

Power supply unit - QUINT4-PS/1AC/24DC/20 - 2904602

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Primary-switched QUINT POWER power supply for DIN rail mounting with free choice of output characteristic curve and SFB (Selective Fuse Breaking) technology, input: 1-phase, output: 24 V DC / 20 A



Key Commercial Data

Packing unit	1
GTIN	 4 046356 985352

Technical data

Dimensions

Width	70 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	73 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)
Maximum altitude	≤ 5000 m (> 2000 m, observe derating)

Input data

Nominal input voltage range	100 V AC ... 240 V AC
	110 V DC ... 250 V DC

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Input data

Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
	90 V DC ... 350 V DC (-18 % ... +40 %)
Dielectric strength maximum	300 V AC 30 s
AC frequency range	50 Hz ... 60 Hz -10 % ... +10 %
Discharge current to PE	< 3.5 mA
Current consumption	6.8 A (100 V AC)
	2.7 A (240 V AC)
Inrush surge current	< 15 A (at 25 °C)
Power failure bypass	≥ 20 ms (120 V AC)
	≥ 20 ms (230 V AC)
Input fuse	12 A (slow-blow, internal)
Choice of suitable circuit breakers	10 A ... 16 A (Characteristic B, C, D, K or comparable)
Type of protection	Transient surge protection
Protective circuit/component	Varistor, gas-filled surge arrester

Output data

Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	24 V DC ... 29.5 V DC (constant capacity)
Nominal output current (I_N)	20 A
Static Boost ($I_{Stat.Boost}$)	25 A
Dynamic Boost ($I_{Dyn.Boost}$)	30 A (5 s)
Selective Fuse Breaking (I_{SFB})	120 A (15 ms)
Derating	> 60 °C (2.5 %/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Control deviation	< 0.5 % (Static load change 10 % ... 90 %)
	< 4 % (Dynamic load change 10 % ... 90 %, (10 Hz))
	< 0.25 % (Input voltage change ±10%)
Residual ripple	< 50 mV _{PP} (with nominal values)
Output power	480 W
Typical response time	300 ms (according to SLEEP MODE)
Maximum power dissipation in no-load condition	< 5 W (230 V AC)
Power loss nominal load max.	< 32 W (230 V AC)

General

Net weight	1.3 kg
Efficiency	> 93.5 % (for 230 V AC and nominal values)
Insulation voltage input/output	3.5 kV AC (type test)

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General

	2 kV AC (routine test)
Protection class	I
MTBF (IEC 61709, SN 29500)	> 1110000 h (25 °C)
	> 673000 h (40°C)
	> 309000 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	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.	30
Conductor cross section AWG max.	10
Stripping length	8 mm

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.	30
Conductor cross section AWG max.	10
Stripping length	8 mm

Connection data for signaling

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

Standards and Regulations

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Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 61000-4-8
	EN 61000-4-11
	EN 61000-4-9
	EN 61000-4-12
	EN 61000-4-16
	EN 61000-4-18
Standard - Safety of transformers	EN 61558-2-16 (air clearances and creepage distances only)
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
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 Low Voltage Directive 2014/35/EC
Rail applications	EN 50121-3-2
Overvoltage category (EN 60950-1)	II
Overvoltage category (EN 61010-1)	II
Overvoltage category (EN 62477-1)	III

Classifications

eCl@ss

eCl@ss 5.1	27242213
eCl@ss 6.0	27049005
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

ETIM

ETIM 5.0	EC002540
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Approvals

Approvals


Approvals

UL Recognized / cUL Recognized / EAC / UL Listed / cUL Listed / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

- UL Recognized
- cUL Recognized
- EAC
- UL Listed
- cUL Listed
- cULus Recognized 

Drawings

Block diagram

