

## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

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Primary-switched QUINT POWER power supply for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, input: 1-phase, output: 24 V DC/40 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.

### Your advantages

- ✓ For superior system availability
- ✓ Fast tripping of standard circuit breakers with dynamic power reserve SFB (selective fuse breaking) technology with up to 6 times the nominal current for 12 ms
- ✓ Reliable starting of difficult loads with the static POWER BOOST power reserve with up to 1.5 times the nominal current permanently
- ✓ Preventive function monitoring



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 421720
GTIN	4046356421720
Weight per Piece (excluding packing)	3,798.800 g
Custom tariff number	85044030
Country of origin	Thailand

### Technical data

#### Dimensions

Width	180 mm
Height	130 mm
Depth	125 mm

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## Technical data

### Dimensions

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

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2.5 %/K)
Ambient temperature (start-up type tested)	-40 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	4000 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)
Dielectric strength maximum	300 V AC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Discharge current to PE	< 3.5 mA
Current consumption	8.8 A (120 V AC)
	4.6 A (230 V AC)
	9.5 A (110 V DC)
	4.7 A (220 V DC)
Nominal power consumption	1157 VA
Inrush surge current	< 15 A (typical)
Mains buffering	> 35 ms (120 V AC)
	> 35 ms (230 V AC)
Input fuse	20 A (slow-blow, internal)
Choice of suitable circuit breakers	16 A ... 20 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 ±1 %
Setting range of the output voltage ( $U_{Set}$ )	18 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current ( $I_N$ )	40 A (-25 °C ... 60 °C, $U_{OUT} = 24$ V DC)
POWER BOOST ( $I_{Boost}$ )	45 A (-25 °C ... 40 °C permanent, $U_{OUT} = 24$ V DC)
Selective Fuse Breaking ( $I_{SFB}$ )	215 A (12 ms)

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## Technical data

### Output data

Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Feedback resistance	max. 35 V DC
Protection against surge voltage on the output	< 35 V DC
Residual ripple	< 30 mV <sub>PP</sub> (with nominal values)
Output power	960 W
Typical response time	< 0.7 s
Maximum power dissipation in no-load condition	14 W
Power loss nominal load max.	80 W

### General

Net weight	3.3 kg
Efficiency	> 92 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage input / PE	3.5 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage output / PE	500 V DC (routine test)
Protection class	I
Degree of protection	IP20
MTBF (IEC 61709, SN 29500)	> 900000 h (25 °C)
	> 530000 h (40 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: P <sub>N</sub> ≥ 50%, 5 mm horizontally, 15 mm next to active components, 50 mm vertically alignable: P <sub>N</sub> < 50%, 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom

### 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
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>

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## Technical data

### Connection data, output

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	M4

### Connection data for signaling

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
Screw thread	M3

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CSA
Standards/regulations	EN 61000-4-2
Contact discharge	4 kV (Test Level 2)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1.4 GHz ... 2 GHz
Test field strength	3 V/m (Test Level 2)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-6-3
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
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 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
	DIN VDE 0106-101

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### Standards and Regulations

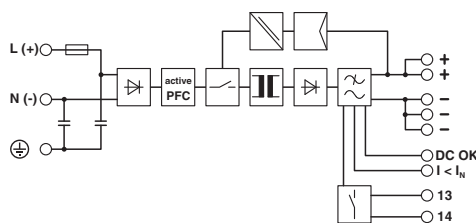
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	BG (design tested)
Shipbuilding approval	DNV GL (EMC A), ABS, LR, RINA, NK, BV
UL approvals	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)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 2.3g, 90 min.
Information technology equipment - safety (CB scheme)	CB Scheme
Rail applications	EN 50121-4
Overvoltage category (EN 62477-1)	III

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Block diagram



## Classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27049002
eCl@ss 5.1	27049000
eCl@ss 6.0	27049000
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

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## Classifications

### ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC002540
ETIM 6.0	EC002540

### UNSPSC

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

## Approvals

### Approvals

#### Approvals

DNV GL / CSA / BV / LR / NK / ABS / RINA / UL Listed / UL Recognized / cUL Recognized / IECCE CB Scheme / cUL Listed / SEMI F47 / EAC / EAC / cULus Recognized / cULus Listed

#### Ex Approvals


UL Listed / cUL Listed / cULus Listed

## Approval details

DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAE000014W
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CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	2261820
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BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	21004-B0 BV
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LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	08/20069 E3
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## Approvals

NK		<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	08A039
ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	15-HG1375463-1-PDA
RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE316517XG
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	SI-5547
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
SEMI F47			SEMI F47
EAC			EAC-Zulassung
EAC			RU C-DE.A*30.B.01082

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## Approvals

cULus Recognized	
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cULus Listed	
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## Accessories

### Accessories

#### Assembly adapter

Assembly adapters - UWA 130 - 2901664



2-piece universal wall adapter for securely mounting the power supply in the event of strong vibrations. The profiles that are screwed onto the side of the power supply are screwed directly onto the mounting surface. The universal wall adapter is attached on the left/right.

Assembly adapters - UWA 182/52 - 2938235



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

## Device protection

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



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

Type 3 surge protection device - PLT-SEC-T3-24-FM-UT - 2907916



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 24 V AC/DC.



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### Accessories

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#### Fan

Fan - QUINT-PS/FAN/4 - 2320076



The fan for QUINT-PS/1AC and .../3AC can be mounted without the need for tools or other accessories. By using the fan, optimum cooling is ensured at high ambient temperatures or if the mounting position is rotated.

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#### Mounting rail adapter

DIN rail adapter - UTA 107 - 2853983

Universal DIN rail adapter



#### Redundancy module

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



DIN rail diode module 12-24 V DC/2x20 A or 1x40 A. Uniform redundancy up to the consumer.

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Redundancy module, with protective coating - QUINT-ORING/24DC/2X20/1X40 - 2320186



Active QUINT redundancy module for DIN rail mounting with ACB (Auto Current Balancing) Technology and monitoring functions, input: 24 V DC/2x 20 A, output: 24 V DC/1 x 40 A, including mounted UTA 107/30 universal DIN rail adapter

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#### Thermomagnetic device circuit breakers

Thermomagnetic device circuit breaker - CB TM1 1A SFB P - 2800836



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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### Accessories

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Thermomagnetic device circuit breaker - CB TM1 2A SFB P - 2800837



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 3A SFB P - 2800838



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 4A SFB P - 2800839



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 5A SFB P - 2800840



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 6A SFB P - 2800841



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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## Power supply unit - QUINT-PS/1AC/24DC/40 - 2866789

### Accessories

Thermomagnetic device circuit breaker - CB TM1 8A SFB P - 2800842



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 10A SFB P - 2800843



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 12A SFB P - 2800844



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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Thermomagnetic device circuit breaker - CB TM1 16A SFB P - 2800845



Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

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