

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

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 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.



Key commercial data

Packing unit	1 pc
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
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

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

Technical data

Ambient conditions

Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Maximum altitude	≤ 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
Inrush surge current	< 85 A (typical)
Power failure bypass	> 20 ms (400 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable fuses	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	18 V DC ... 29.5 V DC ($U_{IN} \geq 360$ V AC / 480 V DC)
	18 V DC ... 26 V DC (< 480 V DC)
Nominal output current	20 A (-25 °C ... 60 °C)
POWER BOOST	26 A (-25 °C ... 40 °C permanent, $U_{OUT} = 24$ V DC)
SFB technology current reserve	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
Max. capacitive load	Unlimited
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 current	20 A (-25 °C ... 60 °C)
Output power	480 W
Peak switching voltages nominal load	< 50 mV _{PP} (20 MHz)
Maximum power dissipation NO-Load	11 W
Power loss nominal load max.	51 W

General

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

Technical data

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)
Protection class	I
	> 860000 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
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
Rail applications	EN 50121-4
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
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 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
Conductor cross section AWG min.	12

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

Technical data

Connection data, output

Conductor cross section AWG max.	10
Stripping length	8 mm
Screw thread	M3

Signaling

Output name	DC OK floating
Output description	$U_{OUT} > 0.9 \times U_N$: Relays closed
Maximum inrush current	≤ 100 mA (short-circuit resistant)
Status display	"DC OK" LED green
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	4 mm ²
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	POWER BOOST, active
Output description	$I_{OUT} < I_N$: High signal
Maximum inrush current	< 20 mA (short-circuit resistant)
Status display	"BOOST" LED yellow/ $I_{OUT} > I_N$: LED on
Output name	DC _{IN} OK, active
Output description	$U_{IN} > 450$ V DC: high signal
Maximum inrush current	< 20 mA (short-circuit resistant)
Status display	LED "DC _{IN} OK" green / $U_{IN} > 450$ V DC: LED on

Classifications

eCl@ss

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

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

Classifications

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

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

Ex Approvals

Approvals submitted

Approval details

UL Recognized 

UL Listed 

cUL Recognized 

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

Approvals

cUL Listed 

EAC

cULus Recognized 

cULus Listed 

Drawings

Block diagram

