

# QUINT-PS/ 3AC/24DC/20

Order No.: 2866792



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DIN rail power supply unit 24 V DC/20 A, primary-switched mode, 3-phase. The SFB technology (Selective Fusebreaking Technology) can be also used to trigger standard power circuit-breakers quickly and reliably.



Commercial data	
EAN	4046356152907
Pack	1 pcs.
Customs tariff	85044081
Weight/Piece	1.8835 KG
Catalog page information	Page 241 (NTK-2008)

### Product notes

WEEE/RoHS-compliant since: 04/12/2007



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## Product description

QUINT POWER power supply units – highest system availability due to SFB technology

Compact power supply units of the new QUINT POWER generation maximize the availability of your system. Even the standard power circuit-breakers can be tripped reliably and quickly with the SFB technology (Selective Fusebreaking Technology) and six times the nominal current for 12 ms. Defective current paths are disconnected selectively, the defect is limited and the important system parts remain in operation. A comprehensive diagnostics is carried out by continuously monitoring the output voltage and current. This preventive function monitoring visualizes the critical operating modes and reports them to the control unit before an error occurs.

## Technical data

### Input data

Nominal input voltage	3x 400 V AC ... 500 V AC
AC input voltage range	3x 320 V AC ... 575 V AC
	2x 360 V AC ... 575 V AC
DC input voltage range	450 V DC ... 800 V DC
AC frequency range	45 Hz ... 65 Hz
DC frequency range	0 Hz
Current consumption	Approx. 3x 1.6 A (400 V AC)
	Approx. 3x 1.3 A (500 V AC)
	Approx. 2x 3.2 A (400 V AC)
	Approx. 2x 2.8 A (500 V AC)
Inrush surge current	< 20 A (typical)
Power failure bypass	> 20 ms (400 V AC)
	> 30 ms (500 V AC)
Recommended backup fuse	6 A (characteristic B)
	10 A (characteristic B)
	16 A (characteristic B)
Name of protection	Transient surge protection
Protective circuit/component	Varistor, Gasableiter

### Output data

Nominal output voltage	24 V DC $\pm$ 1%
Setting range of the output voltage	18 V DC ... 29.5 V DC (> 24 V constant capacity)
Output current	20 A (-25 °C ... 70 °C, U <sub>OUT</sub> = 24 V DC)
	26 A (mit POWER BOOST, -25°C ... 40°C dauerhaft, U <sub>OUT</sub> = 24 V DC)
	120 A (with SFB technology, 12 ms)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Residual ripple	< 40 mVPP (with nominal values)
Peak switching voltages nominal load	< 40 mVPP (at nominal values, 20 MHz)
Maximum power dissipation idling	11 W
Power loss nominal load max.	40 W

**General data**

Width	69 mm
Height	130 mm
Depth	125 mm
Weight	1.5 kg
Operating voltage display	LED green
Efficiency	> 93 % (at 400 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test) 2 kV AC (routine test)
Degree of protection	IP20
Class of protection	I, with PE connection
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: horizontally 5 mm, in addition to active components of 15 mm, vertically 5 cm
Electromagnetic compatibility	Conformance with EMC guideline 2004/108/EC and for low-voltage guideline 2006/95/EC
Immunity to interference	EN 61000-6-2:2005
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	IEC 61558-2-17
Standard - Electrical safety	IEC 60950/VDE 0805 (SELV)
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	IEC 60950 (SELV) and EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410 DIN VDE 0106-1010
Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard – Equipment safety	GS (tested safety)
Standard network variation (undervoltage)	Semi F47
Certificate	CB Scheme

UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950 (3-wire + PE, star net)
Surge voltage category	III

#### Connection data, input

Type of connection	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	18
Conductor cross section AWG/kcmil max	10
Stripping length	7 mm
Screw thread	M4

#### Connection data, output

Type of connection	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	10
Stripping length	7 mm

#### Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$ : High signal
Maximum switching voltage	+ 24 V DC
Output voltage	+ 24 V DC
Maximum inrush current	$\leq 20$ mA (short circuit resistant)
Continuous load current	$\leq 20$ mA
Status display	$U_{OUT} > 0,9 \times U_N$ : LED "DC OK" grün
Note on status display	$U_{OUT} < 0,9 \times U_N$ : LED "DC OK" blinkt
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>

Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	18
Conductor cross section AWG/kcmil max	10
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Screw thread	M4
Output name	DC OK floating
Output description	Relay contact, U <sub>OUT</sub> > 0.9 x U <sub>N</sub> : Contact closed
Maximum switching voltage	≤ 30 V AC/DC
Maximum inrush current	≤ 1 A (≤ 0.5 A / at 60 V AC/DC)
Continuous load current	≤ 1 A
Status display	U <sub>OUT</sub> > 0,9 x U <sub>N</sub> : LED "DC OK" grün
Note on status display	U <sub>OUT</sub> < 0,9 x U <sub>N</sub> : LED "DC OK" blinkt
Output name	POWER BOOST, active
Output description	I <sub>OUT</sub> < I <sub>N</sub> : High signal
Maximum switching voltage	+ 24 V DC
Output voltage	+ 24 V DC
Maximum inrush current	≤ 20 mA (short circuit resistant)
Continuous load current	≤ 20 mA
Status display	I <sub>OUT</sub> > I <sub>N</sub> : LED "BOOST" gelb

#### Certificates / Approvals



Certification ABS, BV, CB, CSA, CUL, GL, LR, NK, UL, UL Listed

Certifications applied for: UL-EX LIS / CUL-EX LIS / NV

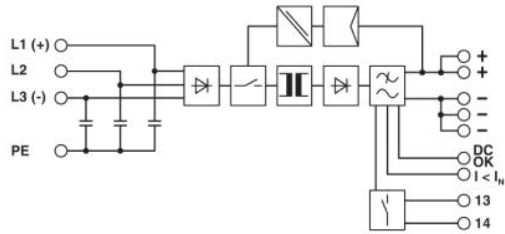
#### Accessories

Item	Designation	Description
<b>General</b>		
2938206	QUINT-PS-ADAPTERS7/2	Assembly adapter for QUINT POWER 10A on S7-300 rail
2320076	QUINT-PS/FAN/4	Fan for QUINT-PS ... power supply. The fan eliminates the position-dependent derating of the power supply.
2938235	UWA 182/52	Universal wall adapter

## Drawings

### Block diagram

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**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



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