

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.

Your advantages

- 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 pc
GTIN	 4 046356 152907
GTIN	4046356152907
Weight per Piece (excluding packing)	1,500.000 g
Custom tariff number	85044001
Country of origin	Germany
Sales Key	CMPQ33

Technical data

Dimensions

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

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Technical data

Dimensions

Height with alternative assembly	130 mm
Depth with alternative assembly	72 mm

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	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)
Nominal power consumption	783 VA
Inrush current	< 20 A (typical)
Mains buffering time	> 20 ms (400 V AC)
	> 30 ms (500 V AC)
Recommended breaker for input protection	6 A ... 16 A (AC: Characteristics B, C, D, K)
Power factor (cos phi)	0.66
Type of protection	Transient surge protection
Protective circuit/component	Varistor, gas-filled surge arrester

Output data

Nominal output voltage	24 V DC \pm 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

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Output data

Feedback voltage resistance	max. 35 V DC
Protection against overvoltage at the output (OVP)	< 35 V DC
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
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)
MTBF (IEC 61709, SN 29500)	> 900000 h (25 °C)
	> 534000 h (40 °C)
	> 250000 h (60 °C)
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)
Degree of protection	IP20
Protection class	I
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 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

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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

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
Screw thread	M4

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise immunity	EN 61000-6-2
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 61000-6-3
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/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)
Standard – Safety extra-low voltage	IEC 60950-1 (SELV) and EN 60204-1 (PELV)

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Standards and Regulations

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	DNV GL (EMC B), 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)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 2.3g, 90 min.
Approval - requirement of the semiconductor industry with regard to mains voltage dips	SEMI F47-0706 Compliance Certificate
Certificate	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"