Power supply unit - QUINT-PS/3AC/24DC/40 - 2866802

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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/40 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

- High level of system availability even in the event of permanent phase failure
- Reliable starting of difficult loads
- Preventive function monitoring

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 152877
GTIN	4046356152877

Technical data

Dimensions

Width	96 mm
Height	130 mm
Depth	176 mm
Width with alternative assembly	176 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	99 mm

Ambient conditions

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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 (start-up type tested)	-40 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	4000 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 2.1 A (400 V AC)
	3x 1.7 A (500 V AC)
	1.7 A (600 V DC)
Nominal power consumption	1342 VA
Inrush surge current	< 15 A
Mains buffering	> 25 ms (400 V AC)
	> 35 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)	40 A (-25 °C ... 60 °C, U_{OUT} = 24 V DC)
POWER BOOST (I_{Boost})	45 A (-25°C ... 40°C permanent, U_{OUT} = 24 V DC)
Selective Fuse Breaking (I_{SFB})	215 A (12 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Feedback resistance	max. 35 V DC
Protection against surge voltage on the output	< 35 V DC
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (change in load, dynamic 10 % ... 90 %)

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Output data

	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 40 mV_{PP} (with nominal values)
Output power	960 W
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 5 mV_{PP} (at nominal values, 20 MHz)
Maximum power dissipation in no-load condition	18 W
Power loss nominal load max.	63 W

General

Net weight	2.5 kg
Operating voltage display	Green LED
Efficiency	> 94 % (at 400 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage input / PE	3.5 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage output / PE	500 V DC (routine test)
Protection class	I
Degree of protection	IP20
MTBF (IEC 61709, SN 29500)	> 880000 h (25 °C)
	> 500000 h (40 °C)
	> 216000 s (60 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: $P_N \geq 50\%$, 5 mm horizontally, 15 mm next to active components, 50 mm vertically alignable: $P_N < 50\%$, 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	6 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
Conductor cross section AWG min.	18
Conductor cross section AWG max.	10
Stripping length	7 mm
Screw thread	M3

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm²
Conductor cross section solid max.	16 mm²

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Connection data, output

Conductor cross section flexible min.	0.5 mm²
Conductor cross section flexible max.	16 mm²
Conductor cross section AWG min.	8
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M4

Connection data for signaling

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	6 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
Conductor cross section AWG min.	18
Conductor cross section AWG max.	10
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CSA
Standards/regulations	EN 61000-4-2
Contact discharge	4 kV (Test Level 2)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1.4 GHz ... 2 GHz
Test field strength	3 V/m (Test Level 2)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	1 kV (Test Level 2 - asymmetrical)
Standards/regulations	EN 61000-6-3
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
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) / Overvoltage category III
Standard – Safety extra-low voltage	IEC 60950-1 (SELV) and EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
	DIN VDE 0106-101

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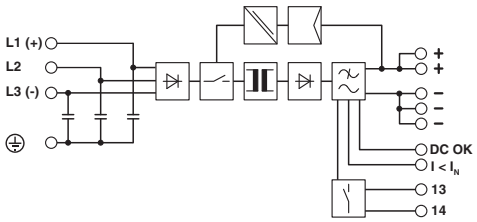
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	GS (tested safety)
Shipbuilding approval	DNV GL (EMC A), ABS, LR, RINA, NK, BV
UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950-1 (3-wire + PE, star net)
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	5 Hz ... 100 Hz resonance search 2.3g, 90 min., resonance frequency 2.3g, 90 min. (according to DNV GL Class C)
Information technology equipment - safety (CB scheme)	CB Scheme
Rail applications	EN 50121-4
Overvoltage category (EN 62477-1)	III

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

Block diagram



Approvals

Approvals

Approvals

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

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

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Approvals

CSA	http://www.csagroup.org/services-industries/product-listing/	2164434
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
IECEE CB Scheme	http://www.iecee.org/	SI-2973
BV	http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	21004-B0 BV
ABS	http://www.eagle.org/eagleExternalPortalWEB/	15-HG1375463-1-PDA
RINA	http://www.rina.org/en	ELE316517XG
NK	http://www.classnk.or.jp/hp/en/	08A039
LR	http://www.lr.org/en	08/20069 E3

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Approvals

SEMI F47		SEMI F47
Bauartgeprüft		SI-SIQ BG 005/009
EAC		RU C-DE.A*30.B.01082
EAC		EAC-Zulassung
DNV GL	http://exchange.dnv.com/tari/	TAE000014W
cUL Listed	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
cULus Listed	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	

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