

QUINT-PS-3X400-500AC/48DC/10 - Power supply



2938219

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DIN rail power supply unit 48 V DC/10 A, primary-switched, 3-phase.



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.

Commercial data

Item number	2938219
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	CM11
Product key	CMPP34
GTIN	4017918927691
Weight per piece (including packing)	2,300 g
Weight per piece (excluding packing)	2,288 g
Customs tariff number	85044030
Country of origin	DE

Technical data

Input data

AC operation

Nominal input voltage range	3x 400 V AC ... 500 V AC
Input voltage range	3x 320 V AC ... 575 V AC (for all three phases) 450 V DC ... 800 V DC (for all three phases)
Input voltage range AC	3x 320 V AC ... 575 V AC (for all three phases)
Input voltage range DC	450 V DC ... 800 V DC (for all three phases)
Voltage type of supply voltage	AC/DC
Inrush current	< 10 A
Inrush current integral (I^2t)	1 A ² s
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Mains buffering time	> 25 ms (400 V AC) > 30 ms (480 V AC)
Current consumption	approx. 3x 1.2 A (400 V AC) 1 A (480 V AC)
Nominal power consumption	517 W
Protective circuit	Transient surge protection; Varistor
Typical response time	< 1 s
Permissible backup fuse	B6 B10 B16
Recommended breaker for input protection	3x 6 A ... 16 A (Characteristics B, C, D, K)

Output data

Efficiency	> 90 % (for 230 V AC and nominal values)
Nominal output voltage	48 V DC \pm 1 %
Setting range of the output voltage (U_{Set})	30 V DC ... 56 V DC (> 48 V DC, constant capacity restricted)
Nominal output current (I_N)	10 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	13 A (-25 °C ... 40 °C permanent)
Derating	60 °C ... 70 °C (2.5 %/K)
Residual ripple	< 20 mV _{PP}
Output power	480 W
Peak switching voltages nominal load	< 140 mV _{PP} (20 MHz)
Maximum no-load power dissipation	10 W
Power loss nominal load max.	45 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
Output voltage	+ 24 V DC

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Maximum inrush current	≤ 20 mA
Continuous load current	≤ 20 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	max. 0.5 A
Continuous load current	≤ 1 A

Connection data

Input

Connection method	Screw connection
Conductor cross-section, rigid min.	0.2 mm ²
Conductor cross-section, rigid 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.	10
Stripping length	8 mm
Screw thread	M3

Output

Connection method	Screw connection
Conductor cross-section, rigid min.	0.5 mm ²
Conductor cross-section, rigid max.	16 mm ²
Conductor cross-section flexible min.	0.5 mm ²
Conductor cross-section flexible max.	10 mm ²
Conductor cross-section AWG min.	20
Conductor cross-section AWG max.	6
Stripping length	10 mm
Screw thread	M4

Signal

Conductor cross-section, rigid min.	0.5 mm ²
Conductor cross-section, rigid max.	16 mm ²
Conductor cross-section flexible min.	0.5 mm ²
Conductor cross-section flexible max.	10 mm ²
Conductor cross-section AWG min.	20
Conductor cross-section AWG max.	6
Screw thread	M4

Signaling

Types of signaling	LED
	Active switching output
	Relay contact

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

Number of phases	3
Insulation voltage input/output	3 kV (type test)
	1.5 kV (routine test)

Product properties

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

Insulation characteristics

Protection class	I (with PE connection)
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Dimensions

Width	160 mm
Height	130 mm
Depth	125 mm

Alternative assembly

Width	122 mm
Height	130 mm
Depth	163 mm

Mounting

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

Material specifications

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)

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Standards and regulations

Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Electrical safety	EN 62368-1
Standard - Equipment safety	GS (tested safety)
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 62368-1
Standard – Safety extra-low voltage	EN 62368-1 (SELV)
	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410

