

# Power supply, with protective coating - QUINT-PS/1AC/24DC/ 5/CO - 2320908

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, with protective coating, input: 1-phase, output: 24 V DC/5 A

## Product Description

QUINT POWER power supplies with maximum functionality

QUINT POWER circuit breakers magnetically and therefore quickly trip at six times the nominal current, for selective and therefore cost-effective system protection. In addition, the high system availability is ensured by preventive function monitoring which reports critical operating states before errors can occur.

Reliable starting of heavy loads takes place via the static power reserve POWER BOOST. Thanks to the adjustable voltage, all ranges between 18 V DC ... 29.5 V DC are covered.

## Why buy this product

- ✓ For superior system availability
- ✓ Reliable starting of difficult loads with the static POWER BOOST power reserve with up to 1.5 times the nominal current permanently
- ✓ Fast tripping of standard circuit breakers with dynamic power reserve SFB (selective fuse breaking) technology with up to 6 times the nominal current for 12 ms
- ✓ Preventive function monitoring
- ✓ Optimum protection with dip coating for 100 % humidity



## Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 520010
GTIN	4046356520010
Weight per Piece (excluding packing)	700.000 g
Custom tariff number	85044030
Country of origin	Thailand

## Technical data

### Dimensions

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## Technical data

### Dimensions

Width	40 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	43 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	100 % (at 25 °C, non-condensing)
Noise immunity	EN 61000-6-2:2005
Maximum altitude	6000 m

### Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC
	90 V DC ... 410 V DC +5 % (UL 508: ≤ 250 V DC)
Dielectric strength maximum	300 V AC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Discharge current to PE	< 3.5 mA
Current consumption	1.2 A (120 V AC)
	0.6 A (230 V AC)
	1.2 A (110 V DC)
	0.6 A (220 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 25 ms (120 V AC)
	> 25 ms (230 V AC)
Input fuse	5 A (slow-blow, internal)
Choice of suitable circuit breakers	6 A ... 16 A (AC: Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

### Output data

Nominal output voltage	24 V DC ±1 %
Setting range of the output voltage ( $U_{Set}$ )	18 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current ( $I_N$ )	5 A (-25°C ... 60°C, $U_{OUT} = 24$ V DC)
POWER BOOST ( $I_{Boost}$ )	7.5 A (-25°C ... 40°C permanent, $U_{OUT} = 24$ V DC)
Selective Fuse Breaking ( $I_{SFB}$ )	30 A (12 ms)

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### Output data

Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 40 mV <sub>PP</sub> (with nominal values)
Output power	120 W
Typical response time	< 0.15 s
Maximum power dissipation in no-load condition	< 3 W
Power loss nominal load max.	< 15 W

### General

Net weight	0.7 kg
Efficiency	> 90 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Protection class	I
MTBF (IEC 61709, SN 29500)	> 1134000 h (25 °C)
	> 635000 h (40°C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Alignable: 5 mm horizontally, 15 mm next to active components, 50 mm vertically

### Connection data, input

Connection method	Pluggable 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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

### Connection data, output

Connection method	Pluggable 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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>

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## Technical data

### Connection data, output

Conductor cross section AWG min.	20
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

### Connection data for signaling

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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	12
Screw thread	M3

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CSA
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
Standard - Electrical safety	IEC 60950-1/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 60950-1 (SELV) and EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	BG (design tested)
Shipbuilding approval	Germanischer Lloyd (EMC 2)
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
DeviceNet approval	DeviceNet™ Power Supply Conformance Tested
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)

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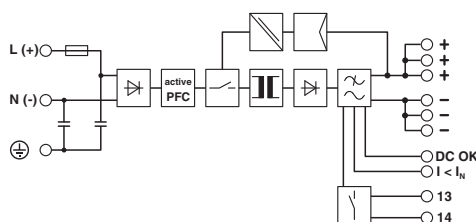
## Technical data

### Standards and Regulations

	15 Hz ... 150 Hz, 2.3g, 90 min.
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Approval - requirement of the semiconductor industry with regard to mains voltage dips	SEMI F47-0706 Compliance Certificate; EN 61000-4-11
Information technology equipment - safety (CB scheme)	IEC 60950 (2 <sup>nd</sup> Edition)
Rail applications	EN 50121-4
ATEX	# II 3 G Ex nA nC IIC T4 Gc
	TÜV 11 ATEX 555674 X
IECEX	Ex nA nC IIC T4 Gc
	IECEX TUN 11.0002X
Overvoltage category (EN 62477-1)	III

## Drawings

Block diagram



## Classifications

### eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27049002
eCl@ss 5.1	27049002
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

### ETIM

ETIM 4.0	EC000599
ETIM 5.0	EC002540
ETIM 6.0	EC002540

### UNSPSC

UNSPSC 6.01	30211502
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### UNSPSC

UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

## Approvals

### Approvals

#### Approvals

CSA / UL Recognized / UL Listed / cUL Recognized / IECCEB Scheme / Bauartgeprüft / EAC / EAC / DNV GL / cULus Recognized

#### Ex Approvals

IECEEx / ATEX / UL Listed / cUL Listed / cULus Listed

### Approval details

CSA		<a href="http://www.csagroup.org/services/testing-and-certification/certified-product-listing/">http://www.csagroup.org/services/testing-and-certification/certified-product-listing/</a>	1897779
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
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
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
IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	SI-2795

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## Approvals

Bauartgeprüft		SI-SIQ BG 005/004
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EAC		EAC-Zulassung
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EAC		7500651.22.01.00242
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DNV GL	<a href="https://www.dnvgl.com/">https://www.dnvgl.com/</a>	TAE000014W
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cULus 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>
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## Accessories

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#### Assembly adapter

Assembly adapters - UTA 107/30 - 2320089



Universal DIN rail adapter

Assembly adapters - UWA 182/52 - 2938235



Universal wall adapter for securely mounting the power supply in the event of strong vibrations. The power supply is screwed directly onto the mounting surface. The universal wall adapter is attached at the top/bottom.

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Assembly adapters - QUINT-PS-ADAPTERS7/1 - 2938196



Assembly adapter for QUINT-PS... power supply on S7-300 rail

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### Fan

Fan - QUINT-PS/FAN/4 - 2320076



The fan for QUINT-PS/1AC and .../3AC can be mounted without the need for tools or other accessories. By using the fan, optimum cooling is ensured at high ambient temperatures or if the mounting position is rotated.

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### Redundancy module

Diode - QUINT-DIODE/12-24DC/2X20/1X40 - 2320157



DIN rail diode module 12-24 V DC/2x20 A or 1x40 A. Uniform redundancy up to the consumer.

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Redundancy module, with protective coating - QUINT-ORING/24DC/2X10/1X20 - 2320173



Active QUINT redundancy module for DIN rail mounting with ACB (auto current balancing) technology and monitoring functions, input: 24 V DC, output: 24 V DC/2 x 10 A or 1 x 20 A, including mounted UTA 107/30 universal DIN rail adapter

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Redundancy module - TRIO-DIODE/12-24DC/2X10/1X20 - 2866514



Redundancy module with function monitoring, 12-24 V DC, 2x 10 A, 1x 20 A

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### Thermomagnetic device circuit breakers



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### Accessories

Thermomagnetic device circuit breaker - CB TM1 1A SFB P - 2800836



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 2A SFB P - 2800837



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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