

QUINT4-PS/1AC/24DC/40 - Power supply unit



2904603

<https://www.phoenixcontact.com/in/products/2904603>

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Primary-switched QUINT POWER power supply with free choice of output characteristic curve, SFB (selective fuse breaking) technology, and NFC interface, input: 1-phase, output: 24 V DC/40 A

Product description

The fourth generation of the high-performance QUINT POWER power supplies ensures superior system availability by means of new functions. Signaling thresholds and characteristic curves can be individually adjusted via the NFC interface. The unique SFB technology and preventive function monitoring of the QUINT POWER power supply increase the availability of your application.

Your advantages

- Most powerful output side: easy system expansion, reliable heavy load startup and miniature circuit breaker tripping
- Most robust input side: high noise immunity, thanks to integrated gas-filled surge arrester (up to 6 kV) and ≥ 20 ms mains failure buffer time
- Most comprehensive signaling: preventive function monitoring reports critical operating states before errors occur
- Available pre-configured: from a batch quantity of just 1

Commercial data

Item number	2904603
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CMP
Product key	CMPI13
Catalog page	Page 235 (C-4-2019)
GTIN	4055626355092
Weight per piece (including packing)	3,250 g
Weight per piece (excluding packing)	2,887 g
Customs tariff number	85044095
Country of origin	TH

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Technical data

Input data

Control input (configurable) Rem	Output power ON/OFF (SLEEP MODE)
Default	Output power ON (>40 k Ω /24 V DC/open bridge between Rem and SGnd)

AC operation

Network type	Star network
Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
Electric strength, max.	300 V AC 60 s
Typical national grid voltage	120 V AC 230 V AC
Voltage type of supply voltage	AC/DC
Inrush current	typ. 12 A (at 25 °C)
Inrush current integral (I^2t)	< 1 A ² s
Inrush current limitation	12 A (after 1 ms)
Frequency range (f_N)	50 Hz ... 60 Hz -10 % ... +10 % 16.7 Hz (acc. to EN 50163)
Mains buffering time	typ. 29 ms (120 V AC) typ. 32 ms (230 V AC)
Current consumption	13.6 A (100 V AC) 10 A (120 V AC) 5.2 A (230 V AC) 5.4 A (240 V AC)
Input fuse	16 A (slow-blow, internal)
Recommended breaker for input protection	16 A ... 20 A (Characteristic B, C, D, K or comparable)
Discharge current to PE	< 3.5 mA 1.7 mA (264 V AC, 60 Hz)

DC operation

Nominal input voltage range	110 V DC ... 250 V DC
Input voltage range	110 V DC ... 250 V DC -18 % ... +40 %
Voltage type of supply voltage	DC
Current consumption	12 A (110 V DC) 5 A (250 V DC)

Output data

Efficiency	typ. 94.8 % (120 V AC) typ. 95.9 % (230 V AC)
Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	24 V DC ... 29.5 V DC (constant capacity)
Nominal output current (I_N)	40 A

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Static Boost ($I_{\text{Stat.Boost}}$)	45 A
Dynamic Boost ($I_{\text{Dyn.Boost}}$)	60 A (5 s)
Selective Fuse Breaking (I_{SFB})	215 A (15 ms)
Magnetic circuit breaker tripping	A1...A40 / B2...B25 / C1...C13 / Z1...Z16
Derating	> 60 °C ... 70 °C (2.5 %/K)
Feedback voltage resistance	≤ 35 V DC
Protection against overvoltage at the output (OVP)	≤ 32 V DC
Control deviation	< 0.5 % (Static load change 10 % ... 90 %)
	< 1 % (Dynamic load change 10 % ... 90 %, (10 Hz))
	< 0.25 % (change in input voltage ±10 %)
Residual ripple	< 50 mV _{PP} (with nominal values)
Short-circuit-proof	yes
No-load proof	yes
Output power	960 W
	1080 W
	1440 W
Maximum no-load power dissipation	< 4 W (120 V AC)
	< 4 W (230 V AC)
Power loss nominal load max.	< 50 W (120 V AC)
	< 50 W (230 V AC)
Power dissipation SLEEP MODE	< 3 W (120 V AC)
	< 3 W (230 V AC)
Crest factor	typ. 1.5 (120 V AC)
	typ. 1.6 (230 V AC)
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes

Signal

Signal ground SGnd	Reference potential for Out1, Out2, and Rem
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Signal Out 1 (configurable)

Digital	24 V DC 20 mA
Default	24 V DC 20 mA 24 V DC for $U_{\text{Out}} > 0.9 \times U_{\text{Set}}$

Signal Out 2 (configurable)

Digital	24 V DC 20 mA
Analog	4 mA ... 20 mA ±5 % (Load ≤400 Ω)
Default	24 V DC 20 mA 24 V DC for $P_{\text{Out}} < P_{\text{N}}$

Signal relay 13/14 (configurable)

Default	closed ($U_{\text{out}} > 0.9 U_{\text{Set}}$)
Digital	24 V DC 1 A
	30 V AC/DC 0.5 A

Connection data