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Power supply unit - QUINT-PS/3AC/48DC/20 - 2320827

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, input: 3-phase, output: 48 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.

Product Features

- ✓ Adjustable output voltage of 30 to 56 V DC
- ✓ 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 indicates critical operating states before errors occur



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	2960.0 g
Custom tariff number	85044030
Country of origin	Thailand

Technical data

Dimensions

Width	96 mm
Height	130 mm
Depth	179 mm
Width with alternative assembly	176 mm

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Technical data

Dimensions

Height with alternative assembly	130 mm
Depth with alternative assembly	99 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	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 (Not approved by UL)
	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
Inrush surge current	< 20 A (typical)
Power failure bypass	> 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

Output data

Nominal output voltage	48 V DC ±1 %
Setting range of the output voltage	30 V DC ... 56 V DC (> 48 V DC, constant capacity restricted)
Nominal output current	20 A (-25°C ... 60°C, U _{OUT} = 48 V DC)
POWER BOOST	22.5 A (-25°C ... 40°C permanent, U _{OUT} = 48 V DC)
SFB technology current reserve	100 A (12 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Active current limitation	Approx. I _{BOOST} = 22.5 A (for short-circuit)
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 4 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)

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Output data

Residual ripple	< 50 mV _{PP} (with nominal values)
Output power	960 W
Typical response time	< 1 s
Maximum power dissipation in no-load condition	24 W
Power loss nominal load max.	70 W

General

Net weight	2.5 kg
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)	> 890000 h (25 °C) > 509000 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	M3

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	16 mm ²
Conductor cross section flexible min.	0.5 mm ²
Conductor cross section flexible max.	16 mm ²
Conductor cross section AWG min.	8
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M3

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Technical data

Connection data for signaling

Conductor cross section solid min.	0.2 mm ²
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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	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Shock	30g in each direction, according to IEC 60068-2-27
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CSA
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-6
Standard – Electrical equipment of machines	EN 60204-1
Standard - Safety of transformers	IEC 61558-2-17
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)
Standard - Approval for medical use	IEC 60601-1, 2 x MOOP
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)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Information technology equipment - safety (CB scheme)	CB Scheme
Rail applications	EN 50121-4

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Classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002540
ETIM 5.0	EC002540

UNSPSC

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

Approvals

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

Ex Approvals

UL Listed / cUL Listed / UL Listed / cUL Listed / cULus Listed


Approvals submitted

Approval details


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Approvals


CSA 


UL Listed 

cUL Listed 

IECEE CB Scheme 

UL Recognized 

cUL Recognized 

cUL Recognized 

Bauartgeprüft

Bauartgeprüft

CSA 

UL Recognized 

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UL Listed

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IECEE CB Scheme

EAC

EAC

cULus Recognized

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Drawings

Block diagram