Approvals

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

EMC data

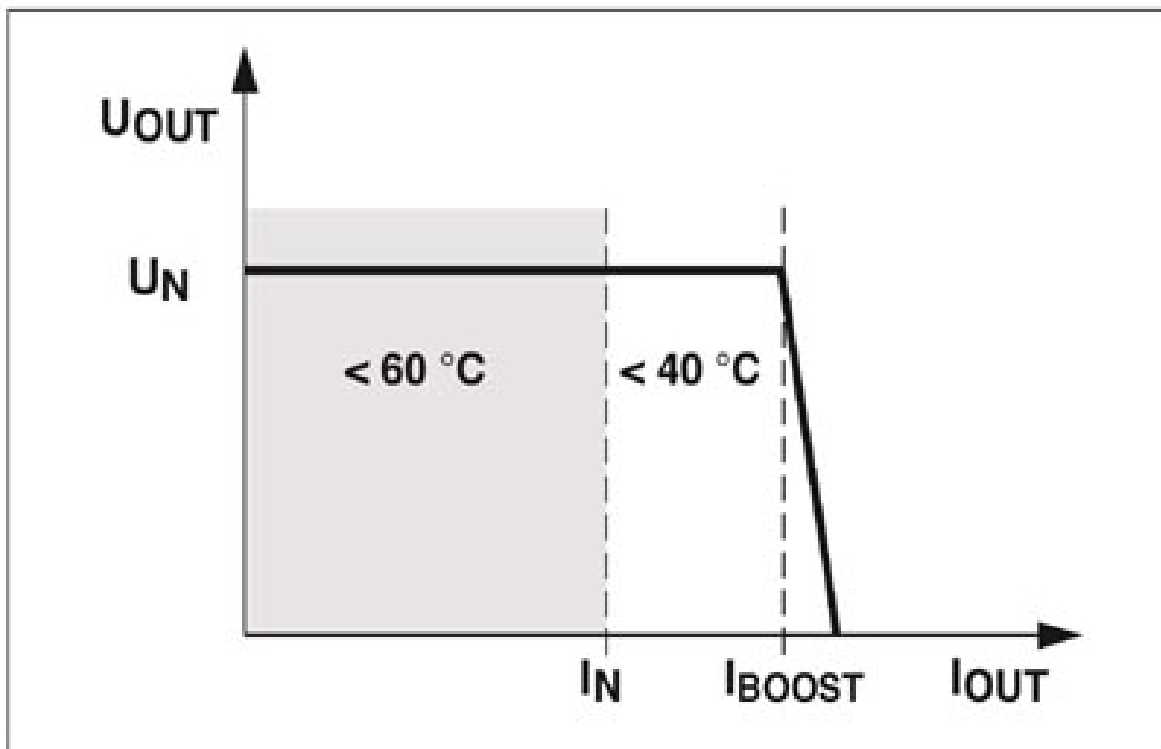
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2

Noise emission

Standards/regulations	EN 55011 (EN 55022)
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Drawings

Diagram



POWER BOOST

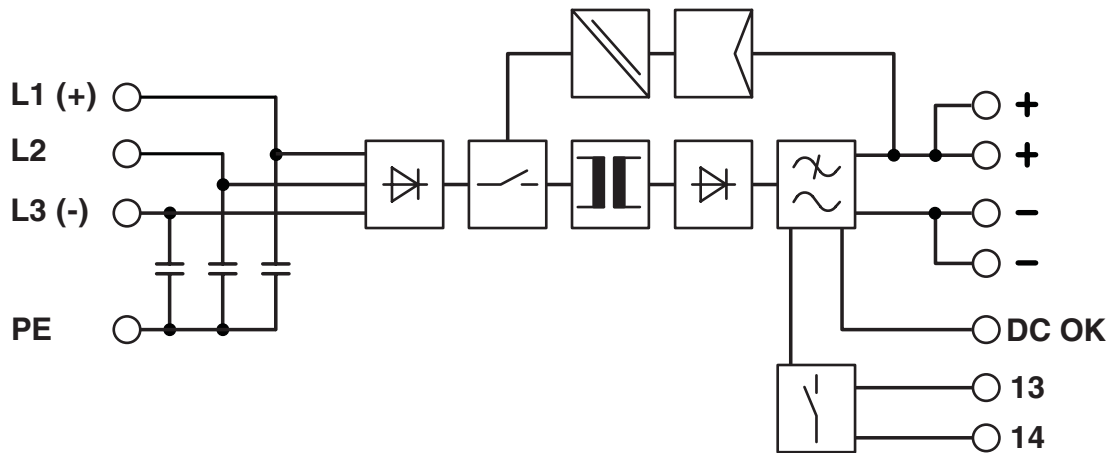
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Block diagram



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Classifications

UNSPSC

UNSPSC 21.0	39121000
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
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