Power supply unit - QUINT-PS/2AC/1DC/24DC/20 - 2320830

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Primary-switched DIN rail power supply unit. AC input: suitable for operation between two phases (400 V AC). DC input: suitable for operation in an FI intermediate circuit. Output: 24 V DC/20 A.

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.

Your advantages

- Compact buffer solution
- Fast tripping of standard circuit breakers
- Preventive function monitoring
- Reliable starting of difficult loads and easy system extension

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 580915
GTIN	4046356580915
Weight per Piece (excluding packing)	2,000.000 g
Custom tariff number	85044030
Country of origin	China

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Dimensions

Width	120 mm

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Dimensions

Height	130 mm
Depth	125 mm

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)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	≤ 2000 m

Input data

Nominal input voltage range	2x 400 V AC ... 500 V AC
	600 V DC
Input voltage range	2x 360 V AC ... 575 V AC
	450 V DC ... 840 V DC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Current consumption	2.5 A (400 V AC)
	2.1 A (500 V AC)
Nominal power consumption	888 VA
Inrush surge current	< 85 A (typical)
Mains buffering	typ. 20 ms (400 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable circuit breakers	10 A ... 16 A (Characteristic B, C)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1 %
Setting range of the output voltage (U_{Set})	18 V DC ... 29.5 V DC (U_{IN} ≥ 360 V AC / 480 V DC)
	18 V DC ... 26 V DC (< 480 V DC)
Nominal output current (I_N)	20 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	26 A (-25°C ... 40°C permanent, U_{OUT} = 24 V DC)
Selective Fuse Breaking (I_{SFB})	120 A (20 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
Feedback resistance	< 35 V DC
Protection against surge voltage on the output	Yes, limited to approx. 35 V DC
Max. capacitive load	Unlimited

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Output data

Active current limitation	Approx. 27 A
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 50 mV_{PP} (with nominal values)
Output power	480 W
Peak switching voltages nominal load	< 50 mV_{PP} (20 MHz)
Maximum power dissipation in no-load condition	11 W
Power loss nominal load max.	51 W

General

Net weight	2 kg
Efficiency	> 92 % (600 V DC)
	> 90.5 % (400 V AC)
Insulation voltage input/output	1.5 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage input / PE	4 kV AC (type test)
	1.5 kV AC (routine test)
Insulation voltage output / PE	500 V DC (routine test)
Protection class	I
Degree of protection	IP20
	> 860000 h (40 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: P_N ≥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

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	6 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	10
Stripping length	8 mm
Screw thread	M3

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	6 mm²

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Technical data

Connection data, output

Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
Conductor cross section AWG min.	12
Conductor cross section AWG max.	10
Stripping length	8 mm
Screw thread	M3

Connection data for signaling

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	6 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	4 mm²
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
Connection in acc. with standard	CUL
Standard - Safety of transformers	EN 61558-2-17
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
	EN 61558-2-17
Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1
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.
Rail applications	EN 50121-4

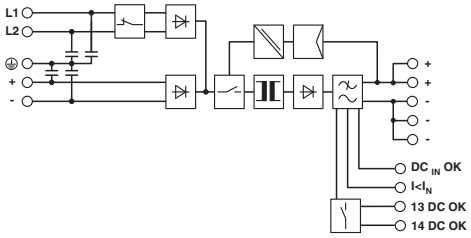
Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

Drawings

Power supply unit - QUINT-PS/2AC/1DC/24DC/20 - 2320830

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

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002540
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

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UL Listed / UL Recognized / cUL Recognized / cUL Listed / EAC / cULus Recognized / cULus Listed

Ex Approvals

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Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
EAC			EAC-Zulassung
cULus Recognized			
cULus Listed			

Accessories

Accessories

Device protection

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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