

Power supply unit - QUINT4-PS/1AC/24DC/3.8/SC - 2904599

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Primary-switched power supply unit, QUINT POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 3.8 A

Product Description


In the power range of up to 100 W, QUINT POWER provides superior system availability in the smallest size. Preventative function monitoring and exceptional power reserves are available for applications in the low-power range.

Why buy this product

- Starting of heavy loads with dynamic boost
- Preventive function monitoring indicates critical operating states before errors occur
-
- Space savings in the control cabinet, thanks to a narrow, slim-line design
-



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 STK |
| GTIN |  4 055626 156057 |
| GTIN | 4055626156057 |

Technical data

Dimensions

| | |
|--------|-------|
| Width | 45 mm |
| Height | 99 mm |
| Depth | 90 mm |

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 |

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Ambient conditions

| | |
|--|---------------------------------------|
| 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 (> 2000 m, observe derating) |

Input data

| | |
|-------------------------------------|--|
| Input voltage range | 100 V AC ... 240 V AC -15 % ... +10 % 110 V DC ... 250 V DC -20 % ... +40 % |
| Dielectric strength maximum | 300 V AC 30 s |
| Discharge current to PE | < 0.25 mA (264 V AC, 60 Hz) |
| Current consumption | 1 A (100 V AC) 0.83 A (120 V AC) 0.46 A (230 V AC) 0.44 A (240 V AC) |
| Nominal power consumption | 104 VA |
| Inrush surge current | typ. 13 A (at 25 °C) |
| Mains buffering | > 35 ms (120 V AC) > 35 ms (230 V AC) |
| Input fuse | 3.15 A (slow-blow, internal) |
| Choice of suitable circuit breakers | 6 A ... 16 A (Characteristic B, C or comparable) |
| Type of protection | Transient surge protection |
| Protective circuit/component | Varistor |

Output data

| | |
|---|---|
| Nominal output voltage | 24 V DC |
| Setting range of the output voltage (U_{Set}) | 24 V DC ... 28 V DC (constant capacity) |
| Nominal output current (I_N) | 3.8 A |
| Dynamic Boost ($I_{Dyn.Boost}$) | 7 A (≤ 60 °C (5 s)) |
| Derating | > 60 °C (2.5%/K) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | yes |
| Feedback resistance | ≤ 35 V DC |
| Protection against surge voltage on the output | ≤ 32 V DC |
| Control deviation | < 0.5 % (Static load change 10 % ... 90 %) < 3 % (Dynamic load change 10 % ... 90 %, (10 Hz)) < 0.2 % (change in input voltage ±10 %) |
| Residual ripple | < 45 mV _{PP} (with nominal values) |
| Output power | 90 W |
| Typical response time | 500 ms |
| Maximum power dissipation in no-load condition | < 1 W (120 V AC) < 1 W (230 V AC) |

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Output data

| | |
|------------------------------|------------------|
| Power loss nominal load max. | < 7 W (120 V AC) |
| | < 6 W (230 V AC) |

General

| | |
|---------------------------------|------------------------|
| Net weight | 0.296 kg |
| Efficiency | typ. 92.8 % (120 V AC) |
| | typ. 93.7 % (230 V AC) |
| Insulation voltage input/output | 4 kV AC (type test) |
| | 3 kV AC (routine test) |
| Protection class | II |
| Degree of protection | IP20 |
| MTBF (IEC 61709, SN 29500) | > 1272000 h (25 °C) |
| | > 690000 h (40 °C) |
| | > 271000 h (60 °C) |
| Assembly instructions | DIN rail mounting |

Connection data, input

| | |
|---------------------------------------|----------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.14 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section flexible min. | 0.14 mm ² |
| Conductor cross section flexible max. | 2.5 mm ² |
| Conductor cross section AWG min. | 26 |
| Conductor cross section AWG max. | 14 |
| Stripping length | 8 mm |

Connection data, output

| | |
|---------------------------------------|----------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.14 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section flexible min. | 0.14 mm ² |
| Conductor cross section flexible max. | 2.5 mm ² |
| Conductor cross section AWG min. | 26 |
| Conductor cross section AWG max. | 14 |
| Stripping length | 8 mm |

