

## Power supply unit - QUINT-PS/1AC/48DC/20 - 2866695

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, input: 1-phase, output: 48 V DC/20 A

### Product Description

QUINT POWER power supplies with maximum functionality

QUINT POWER circuit breakers magnetically and therefore quickly trip at six times the nominal current, for selective and therefore cost-effective system protection. The high level of system availability is additionally ensured, thanks to preventive function monitoring, as it reports critical operating states before errors occur.


Reliable starting of heavy loads takes place via the static power reserve POWER BOOST. Thanks to the adjustable voltage, all ranges between 5 V DC ... 56 V DC are covered.

### Why buy this product

- Reliable starting of difficult loads
- Quick tripping of standard circuit breakers
- Preventive function monitoring



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 547727
Weight per Piece (excluding packing)	3300.0 g
Custom tariff number	85044030
Country of origin	Thailand

### Technical data

#### Dimensions

Width	180 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	183 mm

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## Technical data

### 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)
Noise immunity	EN 61000-6-2:2005
Maximum altitude	2000 m

### Input data

Nominal input voltage range	100 V AC ... 240 V AC
	120 V DC ... 300 V DC (UL 508: ≤ 250 V DC)
Input voltage range	85 V AC ... 264 V AC
	90 V DC ... 300 V DC (UL 508: ≤ 250 V DC)
Short-term input voltage	300 V AC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Discharge current to PE	< 3.5 mA
Inrush surge current	< 15 A (typical)
Power failure bypass	> 25 ms (120 V AC)
	> 25 ms (230 V AC)
Input fuse	20 A (fast blow, internal)
Choice of suitable fuses	16 A ... 25 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

### Output data

Nominal output voltage	48 V DC ±1 %
Setting range of the output voltage	30 V DC ... 56 V DC (> 48 V constant capacity)
Nominal output current	20 A (-25°C ... 60°C, U <sub>OUT</sub> = 48 V DC)
POWER BOOST	22.5 A (-25°C ... 40°C permanent, U <sub>OUT</sub> = 48 V DC)
SFB technology current reserve	100 A (12 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Active current limitation	Approx. I <sub>BOOST</sub> = 22.5 A (for short-circuit)
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 50 mV <sub>PP</sub> (with nominal values)
Output current	20 A (-25°C ... 60°C, U <sub>OUT</sub> = 48 V DC)
Output power	960 W
Typical response time	< 1 s

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### Output data

Maximum power dissipation NO-Load	12 W
Power loss nominal load max.	74 W

### General

Net weight	3.3 kg
Efficiency	> 93 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test) 2 kV AC (routine test)
Protection class	I
MTBF (IEC 61709, SN 29500)	> 880000 h (25 °C) > 523000 h (40°C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Alignable: 5 mm horizontally, 15 mm next to active components, 50 mm vertically
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011 (EN 55022)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204-1
Standard - Electrical safety	IEC 60950-1/VDE 0805 (SELV)
Shipbuilding approval	Germanischer Lloyd (EMC 2)
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 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	BG (design tested)
Information technology equipment - safety (CB scheme)	IEC 60950 (2 <sup>nd</sup> Edition)
Rail applications	EN 50121-4
UL approvals	UL Listed UL 508 UL/C-UL Recognized UL 60950-1 UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	4 mm <sup>2</sup>
Conductor cross section AWG min.	14

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## Technical data

### Connection data, input

Conductor cross section AWG 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 flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	16 mm <sup>2</sup>
Conductor cross section AWG min.	8
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M3

### 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	24 V DC
Maximum inrush current	20 mA (short-circuit resistant)
Continuous load current	$\leq 20$ 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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	4 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG 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
	24 V DC
Maximum inrush current	0.5 A
	1 A
Continuous load current	1 A

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## Technical data

### Signaling

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
Output voltage	+ 48 V DC
Maximum inrush current	20 mA (short-circuit resistant)
Continuous load current	$\leq 20$ mA
Status display	$I_{OUT} > I_N$ : LED "BOOST" yellow

## Classifications

### eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

### ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002540
ETIM 5.0	EC002540

### UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

## Approvals

### Approvals

#### Approvals

CSA / UL Recognized / UL Listed / IECCE CB Scheme / GL / EAC / EAC

#### Ex Approvals

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## Approvals

Approvals submitted

## Approval details

CSA

UL Recognized

UL Listed

IECEE CB Scheme

GL

EAC

EAC

## Drawings

Block diagram

