

Power supply unit - QUINT4-PS/1AC/24DC/2.5/PT - 2909576

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Primary-switched power supply unit, QUINT POWER, Push-in technology, DIN rail mounting, input: 1-phase, output: 24 V DC / 2.5 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
-



Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 356495
GTIN	4055626356495

Technical data

Dimensions

Width	32 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	0.85 A (100 V AC) 0.7 A (120 V AC) 0.39 A (230 V AC) 0.37 A (240 V AC)
Nominal power consumption	71 VA
Inrush surge current	typ. 10 A (at 25 °C)
Mains buffering	> 54 ms (120 V AC) > 54 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
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)	2.5 A
Static Boost ($I_{Stat.Boost}$)	3.125 A (≤ 40 °C)
Dynamic Boost ($I_{Dyn.Boost}$)	5 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 %) < 2 % (Dynamic load change 10 % ... 90 %, (10 Hz)) < 0.1 % (change in input voltage ±10 %)
Residual ripple	< 40 mV _{PP} (with nominal values)
Output power	60 W
Typical response time	500 ms
Maximum power dissipation in no-load condition	< 1 W (230 V AC) < 1 W (120 V AC)

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Output data

Power loss nominal load max.	< 5 W (230 V AC)
	< 5 W (120 V AC)

General

Net weight	0.244 kg
Efficiency	typ. 91.9 % (120 V AC)
	typ. 92.6 % (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)	> 1347000 h (25 °C)
	> 734000 h (40 °C)
	> 295000 h (60 °C)
Assembly instructions	DIN rail mounting

Connection data, input

Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24

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Connection data for signaling

Conductor cross section AWG max.	14
Stripping length	10 mm

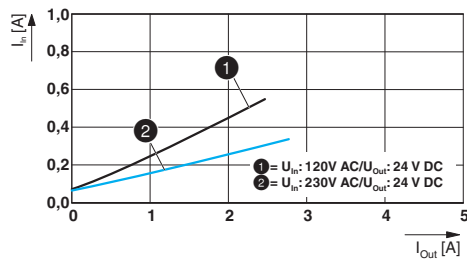
Standards and Regulations

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

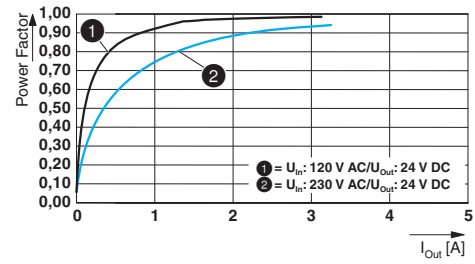
Drawings

Power supply unit - QUINT4-PS/1AC/24DC/2.5/PT - 2909576

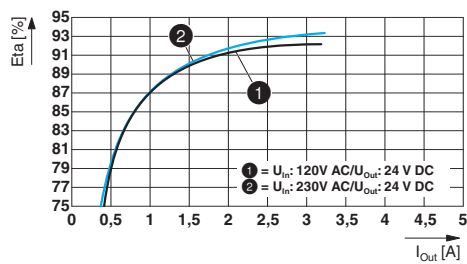
Diagram



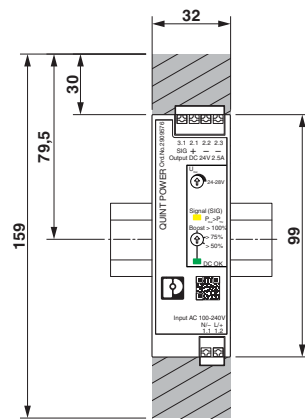
Diagram



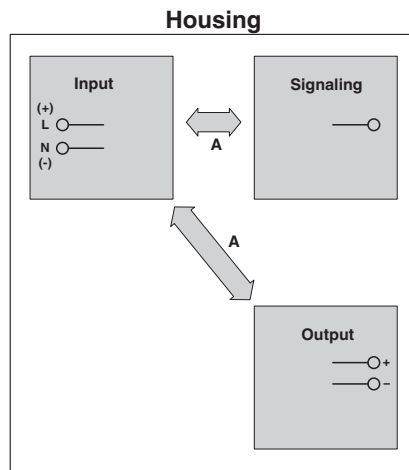
Diagram



Dimensional drawing

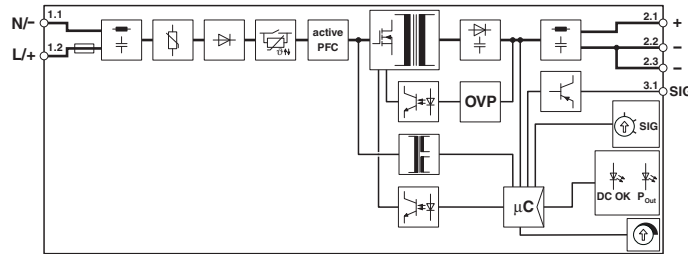


Schematic diagram



Power supply unit - QUINT4-PS/1AC/24DC/2.5/PT - 2909576

Block diagram



Approvals

Approvals

Approvals

UL Listed / cUL Listed / IECCEB Scheme / DNV GL / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
IECEE CB Scheme		http://www.iecee.org/	SI-6218
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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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>