Power supply unit - QUINT4-SYS-PS/1AC/24DC/2.5/SC - 2904614

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Primary-switched power supply unit, QUINT POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 2.5 A

Key Commercial Data

Packing unit	1 pc
GTIN	4 055626 255651
GTIN	4055626255651
Weight per Piece (excluding packing)	380.000 g
Custom tariff number	85044030
Country of origin	Vietnam

Technical data

Dimensions

Width	40 mm
Height	99 mm
Depth	114 mm
Installation distance right/left (active, passive)	0 mm / 0 mm (P_{Out} ≤50 %)
Installation distance right/left (passive)	5 mm / 5 mm (P_{Out} ≥50%)
Installation distance right/left (active)	15 mm / 15 mm (P_{Out} ≥50%)
Installation distance top/bottom (active, passive)	30 mm / 30 mm (P_{Out} ≤50 %)
Installation distance top/bottom (passive)	30 mm / 30 mm (P_{Out} ≥50%)
Installation distance top/bottom (active)	30 mm / 30 mm (P_{Out} ≥50%)

Ambient conditions

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Ambient conditions

Degree of protection	IP20
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (start-up type tested)	-40 °C
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	≤ 5000 m (> 2000 m, observe derating)

Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
	110 V DC ... 250 V DC -20 % ... +40 %
Dielectric strength maximum	300 V AC 30 s
Frequency range (f_N)	50 Hz ... 60 Hz ±10 %
	16.7 Hz (acc. to EN 50163)
Discharge current to PE	< 0.25 mA (264 V AC, 60 Hz)
Current consumption	0.85 A (100 V AC)
	0.7 A (120 V AC)
	0.39 A (230 V AC)
	0.37 A (240 V AC)
Inrush current	typ. 10 A (at 25 °C)
Mains buffering time	typ. 31 ms (120 V AC)
	typ. 31 ms (230 V AC)
Input fuse	4 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (Characteristic B, C, D, K or comparable)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	24 V DC ... 27 V DC (constant capacity)
Nominal output current (I_N)	2.5 A
Static Boost ($I_{Stat.Boost}$)	3.125 A (≤ 40°C)
Dynamic Boost ($I_{Dyn.Boost}$)	4 A (≤ 60 °C (on ≤ 5 s/off ≥ 5 s))
Feedback voltage resistance	≤ 32 V DC
Protection against overvoltage at the output (OVP)	≤ 30 V DC ±2 %

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Output data

Control deviation	< 0.5 % (Static load change 10 % ... 90 %)
	< 2 % (Dynamic load change 10 % ... 90 %, (10 Hz))
	< 0.25 % (change in input voltage ±10 %)
Residual ripple	< 40 mV_{PP} (with nominal values)
Output power	60 W
Typical response time	500 ms
Maximum no-load power dissipation	< 1 W (120 V AC)
	< 1 W (230 V AC)
Power loss nominal load max.	< 5 W (120 V AC)
	< 4 W (230 V AC)

General

Net weight	0.25 kg
Environmental protection directive	RoHS Directive 2011/65/EU
	WEEE
	Reach
Efficiency	typ. 93 % (120 V AC)
	typ. 94 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 2000000 h (25 °C)
	> 1161000 h (40 °C)
	> 514000 h (60 °C)
Insulation voltage input/output	4 kV AC (type test)
	3 kV AC (routine test)
Degree of protection	IP20
Protection class	II
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.14 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	14
Stripping length	8 mm

Connection data, output

Connection method	Screw connection

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Technical data

Connection data, output

Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.14 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	14
Stripping length	8 mm

Connection data for signaling

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.14 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	14
Stripping length	8 mm

Standards

EMC requirements, power plant	IEC 61850-3
	EN 61000-6-5
Standard - Safety of transformers	EN 61558-2-16
Standard - safety for equipment for measurement, control, and laboratory use	IEC 61010-1
Standard – Safety extra-low voltage	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)
Standard - Safe isolation	IEC 61558-2-16
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Rail applications	EN 50121-3-2
	EN 50121-4
	EN 50121-5
	IEC 62236-3-2
	IEC 62236-4
	IEC 62236-5
Overvoltage category EN 61010-1	II (≤ 5000 m)
Overvoltage category EN 62477-1	III (≤ 2000 m)

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

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Technical data

EMC data

Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)
Noise emission	EN 55016
	EN 61000-6-3 (Class B)
Harmonic currents	EN 61000-3-2
	EN 61000-3-2 (Class A)
Flicker	EN 61000-3-3
Electrostatic discharge	EN 61000-4-2
Contact discharge	8 kV (Test Level 4)
Discharge in air	15 kV (Test Level 4)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	20 V/m (Test Level X)
Frequency range	1 GHz ... 6 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	4 kV (Test Level 4 - asymmetrical)
Output	4 kV (Test Level X - asymmetrical)
Signal	4 kV (Test Level X - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5
Input	2 kV (Test Level 4 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A
Power frequency magnetic field	EN 61000-4-8
Frequency	16.67 Hz
	50 Hz
	60 Hz
Test field strength	100 A/m

