

Power supply unit - QUINT-PS-100-240AC/48DC/ 5



2866255

<https://www.phoenixcontact.com/pc/products/2866255>

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DIN rail power supply unit, primary-switched mode, 1-phase, output: 48 V DC / 5 A



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Commercial Data

Item number	2866255
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CMPP14
Catalog Page	Page 484 (IF-2007)
GTIN	4017918951191
Weight per Piece (including packing)	1,466.6 g
Weight per Piece (excluding packing)	1,300 g
Customs tariff number	85044030
Country of origin	TH

Technical Data

Input data

AC operation

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC
	90 V DC ... 350 V DC
Input voltage range AC	85 V AC ... 264 V AC
Input voltage range DC	90 V DC ... 350 V DC
Voltage type of supply voltage	AC/DC
Inrush current	< 15 A (typical)
Inrush current integral (I^2t)	1.5 A ² s
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Mains buffering time	> 50 ms (120 V AC)
	> 50 ms (230 V AC)
Current consumption	approx. 2.2 A (120 V AC)
	1.2 A (230 V AC)
Nominal power consumption	263 W
Protective circuit	Transient surge protection; Varistor
Typical response time	< 1 s
Input fuse	6.3 A (slow-blow, internal)
Permissible backup fuse	B10 B16
Recommended breaker for input protection	10 A ... 16 A (Characteristics B, C, D, K)

Output data

Efficiency	> 91 %
Nominal output voltage	48 V DC \pm 1 %
Setting range of the output voltage (U_{Set})	40 V DC ... 56 V DC
Nominal output current (I_N)	5 A (up to 60 °C)
POWER BOOST (I_{Boost})	7.5 A
Max. capacitive load	unlimited
Residual ripple	< 30 mV _{PP}
Output power	240 W
Peak switching voltages nominal load	< 50 mV _{PP} (20 MHz)
Maximum no-load power dissipation	2 W
Power loss nominal load max.	24 W
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes

Signal: DC OK active

Output description	$U_{OUT} > 0.9 \times U_N$: High signal
Maximum switching voltage	\leq 24 V

Power supply unit - QUINT-PS-100-240AC/48DC/ 5



2866255

<https://www.phoenixcontact.com/pc/products/2866255>

Output voltage	+ 24 V DC
Maximum inrush current	≤ 20 mA
Continuous load current	≤ 40 mA

Signal: 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

Signal: DC OK active

Output description	$U_{OUT} > 0.9 \times U_N$: High signal
Maximum switching voltage	≤ 24 V
Output voltage	+ 24 V DC
Maximum inrush current	≤ 20 mA
Continuous load current	≤ 40 mA

Signal: 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

Connection data

Input

Connection method	Pluggable screw connection
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.	12
Stripping length	7 mm
Screw thread	M3

Output

Connection method	Pluggable screw connection
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.	12
Stripping length	7 mm
Screw thread	M3

Power supply unit - QUINT-PS-100-240AC/48DC/ 5



2866255

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Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signal

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.	12
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

LED signaling

Types of signaling	LED
	Active switching output
	Relay contact
Operating voltage display	Green LED

Signal output: DC OK active

Status display	"DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$: LED flashing

Signal output: DC OK floating

Status display	"DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$: LED flashing

Electrical properties

Insulation voltage input/output	4 kV (type test)
	2 kV (routine test)

Product properties

Product type	Power supply
MTBF (IEC 61709, SN 29500)	> 500000 h

Insulation characteristics

Protection class	I (with PE connection)
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Dimensions

Width	85 mm
Height	130 mm
Depth	125 mm

Alternative assembly

Width	122 mm
Height	130 mm

Depth	88 mm
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Mounting

Mounting type	DIN rail mounting
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

Material specifications

Color	aluminium
Housing material	Metal
Type of housing	AluNox (AlMg1)

Environmental and real-life conditions

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)

Standards and regulations

Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
	EN 61558-2-17
Standard - Equipment safety	GS (tested safety)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Safety of transformers	EN 61558-2-17

