

QUINT4-PS/3AC/24DC/20 - Power supply unit



2904622

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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: 3-phase, output: 24 V DC/20 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

- SFB technology trips standard circuit breakers selectively, loads that are connected in parallel continue working
- Preventive function monitoring indicates critical operating states before errors occur
- Signaling thresholds and characteristic curves that can be adjusted via NFC maximize system availability
- Easy system extension thanks to static boost; starting of difficult loads thanks to dynamic boost
- High degree of immunity, thanks to integrated gas-filled surge arrester and mains failure bridging time of more than 20 milliseconds
- Robust design thanks to metal housing and wide temperature range from -40°C to +70°C
- Worldwide use thanks to the wide range input and international approval package

Commercial data

Item number	2904622
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CMP
Product key	CMPI33
Catalog page	Page 237 (C-4-2019)
GTIN	4046356986885
Weight per piece (including packing)	1,581.433 g
Weight per piece (excluding packing)	1,203 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	3x 400 V AC ... 500 V AC 2x 400 V AC ... 500 V AC
Input voltage range	3x 400 V AC ... 500 V AC -20 % ... +10 % 2x 400 V AC ... 500 V AC -10 % ... +10 %
Typical national grid voltage	400 V AC 480 V AC
Voltage type of supply voltage	AC
Inrush current	typ. 2 A (at 25 °C)
Inrush current integral (I^2t)	< 0.1 A ² s
Inrush current limitation	2 A (after 1 ms)
AC frequency range	50 Hz ... 60 Hz -10 % ... +10 %
Frequency range (f_N)	50 Hz ... 60 Hz -10 % ... +10 %
Mains buffering time	typ. 33 ms (3x 400 V AC) typ. 33 ms (3x 480 V AC)
Current consumption	3x 0.99 A (400 V AC) 3x 0.81 A (480 V AC) 2x 1.62 A (400 V AC) 2x 1.37 A (480 V AC) 3x 0.8 A (500 V AC) 2x 1.23 A (500 V AC)
Nominal power consumption	541 VA
Protective circuit	Transient surge protection; Varistor, gas-filled surge arrester
Power factor (cos phi)	0.94
Switch-on time	< 1 s
Typical response time	300 ms (from SLEEP MODE)
Recommended breaker for input protection	3x 4 A ... 20 A (Characteristic B, C or comparable)
Recommended fuse for input protection	\geq 300 V AC
Discharge current to PE	< 3.5 mA 1.7 mA (550 V AC, 60 Hz)

DC operation

Nominal input voltage range	\pm 260 V DC ... 300 V DC
Input voltage range	\pm 260 V DC ... 300 V DC -13 % ... +30 %
Voltage type of supply voltage	DC
Current consumption	1.23 A (\pm 260 V DC)

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	1.06 A (± 300 V DC)
Recommended breaker for input protection	1x 6 A (10 x 38 mm, 30 kA L/R = 2 ms)
Recommended fuse for input protection	≥ 1000 V DC

Output data

Efficiency	typ. 93.9 % (400 V AC)
	typ. 93.8 % (480 V AC)
Output characteristic	U/I Advanced
	Smart HICCUP
	FUSE MODE
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)	20 A
Static Boost ($I_{Stat.Boost}$)	25 A
Dynamic Boost ($I_{Dyn.Boost}$)	30 A (5 s)
Selective Fuse Breaking (I_{SFB})	120 A (15 ms)
Magnetic circuit breaker tripping	A1...A16 / B2...B13 / C1...C6 / 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 %)
	< 3 % (Dynamic load change 10 % ... 90 %, (10 Hz))
	< 0.25 % (change in input voltage ± 10 %)
Residual ripple	< 60 mV _{PP} (with nominal values)
Short-circuit-proof	yes
No-load proof	yes
Output power	480 W
	600 W
	720 W
Apparent power	686 VA (400 V, $U_{OUT} = 24$ V, $I_{OUT} = \text{stat. Boost}$)
	698 VA (480 V, $U_{OUT} = 24$ V, $I_{OUT} = \text{stat. Boost}$)
Maximum no-load power dissipation	< 7 W (400 V AC)
	< 7 W (480 V AC)
Power loss nominal load max.	< 32 W (400 V AC)
	< 33 W (480 V AC)
Power dissipation SLEEP MODE	< 5 W (400 V AC)
	< 5 W (480 V AC)
Crest factor	typ. 1.78 (400 V AC)
	typ. 2.1 (480 V AC)
Rise time	< 80 ms ($U_{Out} = 10$ % ... 90 %)
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes

Signal