

## Power supply unit - QUINT4-PS/1AC/24DC/3.8/PT - 2909577

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Primary-switched power supply unit, QUINT POWER, Push-in connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 3.8 A

### Product Description

In the power range of up to 100 W, QUINT POWER provides superior system availability in the smallest size. Preventative function monitoring and exceptional power reserves are available for applications in the low-power range.

### Your advantages

- ✓ Starting of heavy loads with dynamic boost
- ✓ Preventive function monitoring indicates critical operating states before errors occur
- ✓ High efficiency and long service life, with low power dissipation and low heating
- ✓ Space savings in the control cabinet, thanks to a narrow, slim-line design
- ✓ Free selection between Push-in and screw connection



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626356488

### Technical data

#### Dimensions

Width	45 mm
Height	106 mm
Depth	90 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	30 mm / 30 mm

#### Ambient conditions

Degree of protection	IP20
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0

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## Technical data

### Ambient conditions

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

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 <sub>N</sub> )	50 Hz ... 60 Hz -10 % ... +10 %
Discharge current to PE	< 0.25 mA (264 V AC, 60 Hz)
Current consumption	1 A (100 V AC) 0.83 A (120 V AC) 0.46 A (230 V AC) 0.44 A (240 V AC)
Nominal power consumption	104 VA
Inrush current	typ. 13 A (at 25 °C)
Mains buffering time	typ. 35 ms (120 V AC) typ. 35 ms (230 V AC)
Input fuse	3.15 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 <sub>Set</sub> )	24 V DC ... 28 V DC (constant capacity)
Nominal output current (I <sub>N</sub> )	3.8 A
Dynamic Boost (I <sub>Dyn.Boost</sub> )	7 A (≤ 60 °C (5 s))
Derating	> 60 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	yes
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)) < 0.2 % (change in input voltage ±10 %)
Residual ripple	< 45 mV <sub>pp</sub> (with nominal values)

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## Technical data

### Output data

Output power	90 W
Typical response time	500 ms
Maximum power dissipation in no-load condition	< 1 W (120 V AC)
	< 1 W (230 V AC)
Power loss nominal load max.	< 7 W (120 V AC)
	< 6 W (230 V AC)

### General

Net weight	0.296 kg
Efficiency	typ. 92.8 % (120 V AC)
	typ. 93.7 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 1272000 h (25 °C)
	> 690000 h (40 °C)
	> 271000 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
Assembly instructions	DIN rail mounting

### Connection data, input

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	10 mm

### Connection data, output

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	10 mm

### Connection data for signaling

Connection method	Push-in connection
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## Technical data

### Connection data for signaling

Conductor cross section solid min.	0.2 mm <sup>2</sup>
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Conductor cross section flexible min.	0.2 mm <sup>2</sup>
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Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	10 mm

### Standards

EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
Standard - Safety of transformers	EN 61558-2-16
Standard - Electrical safety	IEC 61010-2-201 (SELV)
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 - power supply devices for low voltage with DC output	EN 61204-3
Standard – Limitation of mains harmonic currents	EN 61000-3-2

### Conformance/approvals

UL approvals	UL Listed UL 61010-1
	UL Listed UL 61010-2-201
	UL 1310 Class 2 Power Units
	ANSI/UL 121201 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
SIQ	CB-Scheme (IEC 61010-1, IEC 61010-2-201)

### EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)
Noise emission	EN 55016
	EN 61000-6-3 (Class B)
Electrostatic discharge	EN 61000-4-2
Contact discharge	8 kV (Test Level 4)
Discharge in air	8 kV (Test Level 3)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	20 V/m (Test Level X)

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## Technical data

### EMC data

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 4 - asymmetrical)
Signal	4 kV (Test Level 4 - 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)
Signal	0.5 kV (Test Level 2 - symmetrical)
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
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

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## Technical data

### EMC data

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 (Test Level 3)
Voltage	30 V (Permanent)
Test level 2	16.67 Hz 50 Hz 60 Hz (Test Level 4)
Voltage	300 V (1 s)
Comments	Criterion A
Attenuated oscillating wave	EN 61000-4-18
Comments	Criterion B
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.

