

Power supply unit - QUINT-PS/3AC/24DC/20 - 2866792

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, input: 3-phase, output: 24 V DC/20 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
- ✓ High level of system availability even in the event of permanent phase failure
- ✓ Preventive function monitoring



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 152907
GTIN	4046356152907
Weight per Piece (excluding packing)	1,500.000 g
Custom tariff number	85044030
Country of origin	Thailand

Technical data

Dimensions

Width	69 mm
Height	130 mm
Depth	122 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm

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Technical data

Dimensions

Depth with alternative assembly	72 mm
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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	5000 m

Input data

Nominal input voltage range	3x 400 V AC ... 500 V AC
Input voltage range	3x 320 V AC ... 575 V AC
	2x 360 V AC ... 575 V AC
	450 V DC ... 800 V DC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Discharge current to PE	< 3.5 mA
Current consumption	3x 1.6 A (400 V AC)
	3x 1.3 A (500 V AC)
	0.9 A (600 V DC)
Inrush surge current	< 20 A (typical)
Power failure bypass	> 20 ms (400 V AC)
	> 30 ms (500 V AC)
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, gas-filled surge arrester

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)	20 A (-25°C ... 60°C, $U_{OUT} = 24$ V DC)
POWER BOOST (I_{Boost})	26 A (-25°C ... 40°C permanent, $U_{OUT} = 24$ V DC)
Selective Fuse Breaking (I_{SFB})	120 A (12 ms)
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 %)
	< 3 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ± 10 %)
Residual ripple	< 40 mV _{PP} (with nominal values)
Output power	480 W

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Output data

Typical response time	< 0.16 s
Peak switching voltages nominal load	< 40 mV _{pp} (at nominal values, 20 MHz)
Maximum power dissipation in no-load condition	11 W
Power loss nominal load max.	40 W

General

Net weight	1.5 kg
Operating voltage display	Green LED
Efficiency	> 93 % (at 400 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)	> 900000 h (25 °C) > 534000 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	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
Conductor cross section AWG min.	18
Conductor cross section AWG max.	10
Stripping length	7 mm
Screw thread	M4

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
Conductor cross section AWG min.	12
Conductor cross section AWG max.	10
Stripping length	7 mm
Screw thread	M4

Connection data for signaling

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²

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Technical data

Connection data for signaling

Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
Conductor cross section AWG min.	18
Conductor cross section AWG max.	10
Screw thread	M4

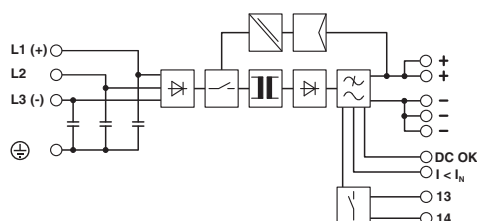
Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Noise 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	GS (tested safety)
Standard - Approval for medical use	IEC 60601-1, 2 x MOOP
Shipbuilding approval	Germanischer Lloyd (EMC 1), ABS, LR, RINA, NK, DNV, BV
UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950-1 (3-wire + PE, star net)
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
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

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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
ETIM 6.0	EC002540

UNSPSC

UNSPSC 6.01	30211502
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 / LR / BV / ABS / NK / RINA / BSH / IECCE CB Scheme / SEMI F47 / Bauartgeprüft / EAC / EAC / DNV GL / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed

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Approvals

Approval details

CSA		http://www.csagroup.org/services/testing-and-certification/certified-product-listing/	1925529
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
LR		http://www.lr.org/en	08/20069 E3
BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	21004-B0 BV
ABS		http://www.eagle.org/eagleExternalPortalWEB/	15- HG1375463-1-PDA
NK		http://www.classnk.or.jp/hp/en/	08A039
RINA		http://www.rina.org/en	ELE016612XG
BSH		http://www.bsh.de/de/index.jsp	Nr. 581

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Approvals

IECEE CB Scheme		http://www.iecee.org/	SI-2794
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SEMI F47			SEMI F47
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Bauartgeprüft			SI-SIQ BG 005/002
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EAC			RU C- DE.A*30.B.01082
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EAC			EAC-Zulassung
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DNV GL		https://www.dnvgl.com/	TAE000014W
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	
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Accessories

Accessories

Assembly 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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Accessories

Assembly adapters - QUINT-PS-ADAPTERS7/2 - 2938206



Assembly adapter for QUINT POWER 10A 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.

Mounting rail adapter

Electronic housing - UTA 107 - 2853983



Universal DIN rail adapter

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.

Redundancy module, with protective coating - QUINT-ORING/24DC/2X20/1X40 - 2320186



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 20 A or 1 x 40 A, including mounted UTA 107/30 universal DIN rail adapter

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.

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.

Thermomagnetic device circuit breaker - CB TM1 3A SFB P - 2800838



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

Thermomagnetic device circuit breaker - CB TM1 4A SFB P - 2800839



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

Thermomagnetic device circuit breaker - CB TM1 5A SFB P - 2800840



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

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Accessories

Thermomagnetic device circuit breaker - CB TM1 6A SFB P - 2800841



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

Thermomagnetic device circuit breaker - CB TM1 8A SFB P - 2800842



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

Thermomagnetic device circuit breaker - CB TM1 10A SFB P - 2800843



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