

## Power supply unit - QUINT4-PS/1AC/24DC/1.3/PT - 2909575

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Primary-switched power supply unit, QUINT POWER, Push-in technology, DIN rail mounting, input: 1-phase, output: 24 V DC / 1.3 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
- 
- Space savings in the control cabinet, thanks to a narrow, slim-line design
- 



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 356471
GTIN	4055626356471

### Technical data

#### Dimensions

Width	22.5 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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## Technical data

### 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	0.46 A (100 V AC) 0.37 A (120 V AC) 0.2 A (230 V AC) 0.2 A (240 V AC)
Nominal power consumption	37 VA
Inrush surge current	typ. 14 A (at 25 °C)
Mains buffering	> 43 ms (120 V AC) > 43 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 ( $I_N$ )	1.3 A
Static Boost ( $I_{Stat.Boost}$ )	1.625 A (≤ 40 °C)
Dynamic Boost ( $I_{Dyn.Boost}$ )	2.6 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 <sub>PP</sub> (with nominal values)
Output power	30 W
Typical response time	500 ms
Maximum power dissipation in no-load condition	< 0.4 W (230 V AC) < 0.4 W (120 V AC)

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## Technical data

### Output data

Power loss nominal load max.	< 3.7 W (120 V AC)
	< 3.1 W (230 V AC)

### General

Net weight	0.188 kg
Efficiency	typ. 89.2 % (120 V AC)
	typ. 90.7 % (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)	> 1904000 h (25 °C)
	> 1107000 h (40 °C)
	> 486000 h (60 °C)

### Connection data, input

Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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 <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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 <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14

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## Technical data

### Connection data for signaling

Stripping length	10 mm
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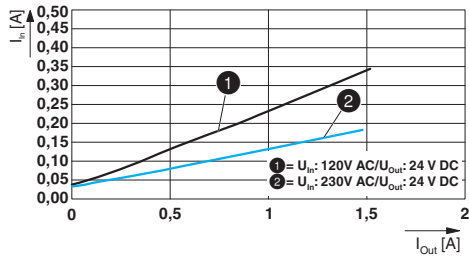
### Standards and Regulations

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
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

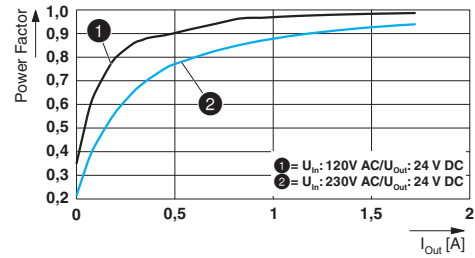
## Drawings

# Power supply unit - QUINT4-PS/1AC/24DC/1.3/PT - 2909575

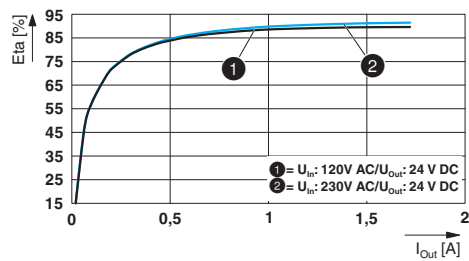
Diagram



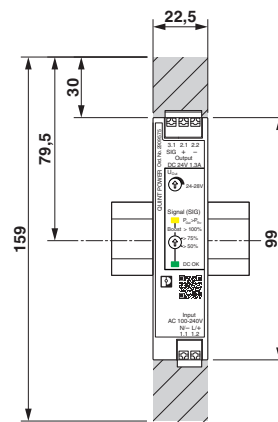
Diagram



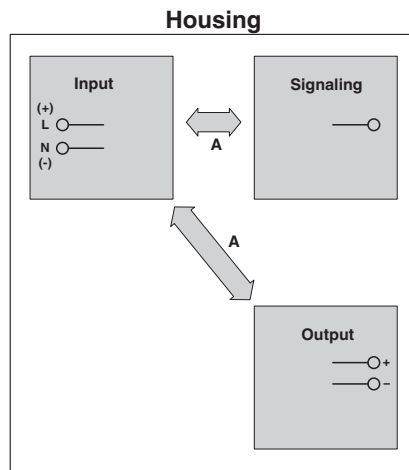
Diagram



Dimensional drawing

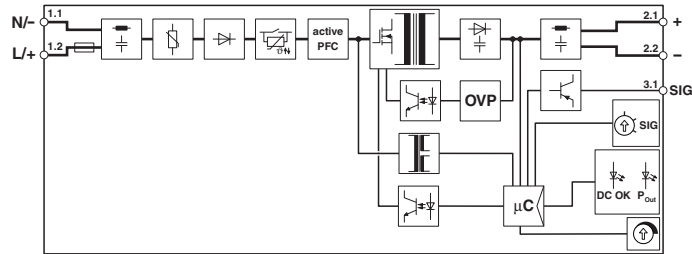


Schematic diagram



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Block diagram



## Approvals

### Approvals

Approvals

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

Ex Approvals

### Approval details

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	SI-6241
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAA00001SN
cULus Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	

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