Approval data

UL approvals	UL/C-UL Recognized UL 60950-1
	UL/C-UL listed UL 508

Conformity/Approvals

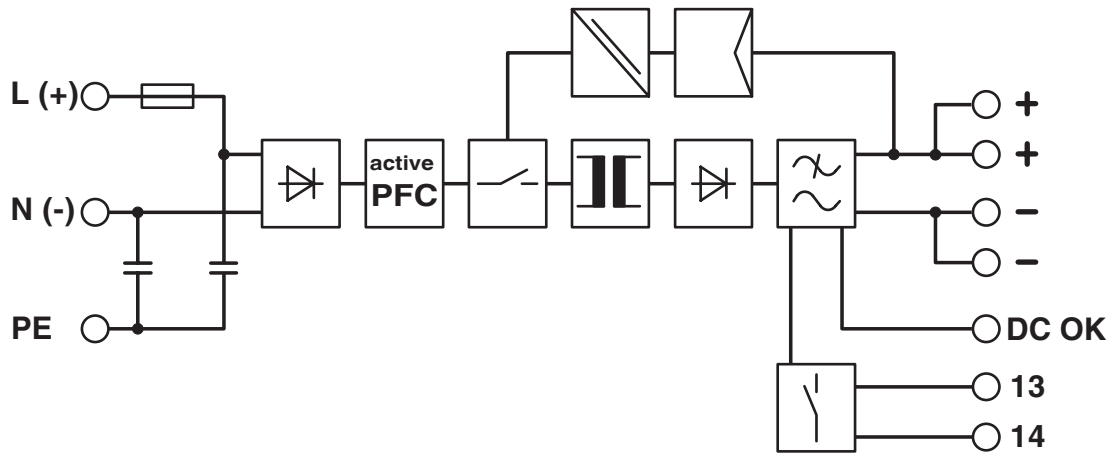
SIL in accordance with IEC 61508	0
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EMC data

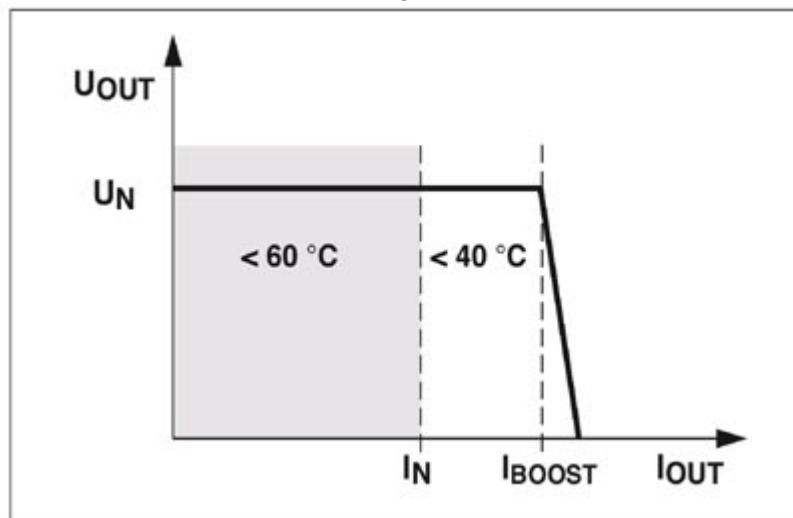
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2

Drawings

Block diagram



Diagram



POWER BOOST

Power supply unit - QUINT-PS-100-240AC/48DC/ 5



2866255

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Approvals

 cUL Recognized

 UL Recognized

 IECEE CB Scheme

 UL Listed

 cUL Listed

cULus Recognized

cULus Listed

Power supply unit - QUINT-PS-100-240AC/48DC/ 5



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Classifications

ECLASS

ECLASS-9.0	27040701
ECLASS-10.0.1	27040701

ETIM

ETIM 7.0	EC002540
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UNSPSC

UNSPSC 21.0	39121004
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

DIN rail adapter

DIN rail adapter - UTA 107 - 2853983

<https://www.phoenixcontact.com/pc/products/2853983>

Universal DIN rail adapter, for screwing on switchgear



Type 3 surge protection device

Type 3 surge protection device - PLT-SEC-T3-230-FM-UT - 2907919

<https://www.phoenixcontact.com/pc/products/2907919>



Type 2/3 surge protection, consisting of protective plug and base element with screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage: 230 V AC/DC

Power supply unit - QUINT-PS-100-240AC/48DC/ 5



2866255

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Type 3 surge protection device

Type 3 surge protection device - PLT-SEC-T3-60-FM-UT - 2907917

<https://www.phoenixcontact.com/pc/products/2907917>



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage: 60 V AC/DC

Mounting adapter

Mounting adapter - QUINT-PS-ADAPTERS7/2 - 2938206

<https://www.phoenixcontact.com/pc/products/2938206>

Assembly adapter for QUINT POWER 10A on S7-300 rail



Power supply unit - QUINT-PS-100-240AC/48DC/ 5



2866255

<https://www.phoenixcontact.com/pc/products/2866255>

Mounting adapter

Mounting adapter - UWA 182/52 - 2938235

<https://www.phoenixcontact.com/pc/products/2938235>



Universal wall adapter for securely mounting the device in the event of strong vibrations. The device is screwed directly onto the mounting surface. The universal wall adapter is attached on the top/bottom.

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