL Listed / UL Recognized / cUL Recognized / IECCE CB Scheme / SEMI F47 / EAC / EAC / Type approved / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed










Approval details

| | | | |
|--------|---|---|------------|
| DNV GL |  | https://approvalfinder.dnvgl.com/ | TAE000014W |
|--------|---|---|------------|

| | | | |
|-----|---|---|---------|
| CSA |  | http://www.csagroup.org/services-industries/product-listing/ | 1925529 |
|-----|---|---|---------|

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Approvals

| | | | |
|-----------------|---|---|----------------|
| BV |  | http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials | 21004-C0 BV |
| LR |  | http://www.lr.org/en | 08/20069 E4 |
| NK |  | http://www.classnk.or.jp/hp/en/ | 08A039 |
| ABS | | http://www.eagle.org/eagleExternalPortalWEB/ | 20-2022476-PDA |
| BSH | | | Nr. 581 |
| RINA |  | http://www.rina.org/en | ELE316517XG |
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
| UL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 211944 |
| cUL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 211944 |
| IECEE CB Scheme |  | http://www.iecee.org/ | SI-2794 |
| SEMI F47 | | | SEMI F47 |
| EAC |  | | EAC-Zulassung |

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Approvals

| | | |
|-----|--|---------------------|
| EAC | | RU*DE*08.B.01873/19 |
|-----|--|---------------------|

| | | |
|---------------|--|-------------------|
| Type approved | | SI-SIQ BG 005/002 |
|---------------|--|-------------------|

| | | |
|------------------|--|--|
| cULus Recognized | | |
|------------------|--|--|

Accessories

Accessories

Assembly adapter

Assembly adapters - UWA 182/52 - 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.

Assembly adapters - QUINT-PS-ADAPTERS7/2 - 2938206



Assembly adapter for QUINT POWER 10A on S7-300 rail

Device protection

Type 3 surge protection device - PLT-SEC-T3-3S-230-FM - 2905230



Plug-in device protection, according to type 3/class III, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with integrated surge-proof fuse and remote indication contact.

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Accessories

Type 3 surge protection device - PLT-SEC-T3-24-FM-UT - 2907916



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage: 24 V AC/DC

Fan

Fan - QUINT-PS/FAN/4 - 2320076



The fan for QUINT-PS/1AC and .../3AC can be mounted without the need for tools or other accessories. By using the fan, optimum cooling is ensured at high ambient temperatures or if the mounting position is rotated.

Mounting rail adapter

DIN rail adapter - UTA 107 - 2853983

Universal DIN rail adapter, for screwing on switchgear



Redundancy module

Diode - QUINT-DIODE/12-24DC/2X20/1X40 - 2320157



DIN rail diode module 12-24 V DC/2x20 A or 1x40 A. Uniform redundancy up to the consumer.

Redundancy module, with protective coating - QUINT-ORING/24DC/2X20/1X40 - 2320186



Active QUINT redundancy module for DIN rail mounting with ACB (Auto Current Balancing) Technology and monitoring functions, input: 24 V DC/2x 20 A, output: 24 V DC/1 x 40 A, including mounted UTA 107/30 universal DIN rail adapter

Thermomagnetic device circuit breakers

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Accessories

Thermomagnetic device circuit breaker - CB TM1 1A SFB P - 2800836



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Thermomagnetic device circuit breaker - CB TM1 2A SFB P - 2800837



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Thermomagnetic device circuit breaker - CB TM1 3A SFB P - 2800838



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Thermomagnetic device circuit breaker - CB TM1 4A SFB P - 2800839



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Thermomagnetic device circuit breaker - CB TM1 5A SFB P - 2800840



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

Accessories

Thermomagnetic device circuit breaker - CB TM1 6A SFB P - 2800841



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Thermomagnetic device circuit breaker - CB TM1 8A SFB P - 2800842



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Thermomagnetic device circuit breaker - CB TM1 10A SFB P - 2800843



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 changeover contact, plug for base element.

Phoenix Contact 2021 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>