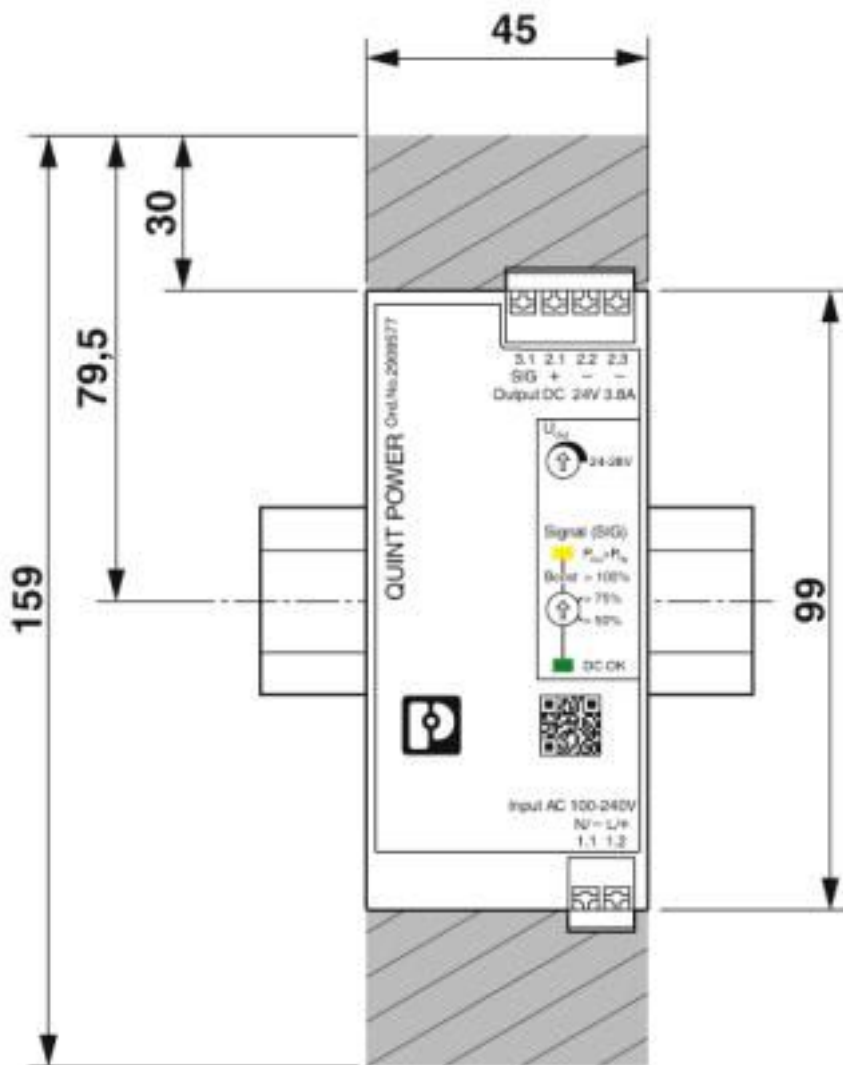
### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

