


# Power supply unit - QUINT-PS-3X400-500AC/48DC/20 - 2938222

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DIN rail power supply, 48 V DC/20 A, primary-switched, 3-phase



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 927066
GTIN	4017918927066

## Technical data

### Dimensions

Width	240 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	243 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2.5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	95 % (at 25 °C, non-condensing)

### Input data

Nominal input voltage range	3x 400 V AC ... 500 V AC
Input voltage range	3x 320 V AC ... 575 V AC (for all three phases)
	450 V DC ... 800 V DC (for all three phases)
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz

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## Technical data

### Input data

Current consumption	approx. 3x 2.3 A (400 V AC)
	1.9 A (480 V AC)
Nominal power consumption	1034 W
Inrush surge current	< 15 A
Mains buffering	> 20 ms (400 V AC)
	> 30 ms (480 V AC)
Choice of suitable circuit breakers	3x 6 A ... 16 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

### Output data

Nominal output voltage	48 V DC $\pm 1\%$
Setting range of the output voltage ( $U_{Set}$ )	30 V DC ... 56 V DC (> 48 V DC, constant capacity restricted)
Nominal output current ( $I_N$ )	20 A (-25 °C ... 60 °C)
POWER BOOST ( $I_{Boost}$ )	22 A (-25°C ... 40°C permanent )
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Residual ripple	< 20 mV <sub>PP</sub>
Output power	960 W
Typical response time	< 1 s
Peak switching voltages nominal load	< 140 mV <sub>PP</sub> (20 MHz)
Maximum power dissipation in no-load condition	20 W
Power loss nominal load max.	90 W

### General

Net weight	3.5 kg
Operating voltage display	Green LED
Efficiency	> 90 % (for 230 V AC and nominal values)
Insulation voltage input/output	3 kV (type test)
	1.5 kV (routine test)
Protection class	I (with PE connection)
Degree of protection	IP20
MTBF (IEC 61709, SN 29500)	> 500000 h
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

### Connection data, input

Connection method	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 flexible min.	0.2 mm <sup>2</sup>

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### Connection data, input

Conductor cross section flexible max.	4 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	10
Stripping length	8 mm
Screw thread	M3

### Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	10 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M4

### Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$ : High signal
Maximum switching voltage	$\leq 24$ V
Output voltage	+ 24 V DC
Maximum inrush current	$\leq 20$ mA
Continuous load current	$\leq 20$ 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.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	10 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	6
Screw thread	M4
Output name	DC OK floating
Output description	Relay contact, $U_{OUT} > 0.9 \times U_N$ : Contact closed
Maximum switching voltage	$\leq 30$ V AC/DC
Maximum inrush current	max. 0.5 A
Continuous load current	$\leq 1$ A
Status display	"DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$ : LED flashing

### Standards and Regulations

# Power supply unit - QUINT-PS-3X400-500AC/48DC/20 - 2938222

## Technical data

### Standards and Regulations

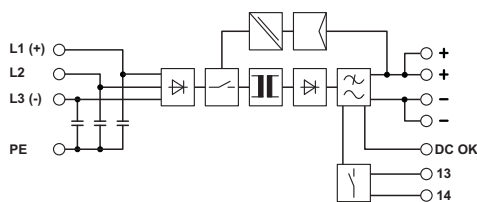
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard - Safety of transformers	EN 61558-2-17
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
	EN 61558-2-17
Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	GS (tested safety)
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1
Information technology equipment - safety (CB scheme)	CB Scheme

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Block diagram



## Approvals

### Approvals

#### Approvals

UL Listed / UL Recognized / cUL Recognized / IECCE CB Scheme / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

#### Ex Approvals

# Power supply unit - QUINT-PS-3X400-500AC/48DC/20 - 2938222

## Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
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IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	SI-937
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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EAC			EAC-Zulassung
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EAC			RU C-DE.A*30.B.01082
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cULus Recognized			
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cULus Listed			
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