

QUINT-PS-24DC/24DC/10

Order No.: 2866378

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2866378>

Quint DC-DC converter, primary switched mode, input: 24 V DC,
output: 24 V DC / 10 A

Commercial data

| | |
|--------------------------|--------------------|
| EAN | 4017918987169 |
| Pack | 1 Pcs. |
| Customs tariff | 85044081 |
| Weight/Piece | 1.4008 KG |
| Catalog page information | Page 506 (IF-2007) |

Product notes

WEEE/RoHS-compliant since:
11/21/2006



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Product description

The QUINT DC-DC converter 24 V/10 A converts the DC voltage from 18 V ... 32 V to an adjustable, controlled and galvanically separated 24 V output voltage. If no regulated and stable 24 V DC voltage is available to supply a load, DC-DC converters ensure the adjustment of the 24 V load: A non-regulated DC voltage is converted to an adjustable output voltage of 22.5 V ...28.5 V.

Due to electrical isolation, the DC voltage circuits are electrically isolated from each other in a safe way. With a design width of only 80 mm, the housing is extremely slim. The floating DC-OK output and an LED are available for signaling.

Technical data

Input data

| | |
|-----------------------|---------|
| Nominal input voltage | 24 V DC |
|-----------------------|---------|

| | |
|------------------------------|----------------------------|
| | 24 V DC |
| DC input voltage range | 18 V DC ... 32 V DC |
| DC frequency range | 0 Hz |
| Current consumption | Approx. 11.4 A (24 V) |
| Inrush surge current | < 20 A (typical) |
| Power failure bypass | > 3 ms (24 V DC) |
| Input fuse | 25 A (slow-blow, internal) |
| Name of protection | Transient surge protection |
| Protective circuit/component | Varistor |

Output data

| | |
|--------------------------------------|--|
| Nominal output voltage | 24 V DC \pm 1% |
| Setting range of the output voltage | 22.5 V DC ... 28.5 V DC |
| Output current | 10 A (-25 °C ... 60 °C) |
| Connection in parallel | Yes, for redundancy and increased capacity |
| Connection in series | Yes |
| Max. capacitive load | Unlimited |
| Current limitation | Approx. 18 A |
| Control deviation | < 1 % (change in load, static 10% ... 90%) < 2 % (change in load, dynamic 10% ... 90%) < 0.1 % (change in input voltage \pm 10%) |
| Residual ripple | < 30 mVPP |
| Peak switching voltages nominal load | < 10 mVPP |
| Maximum power dissipation idling | 2 W |
| Power loss nominal load max. | 28 W |

General data

| | |
|---------------------------------|---|
| Width | 80 mm |
| Height | 130 mm |
| Depth | 125 mm |
| Weight | 0.95 kg |
| Operating voltage display | LED green |
| Efficiency | > 88 % |
| Insulation voltage input/output | 1.5 kV (routine test) 1 kV (type test) |
| Degree of protection | IP20 |

| | |
|--|---|
| Class of protection | III |
| MTBF | > 500 000 h in acc. with IEC 61709 (SN 29500) |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60°C derating) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Max. permissible relative humidity (operation) | 95 % (at 25°C, no condensation) |
| Mounting position | Horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | Can be aligned: Horizontal 0 cm, vertical 5 cm |
| Electromagnetic compatibility | Conformance with EMC directive 89/336/EEC |
| Immunity to interference | EN 61000-6-2 |
| Standard – Electrical equipment of machines | EN 60204 |
| Standard – Safety transformers for switched-mode power supply units | EN 61558-2-17 |
| Standard - Electrical safety | EN 60950/VDE 0805 (SELV) |
| Standard – Shipbuilding | German Lloyd, ABS |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV) |
| Standard – Safety extra-low voltage | EN 60950 (SELV) |
| | EN 60204 (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |
| | DIN VDE 0106-1010 |
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment | DIN VDE 0106-101 |
| UL approvals | UL/C-UL listed UL 508 |
| | UL/C-UL Recognized UL 60950 |
| | UL/C-UL Listed UL 1604 Class I, Division 2, Groups A, B, C, D |

Connection data, input

| | |
|--|--------------------------------|
| Type of connection | COMBICON screw/plug connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |
| Stripping length | 7 mm |
| Screw thread | M 3 |

Connection data, output

| | |
|--|--------------------------------|
| Type of connection | COMBICON screw/plug connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |
| Stripping length | 7 mm |

Signaling

| | |
|--|---|
| Output name | DC OK active |
| Output description | U _{OUT} > 21.5 V: High signal |
| Maximum switching voltage | ≤ 24 V DC |
| Output voltage | + 24 V DC |
| Continuous load current | ≤ 40 mA |
| Status display | "DC OK" LED green |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |
| Screw thread | M 3 |
| Output name | DC OK floating |
| Output description | U _{OUT} > 21.5 V: Contact closed |
| Maximum switching voltage | ≤ 30 V AC/DC |
| Continuous load current | ≤ 1 A |
| Status display | "DC OK" LED green |

Certificates / Approvals

Approval logo

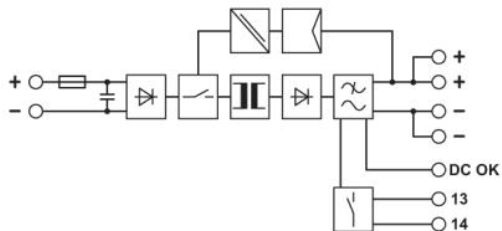


requested approbations

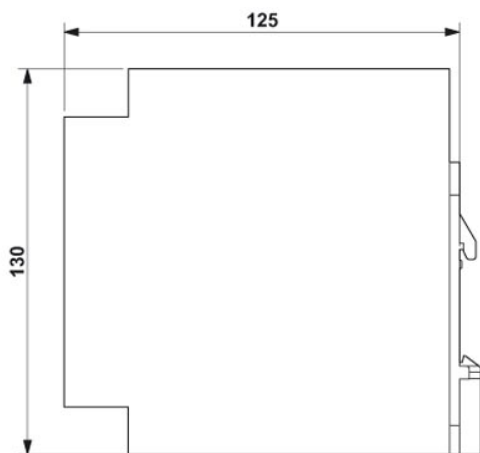
| | |
|-------------------|--|
| Certification | ABS, CUL, CUL Listed, DNV, GL, UL, UL Listed |
| Certification Ex: | CUL-EX LIS, UL-EX LIS |

Drawings

Block diagram



Dimensioned drawing



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