

# QUINT-PS-3X400-500AC/24DC/ 5


Order No.: 2938594



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2938594>

DIN rail power supply unit 24 V DC/5 A, primary switched-mode, 3-phase.



Commercial data	
GTIN (EAN)	 4 017918 908362
sales group	H041
Pack	1 pcs.
Customs tariff	85044082
Catalog page information	Page 482 (IF-2007)

### Product notes

WEEE/RoHS-compliant since:  
03/21/2006



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### Product description

QUINT POWER is the powerful 60 - 960 W DC power supply unit for universal use. With its wide-range input, single and three-phase versions, and international approval package, this solution is unrivalled. QUINT POWER provides reliable power supply: generously dimensioned capacitors ensure mains buffering of over 20 ms at full load. Full output power is provided by all three-phase devices, even in the event of a permanent phase failure. The Power Boost power reserve easily starts loads with high inrush currents and ensures that fuses are reliably tripped. Preventive function monitoring diagnoses impermissible operating states and minimizes downtimes in your system. Remote monitoring is provided by an active transistor switching output and a floating relay contact. All devices are idling-proof and short-circuit-proof, and are available with a regulated and adjustable output voltage of 12, 24, and 48 V DC with output currents of 2.5, 5, 10, 20,

30, and 40 A. Power supply units for use in Ex zone 2, uninterruptible solutions, AS-i power supply units, and a QUINT diode complete this comprehensive product range.

#### 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 (for all three phases)
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 0.36 A (400 V AC) 3x 0.34 A (480 V AC)
Nominal power consumption	120 W
Inrush surge current	< 15 A (typical)
Power failure bypass	> 50 ms (400 V AC) > 50 ms (480 V AC)
Input fuse	5 A (slow-blow, internal)
Permissible backup fuse	B6 B10 B16
Type 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 ... 28.5 V
Output current	5 A (up to 60 °C) 7.5 A (with POWER BOOST)
Derating	60 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Current limitation	Approx. $I_{BOOST} = 7.5$ A (for short-circuit)
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	< 10 mV <sub>PP</sub> (with nominal values)
Peak switching voltages nominal load	< 140 mV <sub>PP</sub> (20 MHz)

Maximum power dissipation idling	< 3 W
Power loss nominal load max.	< 17 W
<b>General data</b>	
Width	70 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	73 mm
	130 mm
Net weight	0.95 kg
Operating voltage display	Green LED
Efficiency	> 88 %
Insulation voltage input/output	4 kV AC (type test) 2 kV AC (routine test)
Degree of protection	IP20
Protection class	I, with PE connection
MTBF (IEC 61709, SN 29500)	> 500000 h
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/EC
Noise emission	EN 50081-2
Noise immunity	EN 61000-6-2:2005
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	EN 61558-2-17
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV) EN 61558-2-17
Shipbuilding approval	Germanischer Lloyd (EMC 2), 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 60950-1 (SELV) 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)
Certificate	CB Scheme
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
Surge voltage category	III

#### Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	8 mm
Screw thread	M3

#### Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	8 mm

#### Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$ : High signal

Maximum switching voltage	≤ 24 V
Output voltage	+ 24 V DC (signal)
Maximum inrush current	≤ 40 mA
Continuous load current	≤ 40 mA
Status display	"DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$ : LED flashing
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
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	M3
Output name	DC OK floating
Output description	Relay contact, $U_{OUT} > 0.9 \times U_N$ : Contact closed
Maximum switching voltage	≤ 30 V AC/DC
Maximum inrush current	≤ 1 A
Continuous load current	≤ 1 A
Status display	"DC OK" LED green

#### Certificates / Approvals



Certification CB, CUL, CUL Listed, DNV, GL, GOST, UL, UL Listed

Certification Ex: CUL-EX LIS, UL-EX LIS

#### Accessories

Item	Designation	Description
<b>General</b>		
2938196	QUINT-PS-ADAPTERS7/1	Assembly adapter for QUINT-PS... power supply on S7-300 rail

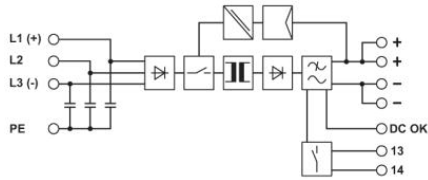
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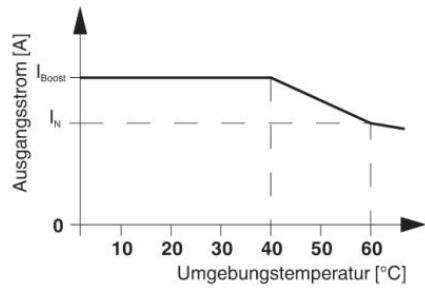
Universal wall adapter

## Diagrams/Drawings

### Block diagram



### Diagram



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