

# Power supply unit - QUINT-PS/ 3AC/24DC/10 - 2866705

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Primary-switched QUINT power supply for DIN rail mounting, input: 3-phase, output: 24 V DC/10 A, with integrated SFB technology (selective fuse breaking technology).

## Product Description

QUINT POWER power supply units – Superior 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.

## Product Features

- High level of system availability even in the event of permanent phase failure
- Reliable starting of difficult loads
- Preventive function monitoring



## Key commercial data

package_quantity	1
GTIN	4046356152891

## Technical data

### Dimensions

Width	60 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	63 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60°C derating, startup at -40°C type-tested)
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

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## Technical data

### Input data

Input voltage range	3x 320 V AC ... 575 V AC
Input voltage range	2x 360 V AC ... 575 V AC
Input voltage range	450 V DC ... 800 V DC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Current consumption	3x 1.2 A (400 V AC)
Current consumption	3x 1 A (500 V AC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 20 ms (400 V AC)
Power failure bypass	> 30 ms (500 V AC)
Choice of suitable fuses	6 A ... 16 A (AC: Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor, gas-filled surge arrester

### Output data

Nominal output voltage	24 V DC $\pm$ 1%
Setting range of the output voltage	18 V DC ... 29.5 V DC (> 24 V constant capacity)
Output current	10 A (-25°C ... 60°C, U <sub>OUT</sub> = 24 V DC)
Output current	15 A (with POWER BOOST, -25°C ... 40°C permanently, U <sub>OUT</sub> = 24 V DC)
Output current	60 A (12 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Residual ripple	< 20 mV <sub>PP</sub> (with nominal values)
Peak switching voltages nominal load	< 20 mV <sub>PP</sub> (at nominal values, 20 MHz)
Maximum power dissipation NO-Load	7 W
Power loss nominal load max.	19 W

### General

Net weight	1.1 kg
Operating voltage display	Green LED
Efficiency	> 93 % (at 400 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
Insulation voltage input/output	2 kV AC (routine test)
Protection class	I
MTBF (IEC 61709, SN 29500)	> 633000 h
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
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204

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## Technical data

### General

<b>Standard - Electrical safety</b>	IEC 60950-1/VDE 0805 (SELV)
<b>Shipbuilding approval</b>	Germanischer Lloyd (EMC 1), ABS, LR, RINA, NK, DNV, BV
<b>Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations</b>	EN 50178/VDE 0160 (PELV)
<b>Standard – Safety extra-low voltage</b>	IEC 60950-1 (SELV) and EN 60204 (PELV)
<b>Standard - Safe isolation</b>	DIN VDE 0100-410
<b>Standard - Safe isolation</b>	DIN VDE 0106-1010
<b>Standard – Protection against electric shock</b>	DIN 57100-410
<b>Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment</b>	DIN VDE 0106-101
<b>Standard – Limitation of mains harmonic currents</b>	EN 61000-3-2
<b>Standard - Equipment safety</b>	GS (tested safety)
<b>Approval - requirement of the semiconductor industry with regard to mains voltage dips</b>	SEMI F47-0706 Compliance Certificate
<b>Information technology equipment - safety (CB scheme)</b>	CB Scheme
<b>UL approvals</b>	UL Listed UL 508
<b>UL approvals</b>	UL/C-UL Recognized UL 60950 (3-wire + PE, star net)
<b>UL approvals</b>	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
<b>Surge voltage category</b>	III

### Connection data, input

<b>Connection method</b>	Pluggable screw connection
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	16
<b>Conductor cross section AWG/kcmil max</b>	12
<b>Stripping length</b>	7 mm
<b>Screw thread</b>	M3

### Connection data, output

<b>Connection method</b>	Pluggable screw connection
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	16
<b>Conductor cross section AWG/kcmil max</b>	12
<b>Stripping length</b>	7 mm

### Signaling

<b>Output name</b>	DC OK active
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## Technical data

### Signaling

<b>Output description</b>	$U_{OUT} > 0.9 \times U_N$ : High signal
<b>Maximum switching voltage</b>	+ 24 V DC
<b>Output voltage</b>	+ 24 V DC
<b>Maximum inrush current</b>	min. 20 mA (short-circuit resistant)
<b>Continuous load current</b>	$\leq 20$ mA
<b>Status display</b>	$U_{OUT} > 0.9 \times U_N$ : "DC OK" LED green
<b>Note on status display</b>	$U_{OUT} < 0.9 \times U_N$ : Flashing "DC OK" LED
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	16
<b>Conductor cross section AWG/kcmil max</b>	12
<b>Tightening torque, min</b>	0.5 Nm
<b>Tightening torque max</b>	0.6 Nm
<b>Screw thread</b>	M3
<b>Output name</b>	DC OK floating
<b>Output description</b>	Relay contact, $U_{OUT} > 0.9 \times U_N$ : Contact closed
<b>Maximum switching voltage</b>	$\leq 30$ V AC/DC
<b>Maximum inrush current</b>	$\leq 1$ A
<b>Continuous load current</b>	$\leq 1$ A
<b>Status display</b>	$U_{OUT} > 0.9 \times U_N$ : "DC OK" LED green
<b>Note on status display</b>	$U_{OUT} < 0.9 \times U_N$ : Flashing "DC OK" LED
<b>Output name</b>	POWER BOOST, active
<b>Output description</b>	$I_{OUT} < I_N$ : High signal
<b>Maximum switching voltage</b>	+ 24 V DC
<b>Output voltage</b>	+ 24 V DC
<b>Maximum inrush current</b>	min. 20 mA (short-circuit resistant)
<b>Continuous load current</b>	$\leq 20$ mA
<b>Status display</b>	$I_{OUT} > I_N$ : LED "BOOST" yellow

