

# QUINT-PS/ 1AC/24DC/40


Order No.: 2866789



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24 V DC/40 A DIN rail power supply unit, primary-switched, single-phase. SFB (selective fuse breaking) technology can be also used to trigger standard circuit breakers quickly and reliably.



Commercial data	
EAN	4  046356 421720
Pack	1
Customs tariff	85044081
Country of Origin	TH
Catalog page information	Page 583 (IF-2011)

### Product notes

WEEE/RoHS-compliant since:  
17/06/2008



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### Product description

QUINT POWER power supply units – Maximum 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.

## Technical data

### Input data

Nominal input voltage	100 V AC ... 240 V AC
	120 V DC ... 300 V DC (UL 508: ≤ 250 V DC)
AC input voltage range	85 V AC ... 264 V AC
DC input voltage range	90 V DC ... 300 V DC (UL 508: ≤ 250 V DC)
Short-term input voltage	max. 300 V AC
AC frequency range	45 Hz ... 65 Hz
DC frequency range	0 Hz
Current consumption	Approx. 8.8 A (120 V AC)
	Approx. 4.6 A (230 V AC)
	Approx. 8.8 A (120 V DC)
	Approx. 4.2 A (250 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 20 ms (120 V AC)
	> 20 ms (230 V AC)
Input fuse	20 A (fast blow, internal)
Permissible backup fuse	B16
	B25
Additional text	AC: 1 x circuit breaker - recommended fuse
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 (> 24 V constant capacity)
Output current	40 A (-25°C ... 60°C, U <sub>OUT</sub> = 24 V DC)
	45 A (with POWER BOOST, -25°C ... 40°C permanently, U <sub>OUT</sub> = 24 V DC)
	215 A (SFB technology, 12 ms)
	45 A (U <sub>In</sub> ≥ 100 V AC, ≥ 120 V DC)
Magnetic fuse tripping	B25
	C13
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased power (see data sheet Section 15/Parallel operation function)

Connection in series	Yes
Residual ripple	< 30 mV <sub>PP</sub> (with nominal values)
Maximum power dissipation idling	14 W
Power loss nominal load max.	80 W

#### General data

Width	180 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
	183 mm
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)
Degree of protection	IP20
Protection class	I
MTBF (IEC 61709, SN 29500)	> 500000 h (According to IEC 61709)
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, no condensation)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: 5 mm horizontally, 15 mm next to active components, 5 cm 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
Standard - Safety of transformers	IEC 61558-2-17
Standard - Electrical safety	IEC 60950-1/VDE 0805 (SELV)
Shipbuilding approval	Germanischer Lloyd (EMC 1)
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 (PELV)
Standard - Safe isolation	DIN VDE 0100-410 DIN VDE 0106-101

Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard – Equipment safety	BG (design tested)
Certificate	CB Scheme
UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950
Surge voltage category	III

#### 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 stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	14
Conductor cross section AWG/kcmil 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>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section stranded min.	0.5 mm <sup>2</sup>
Conductor cross section stranded max.	16 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	8
Conductor cross section AWG/kcmil max	6
Stripping length	10 mm

#### Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$ : High signal
Maximum switching voltage	+ 24 V DC
Output voltage	+ 24 V DC
Maximum inrush current	≤ 20 mA (short-circuit resistant)

Continuous load current	$\leq 20 \text{ mA}$
Status display	$U_{\text{OUT}} > 0.9 \times U_{\text{N}}$ : "DC OK" LED green
Note on status display	$U_{\text{OUT}} < 0.9 \times U_{\text{N}}$ : Flashing "DC OK" LED
	$I_{\text{OUT}} < I_{\text{N}}$ : LED ON
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	10
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Screw thread	M3
Output name	DC OK floating
Output description	Relay contact, $U_{\text{OUT}} > 0.9 \times U_{\text{N}}$ : Contact closed
Maximum switching voltage	$\leq 30 \text{ V AC/DC}$
Maximum inrush current	$\leq 1 \text{ A}$
Continuous load current	$\leq 1 \text{ A}$
Status display	$U_{\text{OUT}} > 0.9 \times U_{\text{N}}$ : "DC OK" LED green
Note on status display	$U_{\text{OUT}} < 0.9 \times U_{\text{N}}$ : Flashing "DC OK" LED
Output name	POWER BOOST, active
Output description	$I_{\text{OUT}} < I_{\text{N}}$ : High signal
Maximum switching voltage	+ 24 V DC
Output voltage	+ 24 V DC
Maximum inrush current	$\leq 20 \text{ mA}$ (short-circuit resistant)
Continuous load current	$\leq 20 \text{ mA}$
Status display	$I_{\text{OUT}} > I_{\text{N}}$ : LED "BOOST" yellow

### Certificates



Certification CB, CSA, CUL, GOST, UL, UL Listed

Certification Ex: CUL-EX LIS, UL-EX LIS

Certifications applied for: GL / LR / NV / BV / NK / ABS

### Accessories

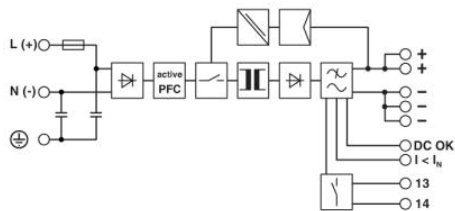
Item	Designation	Description
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#### General

2853983	UTA 107	Universal DIN rail adapter, for screwing on switchgear
2938235	UWA 182/52	Universal wall adapter

### Drawings

Block diagram



**Address**

PHOENIX CONTACT Ltd  
Halesfield 13  
Telford / Shropshire / TF7 4PG,England  
Phone 01952 681 700  
Fax 01952 681 799  
<http://www.phoenixcontact.co.uk>



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