

# QUINT-PS-100-240AC/24DC/40


Order No.: 2938879

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2938879>

DIN rail power supply unit 24 V DC/40 A, primary switched-mode, 1-phase.



## Commercial data

GTIN (EAN)	
sales group	H041
Pack	1 pcs.
Customs tariff	85044082
Catalog page information	Page 563 (IF-2009)

## Product notes

WEEE/RoHS-compliant since:  
07/10/2006



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## Product description

QUINT POWER power supply units for plant and special engineering reliably start heavy loads with high inrush currents using the POWER BOOST. Thanks to the wide-range input and extensive package of approvals, they can be used in all sectors of industry the world over. The switching output or floating relay contact are used for remote diagnostics.

## Technical data

### Input data

Nominal input voltage	110 V AC ... 240 V AC
AC input voltage range	85 V AC ... 264 V AC (Derating < 100 V DC: 2.5%/V)
DC input voltage range	90 V DC ... 350 V DC (Derating < 110 V DC: 2.5%/V)
AC frequency range	45 Hz ... 65 Hz
DC frequency range	0 Hz
Current consumption	Approx. 12.5 A (120 V AC) Approx. 4.5 A (230 V AC)
Nominal power consumption	960 W
Inrush surge current	< 15 A (typical)
Power failure bypass	> 20 ms (120 V AC) > 20 ms (230 V AC)
Input fuse	20 A (fast blow, internal)
Permissible backup fuse	B16 B20
Type of protection	Transient surge protection
Protective circuit/component	Varistor

### Output data

Nominal output voltage	24 V DC $\pm 1\%$
Setting range of the output voltage	22.5 V DC ... 29.5 V DC (> 24 V constant capacity)
Output current	40 A (-25 °C ... 60 °C) 45 A (with POWER BOOST, -25°C ... 40°C permanent)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Max. capacitive load	Unlimited
Current limitation	Approx. $I_{BOOST} = 45$ A (for short-circuit)
Control deviation	< 1 % (change in load, static 10% ... 90%) < 2 % (change in load, dynamic 10% ... 90%) < 0.1 % (change in input voltage $\pm 10\%$ )
Residual ripple	< 30 mV <sub>PP</sub> (with nominal values)
Peak switching voltages nominal load	< 50 mV <sub>PP</sub> (20 MHz)
Maximum power dissipation idling	28 W
Power loss nominal load max.	80 W

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**General data**

Width	240 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
	243 mm
Net weight	3.5 kg
Operating voltage display	Green LED
Efficiency	> 92 % (for 230 V AC and nominal values)
Insulation voltage input/output	3 kV AC (type test) 2 kV AC (routine test)
Degree of protection	IP20
Protection class	I, with PE connection
MTBF (IEC 61709, SN 29500)	> 500000 h
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	95 % (at 25 °C, no condensation)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontal 0 cm, vertical 5 cm
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 50081-2
Noise immunity	EN 61000-6-2:2005
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	EN 61558-2-17
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV) EN 61558-2-17
Shipbuilding approval	Germanischer Lloyd (EMC 2), ABS, DNV
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	EN 60950-1 (SELV) EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410 DIN VDE 0106-1010

Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard – Equipment safety	GS (tested safety)
Certificate	CB Scheme
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
	UL/C-UL Listed UL 1604 Class I, Division 2, Groups A, B, C, D
Surge voltage category	III

**Connection data, input**

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	10
Stripping length	7 mm
Screw thread	M3

**Connection data, output**

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section stranded min.	0.5 mm <sup>2</sup>
Conductor cross section stranded max.	10 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	6
Stripping length	10 mm

**Signaling**

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$ : High signal
Maximum switching voltage	≤ 24 V
Output voltage	+ 24 V DC (signal)

Maximum inrush current	≤ 20 mA (short-circuit resistant)
Continuous load current	≤ 20 mA
Status display	"DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$ : LED flashing
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	10
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Screw thread	M3
Output name	DC OK floating
Output description	Relay contact, $U_{OUT} > 0.9 \times U_N$ : Contact closed
Maximum switching voltage	≤ 30 V AC/DC
Maximum inrush current	≤ 1 A
Continuous load current	≤ 1 A
Status display	"DC OK" LED green

#### Certificates / Approvals



Certification CUL, CUL Listed, DNV, GL, GOST, UL, UL Listed

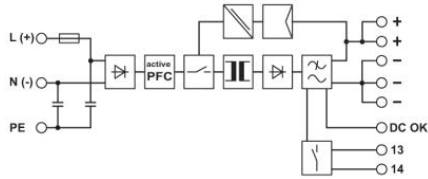
Certification Ex: CUL-EX LIS, UL-EX LIS

#### Accessories

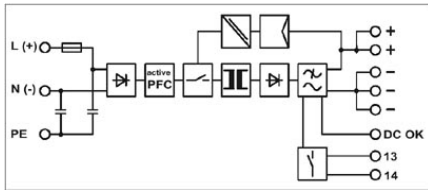
Item	Designation	Description
<b>General</b>		
2938235	UWA 182/52	Universal wall adapter

## Diagrams/Drawings

### Block diagram



### Circuit diagram



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