Connection data for signaling

| | |
|---------------------------------------|----------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.14 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section flexible min. | 0.14 mm ² |
| Conductor cross section flexible max. | 2.5 mm ² |
| Conductor cross section AWG min. | 26 |

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Connection data for signaling

| | |
|----------------------------------|------|
| Conductor cross section AWG max. | 14 |
| Stripping length | 8 mm |

Standards and Regulations

| | |
|--|--|
| 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 61000-4-5 |
| Signal | 0.5 kV (Test Level 2 - symmetrical) |
| | 0.5 kV (Test Level 1 - asymmetrical) |
| Standards/regulations | EN 61000-4-6 |
| Frequency range | 0.15 MHz ... 80 MHz |
| Voltage | 10 V (Test Level 3) |
| Conducted noise emission | EN 55016 EN 61000-6-4 (Class A) |
| Standards/regulations | EN 61000-4-8 |
| | EN 61000-4-11 |
| | EN 61000-4-9 |
| | EN 61000-4-12 |
| | EN 61000-4-18 |
| Standard - power supply devices for low voltage with DC output | EN 61204-3 |
| Standard – Safety extra-low voltage | IEC 61010-1 (SELV) |
| | IEC 61010-2-201 (PELV) |
| Standard - Safe isolation | IEC 61558-2-16 |
| | IEC 61010-2-201 |
| UL approvals | UL Listed UL 61010-1 |
| | UL Listed UL 61010-2-201 |
| | UL 1310 Class 2 Power Units |
| Shock | 18 ms, 30g, in each space direction (according to IEC 60068-2-27) |
| Vibration (operation) | < 15 Hz, ±2.5 mm amplitude; 15 Hz ... 100 Hz: 2.3 g 90 Min. (in accordance with IEC 60068-2-6) |
| Overvoltage category (EN 61010-1) | II (≤ 5000 m) |
| Overvoltage category (EN 62477-1) | III (≤ 2000 m) |

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 25; |
|------------|---|

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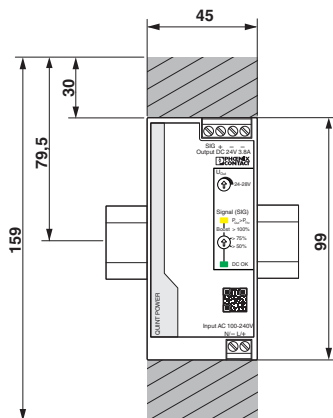
Technical data

Environmental Product Compliance

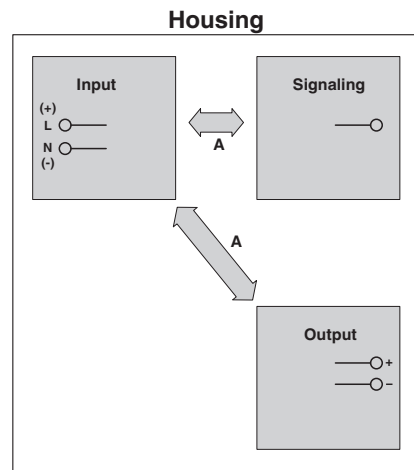
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| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |
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Drawings

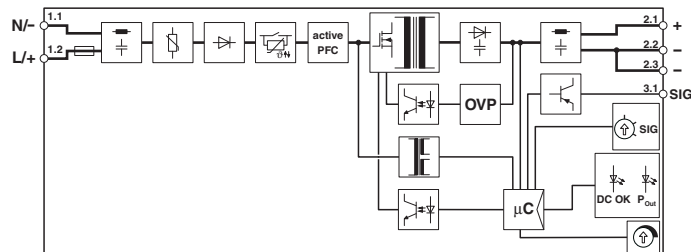
Dimensional drawing



Schematic diagram



Block diagram



Approvals

Approvals

Approvals





IECEE CB Scheme / UL Listed / cUL Listed / DNV GL / cULus Listed

Ex Approvals

Approval details

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Approvals

| | | | |
|-----------------|--|---|---------------|
| IECEE CB Scheme |  | http://www.iecee.org/ | SI-6230 |
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
| DNV GL | | http://exchange.dnv.com/tari/ | TAA00001SN |
| cULus Listed |  | | |

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