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Technical data

EMC data

Additional text	60 s
Comments	Criterion A
Frequency	50 Hz
	60 Hz
Frequency range	50 Hz ... 60 Hz
Test field strength	1 kA/m
Additional text	3 s
Frequency	0 Hz
Test field strength	300 A/m
Additional text	DC, 60 s
Voltage dips	EN 61000-4-11
Voltage	100 V AC
Frequency	60 Hz
Voltage dip	70 %
Number of periods	0.5 / 1 / 30 periods
Additional text	Test Level 2
Comments	Criterion A
Voltage dip	40 %
Number of periods	5 / 10 / 50 periods
Additional text	Test Level 2
Comments	Criterion B
Voltage dip	0 %
Number of periods	0.5 / 1 / 5 / 50 periods
Additional text	Test Level 2
Comments	Criterion B
Pulse-shape magnetic field	EN 61000-4-9
Test field strength	1000 A/m
Comments	Criterion A
Attenuated sinusoidal oscillations (ring wave)	EN 61000-4-12
Input	2 kV (symmetrical)
	4 kV (asymmetrical)
Comments	Criterion A
Asymmetrical conducted disturbance variables	EN 61000-4-16
Test level 1	16.67 Hz 50 Hz 60 Hz 150 Hz 180 Hz (Test Level 3)
Voltage	30 V (10 s)
Test level 2	16.67 Hz 50 Hz 60 Hz (Test Level 2)
Voltage	300 V (1 s)

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Technical data

EMC data

Comments	Criterion A
Attenuated oscillating wave	EN 61000-4-18
Voltage	1 kV (symmetrical)
	2.5 kV (asymmetrical)
	1 kV (symmetrical)
Comments	Criterion A
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.
Criterion C	Temporary adverse effects on the operating behavior, which the device corrects automatically or which can be restored by actuating the operating elements.

Drawings

Pictogram

Block diagram

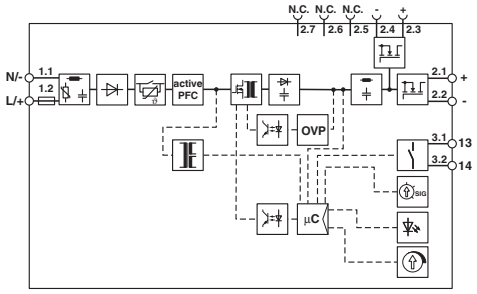

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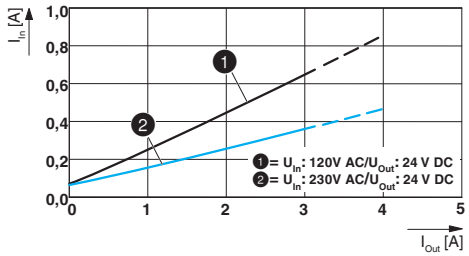
Diagram



Diagram

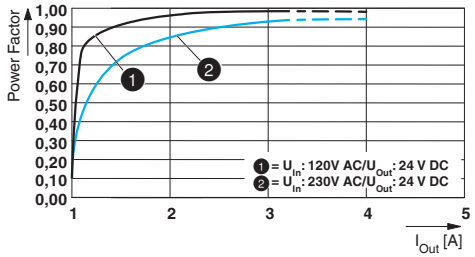


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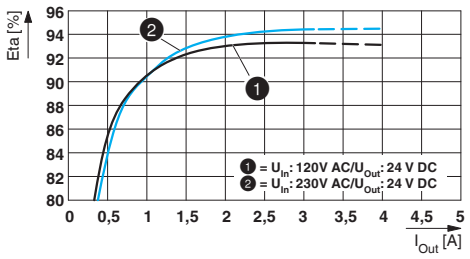
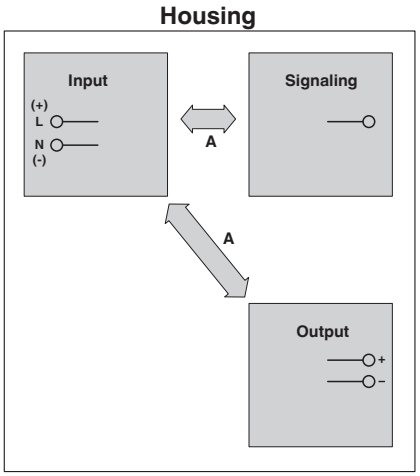
Diagram



Schematic diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 11.0	27040701
eCl@ss 5.1	27242213
eCl@ss 9.0	27040701

UNSPSC

UNSPSC 13.2	39121004
UNSPSC 18.0	39121004
UNSPSC 19.0	39121004
UNSPSC 20.0	39121004
UNSPSC 21.0	39121004

Approvals

Approvals

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cULus Listed / IECEE CB Scheme

Ex Approvals

ATEX / IECEx / cULus Listed

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Approvals

Approval details

cULus Listed	c UL us LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528

IECEE CB Scheme	CB scheme	http://www.iecee.org/	DK-116799-A1-UL

Accessories

Accessories

Device circuit breakers

Electronic circuit breaker - CBMC E4 24DC/1-10A NO - 2906032

Multi-channel electronic circuit breaker for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

Electronic circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Multi-channel electronic circuit breaker for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

Electronic circuit breaker - CBMC E4 24DC/1-4A NO-C - 2908713

Multi-channel electronic circuit breaker that can be preconfigured, for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

Device protection

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Accessories

Type 3 surge protection device - PLT-SEC-T3-230-FM-UT - 2907919

Type 2/3 surge protection, consisting of protective plug and base element with screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage: 230 V AC/DC

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

DIN rail connector

DIN rail bus connectors - ME 22,5 TBUS ADAPTER KMGY - 2201756

DIN rail bus adapter for ME and ME-MAX, design width: 22.5 mm, 5 parallel positions, color: light gray (similar to RAL 7035)

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 KMGY - 2713645

DIN rail connector, color: light gray, nominal current: 8 A (parallel contacts), rated voltage (III/2): 125 V, number of positions: 5, pitch: 3.81 mm, mounting: DIN rail mounting, Locking: without, mounting: without, type of packaging: packed in cardboard, Item with gold-plated contacts, bus connectors for connecting with electronics housings, 5 parallel contacts

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Screwdriver tools

Screwdriver - SF-SL 0,4X2,0-60 - 1212546

Screwdriver, flat bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip

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Accessories