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27040702
<b>eCl@ss 4.1</b>	27040702
<b>eCl@ss 5.0</b>	27049002
<b>eCl@ss 5.1</b>	27049002
<b>eCl@ss 6.0</b>	27049002
<b>eCl@ss 7.0</b>	27049002
<b>eCl@ss 8.0</b>	27049002

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## classifications

### ETIM

<b>ETIM 2.0</b>	EC001039
<b>ETIM 3.0</b>	EC001039
<b>ETIM 4.0</b>	EC000599
<b>ETIM 5.0</b>	EC002540

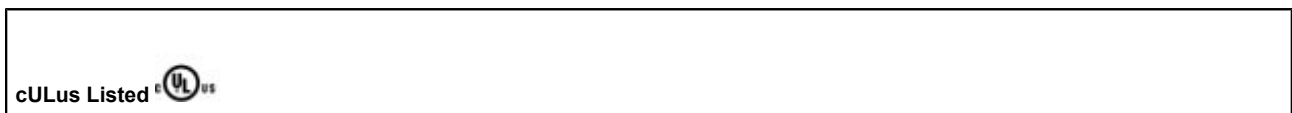
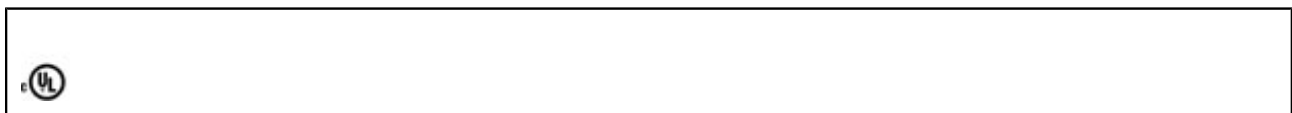
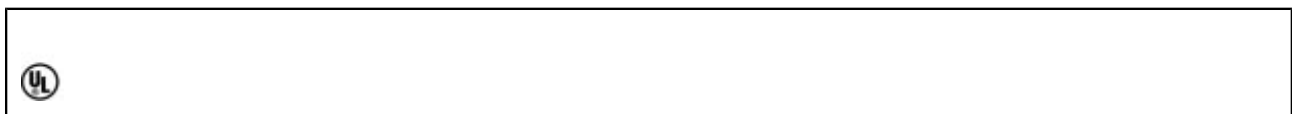
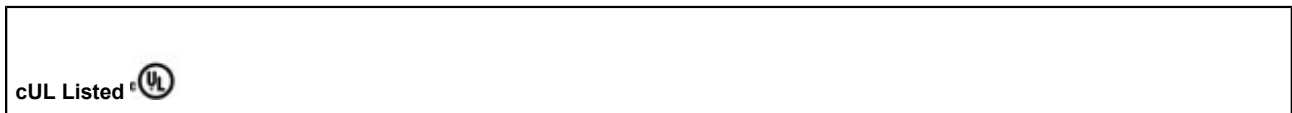
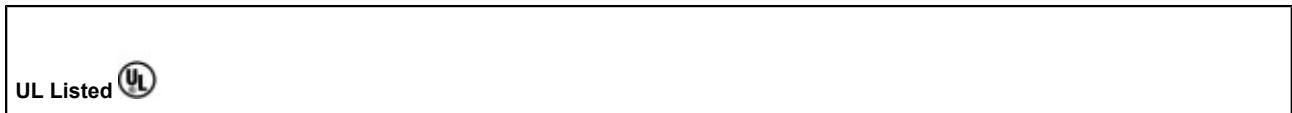
### UNSPSC

<b>UNSPSC 6.01</b>	30211502
<b>UNSPSC 7.0901</b>	39121004
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<b>UNSPSC 13.2</b>	39121004

