

Power supply unit - QUINT-PS/1AC/24DC/ 5 - 2866750

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, 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. The high level of system availability is additionally ensured, thanks to preventive function monitoring, as it reports critical operating states before errors occur.

Reliable starting of heavy loads takes place via the static power reserve POWER BOOST. Thanks to the adjustable voltage, all ranges between 5 V DC ... 56 V DC are covered.

Why buy this product

- 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
- For superior system availability
- Preventive function monitoring



Key Commercial Data

Packing unit	1 STK
Weight per Piece (excluding packing)	1011.4 g
Custom tariff number	85044030
Country of origin	Thailand

Technical data

Dimensions

Width	40 mm
Height	130 mm
Depth	125 mm

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Technical data

Dimensions

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)	-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)
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 ... 350 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)
	1.3 A (110 V DC)
	0.6 A (220 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 55 ms (120 V AC)
	> 55 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)
Derating	60 °C ... 70 °C (2.5%/K)

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Output data

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 _{PP} (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)
	> 270000 h (60°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 ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 ²
Conductor cross section solid max.	2.5 mm ²

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Technical data

Connection data, output

Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	20
Conductor cross section AWG max.	12
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
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 - Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	BG (design tested)
Standard - Approval for medical use	IEC 60601-1, 2 x MOOP
Shipbuilding approval	Germanischer Lloyd (EMC 2), ABS, LR, RINA, NK, DNV, BV
UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950-1

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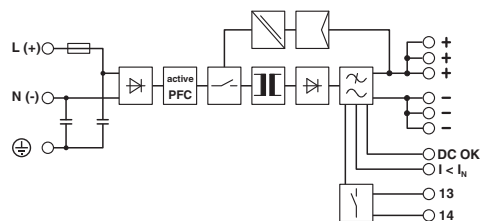
Technical data

Standards and Regulations

	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)
	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
Information technology equipment - safety (CB scheme)	CB Scheme
Rail applications	EN 50121-4
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 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC002540

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Classifications

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

Approvals

Approvals

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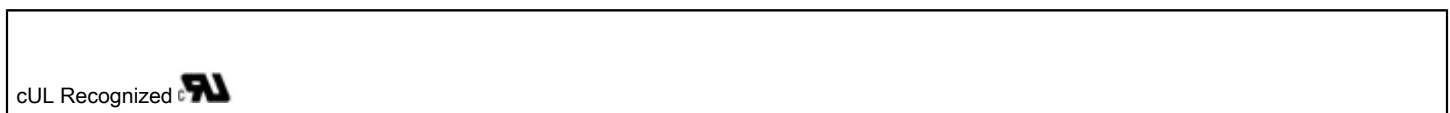
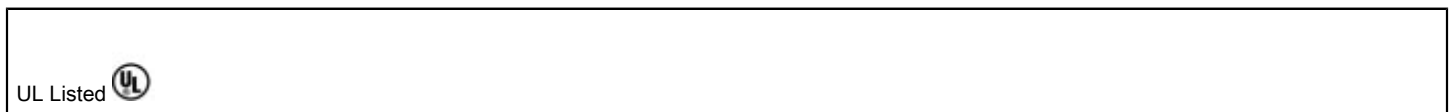
CSA / UL Recognized / UL Listed / cUL Recognized / LR / BV / ABS / NK / RINA / IECEE CB Scheme / SEMI F47 / Bauartgeprüft / EAC / DeviceNet / EAC / DNV GL / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details



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Approvals


LR

BV

ABS

NK

RINA

IECEE CB Scheme 

SEMI F47


Bauartgeprüft

EAC

DeviceNet

EAC

DNV GL

cULus Recognized 

Accessories

Accessories

Assembly adapter

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Accessories

Assembly adapters - UTA 107/30 - 2320089



Universal DIN rail adapter

Assembly adapters - UWA 182/52 - 2938235



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



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

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.

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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Accessories

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

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



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

Thermomagnetic device circuit breakers

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.

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.
