

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Primary-switched power supply unit, QUINT POWER, Screw connection, DIN rail mounting, SFB Technology (Selective Fuse Breaking), input: 1-phase, output: 24 V DC / 10 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. In addition, the high system availability is ensured by preventive function monitoring which reports critical operating states before errors can occur.

Reliable starting of heavy loads takes place via the static power reserve POWER BOOST. Thanks to the adjustable voltage, all ranges between 18 V DC ... 29.5 V DC are covered.

## Your advantages

- ✓ For superior system availability
- ✓ Reliable starting of difficult loads with the static POWER BOOST power reserve with up to 1.5 times the nominal current permanently
- ✓ 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
- ✓ Preventive function monitoring
- ✓ Optimum protection with dip coating for 100 % humidity



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356520027
Weight per Piece (excluding packing)	1,100.000 g
Custom tariff number	85044030
Country of origin	Thailand
Sales Key	CMQ13

## Technical data

### Dimensions

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

## 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
Installation distance right/left	5 mm / 5 mm
Installation distance top/bottom	50 mm / 50 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (> 60 °C Derating: 2.5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	100 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	≤ 5000 m

### Input data

Nominal input voltage range	100 V AC ... 240 V AC
	110 V DC ... 250 V DC
Input voltage range	85 V AC ... 264 V AC
	90 V DC ... 410 V DC +5 % (UL 508: ≤ 250 V DC)
Dielectric strength maximum	300 V AC
AC frequency range	50 Hz ... 60 Hz
Discharge current to PE	< 3.5 mA
Current consumption	4 A (100 V AC)
	1.7 A (240 V AC)
	2.2 A (120 V AC)
	1.3 A (230 V AC)
	2.5 A (110 V DC)
	1.2 A (220 V DC)
	3.4 A (110 V DC)
	1.5 A (250 V DC)
Nominal power consumption	303 VA
Inrush current	< 15 A
Mains buffering time	typ. 36 ms (120 V AC)
	typ. 36 ms (230 V AC)
Input fuse	10 A (slow-blow, internal)
Recommended breaker for input protection	10 A ... 20 A (AC: Characteristics B, C, D, K)

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

## Technical data

### Input data

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 ( $U_{Set}$ )	18 V DC ... 29.5 V DC (> 24 V DC, constant capacity)
Nominal output current ( $I_N$ )	10 A (-25 °C ... 60 °C, $U_{OUT} = 24$ V DC)
POWER BOOST ( $I_{Boost}$ )	15 A (-25 °C ... 40 °C permanent, $U_{OUT} = 24$ V DC )
Selective Fuse Breaking ( $I_{SFB}$ )	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
Feedback voltage resistance	$\leq 35$ V DC
Protection against overvoltage at the output (OVP)	$\leq 32$ V DC
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage $\pm 10\%$ )
Residual ripple	< 50 mV <sub>PP</sub> (with nominal values)
Output power	240 W
Typical response time	< 0.15 s
Maximum power dissipation in no-load condition	9.1 W
Power loss nominal load max.	22 W

### General

Net weight	1.1 kg
Efficiency	typ. 92.5 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 940000 h (25 °C)
	> 530000 h (40 °C)
	> 230000 h (60 °C)
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)
Degree of protection	IP20
Protection class	I
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: $P_N \geq 50\%$ , 5 mm horizontally, 15 mm next to active components, 50 mm vertically alignable: $P_N < 50\%$ , 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

## Technical data

### Connection data, input

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

### Connection data, output

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

### Connection data for signaling

Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	16
Conductor cross section AWG max.	12
Screw thread	M3

### Standards

EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
HART FSK Physical Layer Test Specification Compliance	Output voltage U <sub>Out</sub> compliant
Standard - Electrical safety	IEC 61010-2-201 (SELV)
Standard - safety for equipment for measurement, control, and laboratory use	IEC 61010-1
Standard – Safety extra-low voltage	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

## Technical data

### Standards

Standard - Safe isolation	IEC 61010-2-201
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Equipment safety	BG (design tested)
Explosive atmosphere	EN 60079-15 (Zone 2)
Mains variation/undervoltage	SEMI F47-0706 Compliance Certificate
Rail applications	EN 50121-4
	EN 50121-3-2
Overvoltage category EN 61010-1	II ( $\leq 5000$ m)
Overvoltage category EN 62477-1	III ( $\leq 2000$ m)

### Conformance/approvals

UL approvals	UL/C-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)
CSA	CAN/CSA-C22.2 No. 60950-1-07
	CSA-C22.2 No. 107.1-01
SIQ	BG (type approved)
Shipbuilding approval	DNV GL (EMC B), ABS, LR, RINA, NK, BV
DeviceNet approval	DeviceNet™ Power Supply Conformance Tested

### EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electrostatic discharge	EN 61000-4-2
Contact discharge	8 kV (Test Level 4)
Discharge in air	15 kV (Test Level 4)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	20 V/m (Test Level 3)
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 GHz ... 3 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	4 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	2 kV (Test Level 4 - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

## Technical data

### EMC data

Input	2 kV (Test Level 3 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

### 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

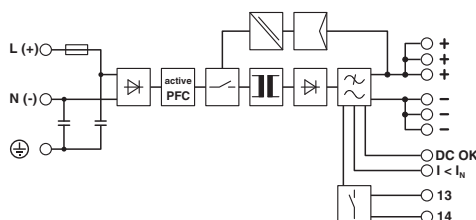
Pictogram



Pictogram



Block diagram



## Classifications

eCI@ss

eCI@ss 10.0.1	27040701
---------------	----------

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/ CO - 2320911

## Classifications

### eCl@ss

eCl@ss 11.0	27040701
eCl@ss 4.0	27040700
eCl@ss 4.1	27040700
eCl@ss 5.0	27049000
eCl@ss 5.1	27049000
eCl@ss 6.0	27049000
eCl@ss 7.0	27049002
eCl@ss 9.0	27040701

### ETIM

ETIM 4.0	EC000599
ETIM 6.0	EC002540
ETIM 7.0	EC002540

### UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004
UNSPSC 18.0	39121004
UNSPSC 19.0	39121004
UNSPSC 20.0	39121004
UNSPSC 21.0	39121004

## Approvals

### Approvals

---

#### Approvals

DNV GL / Type approved / CSA / BV / LR / NK / ABS / RINA / UL Listed / cUL Recognized / IECEx CB Scheme / cUL Listed / EAC / EAC / cULus Listed

---

#### Ex Approvals

INMETRO / ATEX / CCC / IECEx / UL Listed / cUL Listed / EAC Ex / NEPSI / cULus Listed

---

### Approval details

# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/CO - 2320911

## Approvals

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE000014W
Type approved			SI-SIQ BG 005/008
CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	1897786
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-C0 BV
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	08/20069 E4
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>	20-2022476-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
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-6154



# Power supply, with protective coating - QUINT-PS/1AC/24DC/10/ CO - 2320911

## Approvals

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
------------	--	---	---------------

EAC			EAC-Zulassung
-----	--	--	---------------

EAC			RU*DE*08.B.01873/19
-----	--	--	---------------------

cULus Listed			
--------------	--	--	--