## approvals

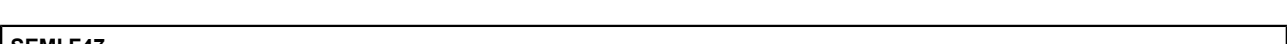
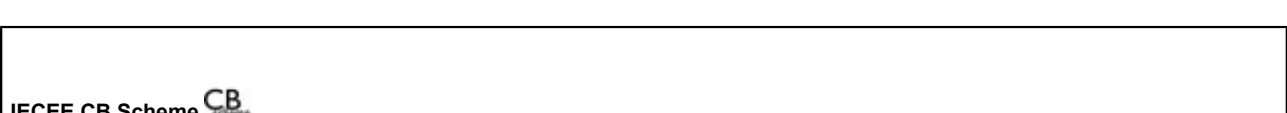
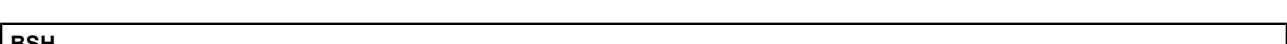
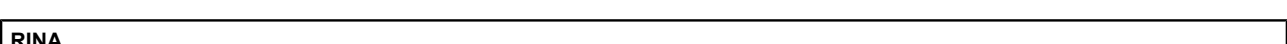
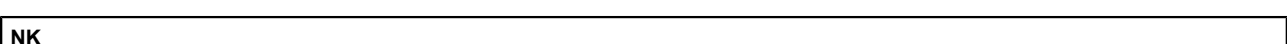
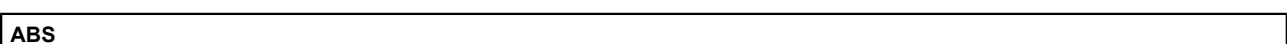
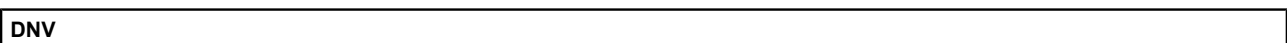
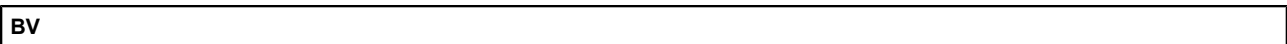
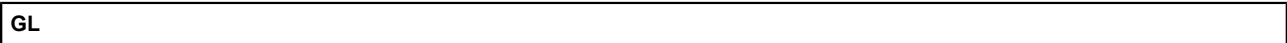
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### Approval details



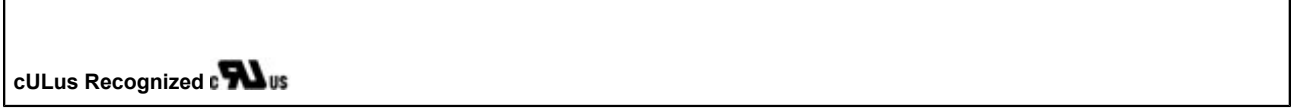
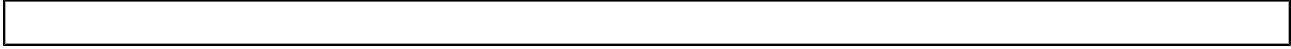
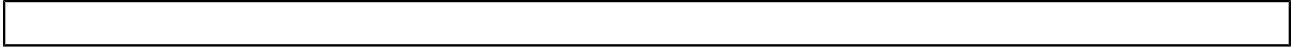
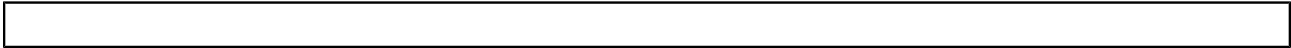
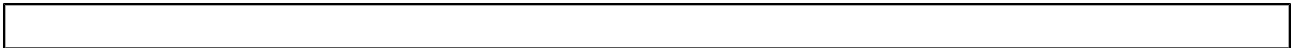
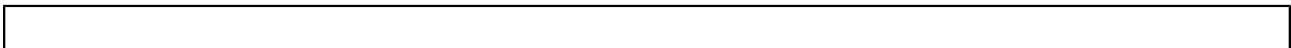
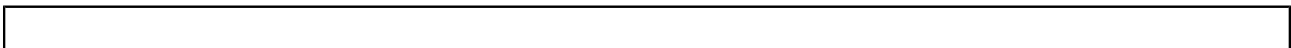
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approvals



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approvals



## Power supply unit - QUINT-PS/ 3AC/24DC/10 - 2866705

accessories

### Mounting rail adapter

UTA 107 - 2853983



### Assembly adapter

UWA 182/52 - 2938235



QUINT-PS-ADAPTERS7/2 - 2938206



### Fan

QUINT-PS/FAN/4 - 2320076



### Redundancy module

QUINT-DIODE/12-24DC/2X20/1X40 - 2320157





## Power supply unit - QUINT-PS/ 3AC/24DC/10 - 2866705

accessories

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QUINT-ORING/24DC/2X10/1X20 - 2320173



TRIO-DIODE/12-24DC/2X10/1X20 - 2866514



### Thermomagnetic device circuit breakers

CB TM1 1A SFB P - 2800836



CB TM1 2A SFB P - 2800837



CB TM1 3A SFB P - 2800838



# Power supply unit - QUINT-PS/ 3AC/24DC/10 - 2866705

accessories

CB TM1 4A SFB P - 2800839



CB TM1 5A SFB P - 2800840



## Drawings

Block diagram

