Power supply unit - QUINT4-PS/1AC/24DC/3.8/PT - 2909577

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Primary-switched power supply unit, QUINT POWER, Push-in technology, DIN rail mounting, input: 1-phase, output: 24 V DC / 3.8 A

Product Description

In the power range of up to 100 W, QUINT POWER provides superior system availability in the smallest size. Preventative function monitoring and exceptional power reserves are available for applications in the low-power range.

Why buy this product

- Starting of heavy loads with dynamic boost
- Preventive function monitoring indicates critical operating states before errors occur
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- Space savings in the control cabinet, thanks to a narrow, slim-line design
-

RoHS

Key Commercial Data

Packing unit	1 STK
GTIN	4 055626 356488
GTIN	4055626356488

Technical data

Dimensions

Width	45 mm
Height	106 mm
Depth	90 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

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Ambient conditions

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 (> 2000 m, observe derating)

Input data

Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
	110 V DC ... 250 V DC -20 % ... +40 %
Dielectric strength maximum	300 V AC 30 s
Discharge current to PE	< 0.25 mA (264 V AC, 60 Hz)
Current consumption	1 A (100 V AC)
	0.83 A (120 V AC)
	0.46 A (230 V AC)
	0.44 A (240 V AC)
Nominal power consumption	104 VA
Inrush surge current	typ. 13 A (at 25 °C)
Mains buffering	> 35 ms (120 V AC)
	> 35 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable circuit breakers	6 A ... 16 A (Characteristic B, C, D, K or comparable)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	24 V DC ... 28 V DC (constant capacity)
Nominal output current (I_N)	3.8 A
Dynamic Boost ($I_{Dyn.Boost}$)	7 A (≤ 60 °C (5 s))
Derating	> 60 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Feedback resistance	≤ 35 V DC
Protection against surge voltage on the output	≤ 32 V DC
Control deviation	< 0.5 % (Static load change 10 % ... 90 %)
	< 3 % (Dynamic load change 10 % ... 90 %, (10 Hz))
	< 0.2 % (change in input voltage ±10 %)
Residual ripple	< 45 mV_{PP} (with nominal values)
Output power	90 W
Typical response time	500 ms
Maximum power dissipation in no-load condition	< 1 W (120 V AC)
	< 1 W (230 V AC)

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Output data

Power loss nominal load max.	< 7 W (120 V AC)
	< 6 W (230 V AC)

General

Net weight	0.296 kg
Efficiency	typ. 92.8 % (120 V AC)
	typ. 93.7 % (230 V AC)
Insulation voltage input/output	4 kV AC (type test)
	3 kV AC (routine test)
Protection class	II
Degree of protection	IP20
MTBF (IEC 61709, SN 29500)	> 1272000 h (25 °C)
	> 690000 h (40 °C)
	> 271000 h (60 °C)
Assembly instructions	DIN rail mounting

Connection data, input

Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	10 mm

Connection data, output

Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	10 mm

Connection data for signaling

Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
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Connection data for signaling

Conductor cross section AWG max.	14
Stripping length	10 mm

Standards and Regulations

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	0.5 kV (Test Level 2 - symmetrical)
	0.5 kV (Test Level 1 - asymmetrical)
Standards/regulations	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Conducted noise emission	EN 55016 EN 61000-6-4 (Class A)
Standards/regulations	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 - power supply devices for low voltage with DC output	EN 61204-3
Standard – Safety extra-low voltage	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)
Standard - Safe isolation	IEC 61558-2-16
	IEC 61010-2-201
UL approvals	UL Listed UL 61010-1
	UL Listed UL 61010-2-201
	UL 1310 Class 2 Power Units
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, ±2.5 mm amplitude; 15 Hz ... 100 Hz: 2.3 g 90 Min. (in accordance with IEC 60068-2-6)
Overvoltage category (EN 61010-1)	II
Overvoltage category (EN 62477-1)	III

Drawings

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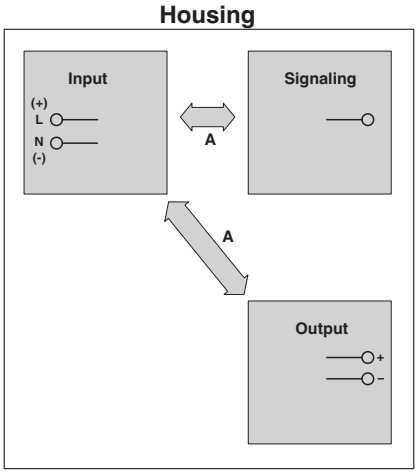
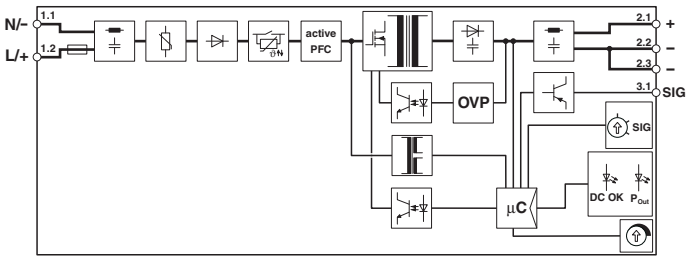
Schematic diagram



Block diagram



Approvals

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IECEE CB Scheme / UL Listed / cUL Listed / DNV GL / cULus Listed

Ex Approvals

Approval details

IECEE CB Scheme	CB scheme	http://www.iecee.org/	SI-6230
UL Listed	UL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528

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Approvals

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528

DNV GL	http://exchange.dnv.com/tari/	TAA00001SN

cULus Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

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