

# QUINT-PS/ 3AC/48DC/20

Order No.: 2320827




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DIN rail power supply unit 48 V DC/20 A, primary-switched, 3-phase. For the first time, SFB (selective fuse breaking) technology can also be used to trigger standard circuit breakers quickly and reliably.



## Commercial data

GTIN (EAN)	 4 046356 547734
sales group	H034
Pack	1 pcs.
Catalog page information	Page 588 (IF-2011)

## Product notes

WEEE/RoHS-compliant since: 11/18/2009



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## Product description

QUINT POWER power supply units – Maximum system availability with SFB technology

Compact power supply units of the new QUINT POWER generation maximize the availability of your system. With the SFB technology (Selective Fuse Breaking Technology), six times the nominal current for 12 ms, even the standard power circuit-breakers can now also be triggered reliably and quickly. Faulty current paths are switched off selectively, the fault is located and important system parts continue to operate. Comprehensive diagnostics are provided through constant monitoring of output voltage and current. This preventive function monitoring visualizes critical operating modes and reports them to the control unit before an error can occur.

## Technical data

### Input data

Nominal input voltage	3x 400 V AC ... 500 V AC
AC input voltage range	3x 320 V AC ... 575 V AC
DC input voltage range	450 V DC ... 800 V DC
AC frequency range	45 Hz ... 65 Hz
DC frequency range	0 Hz
Current consumption	3 x 2.1 A (400 V AC) 3 x 1.7 A (500 V AC)
Inrush surge current	< 20 A (typical)
Power failure bypass	> 25 ms (400 V AC) > 35 ms (500 V AC)
Permissible backup fuse	B6 B10 B16
Additional text	AC: 3 x circuit breaker - recommended fuse
Type of protection	Transient surge protection
Protective circuit/component	Varistor

### Output data

Nominal output voltage	48 V DC $\pm$ 1%
Setting range of the output voltage	30 V DC ... 56 V DC (> 48 V constant capacity)
Output current	20 A (-25°C ... 60°C, U <sub>OUT</sub> = 48 V DC) 22.5 A (with POWER BOOST, -25 °C ... 40 °C permanently, U <sub>OUT</sub> = 48 V DC) 100 A (SFB technology, 12 ms)
Magnetic fuse tripping	B10 C6
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Current limitation	Approx. I <sub>BOOST</sub> = 22.5 A (for short-circuit)
Control deviation	< 1 % (change in load, static 10% ... 90%) < 4 % (change in load, dynamic 10% ... 90%) < 0.1 % (change in input voltage $\pm$ 10%)
Residual ripple	< 50 mV <sub>PP</sub> (with nominal values)

Maximum power dissipation idling	24 W
Power loss nominal load max.	70 W
<b>General data</b>	
Width	96 mm
Height	130 mm
Depth	176 mm
Width with alternative assembly	177.5 mm
Height with alternative assembly	130 mm
	99 mm
Net weight	2.5 kg
Efficiency	> 93 % (at 400 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Degree of protection	IP20
Protection class	I
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: 5 mm horizontally, 15 mm next to active components, 5 cm vertically
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
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	IEC 61558-2-17
Standard - Electrical safety	IEC 60950-1/VDE 0805 (SELV)
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	IEC 60950-1 (SELV) and 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	BG (design tested)
Certificate	CB Scheme
UL approvals	UL applied for
Surge voltage category	II

#### 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.	18
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.	16 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	8
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 DC
Output voltage	+ 48 V DC
Maximum inrush current	≤ 20 mA (short-circuit resistant)
Continuous load current	≤ 20 mA
Status display	$U_{OUT} > 0.9 \times U_N$ : "DC OK" LED green

Note on status display	$U_{OUT} < 0.9 \times U_N$ : Flashing "DC OK" LED
	$I_{OUT} < I_N$ : LED ON
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.	18
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	$\leq 30$ V AC/DC
Maximum inrush current	$\leq 1$ A
Continuous load current	$\leq 1$ A
Status display	$U_{OUT} > 0.9 \times U_N$ : "DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$ : Flashing "DC OK" LED
Output name	POWER BOOST, active
Output description	$I_{OUT} < I_N$ : High signal
Maximum switching voltage	+ 24 V DC
Output voltage	+ 48 V DC
Maximum inrush current	$\leq 20$ mA (short-circuit resistant)
Continuous load current	$\leq 20$ mA
Status display	$I_{OUT} > I_N$ : LED "BOOST" yellow

#### Certificates / Approvals

CB  
scheme

Certification CB, CSA, CUL Listed, UL Listed

Certifications applied for: UL

### Accessories

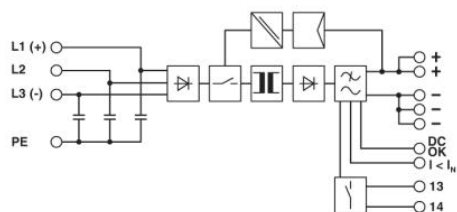
Item	Designation	Description
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### General

2938235	UWA 182/52	Universal wall adapter
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### Diagrams/Drawings

Block diagram



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