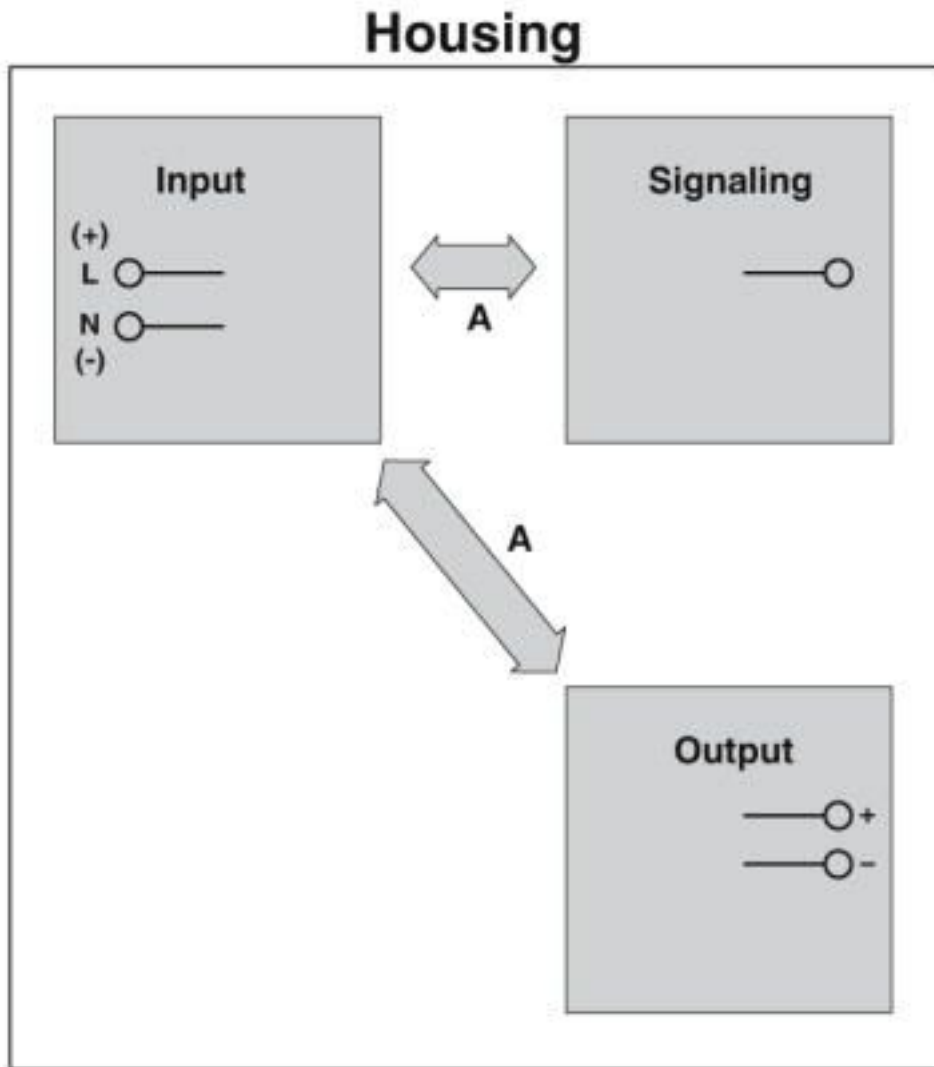
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Dimensional drawing

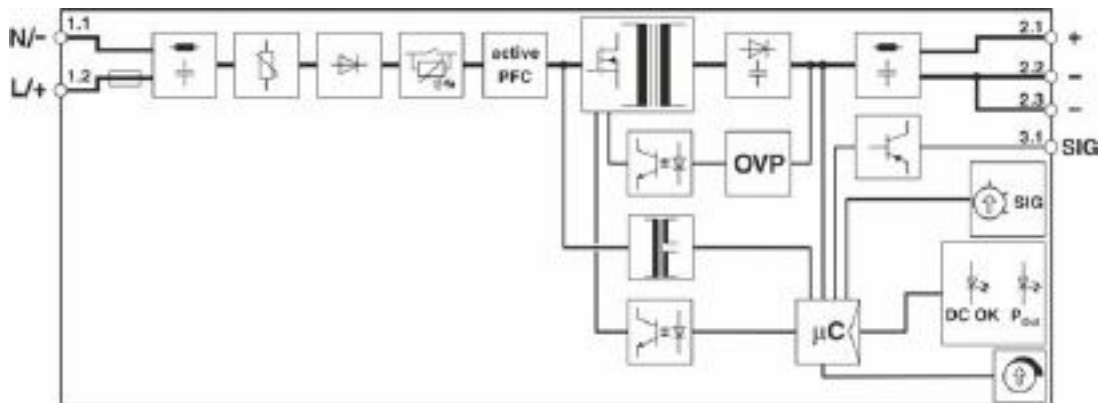


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Schematic diagram



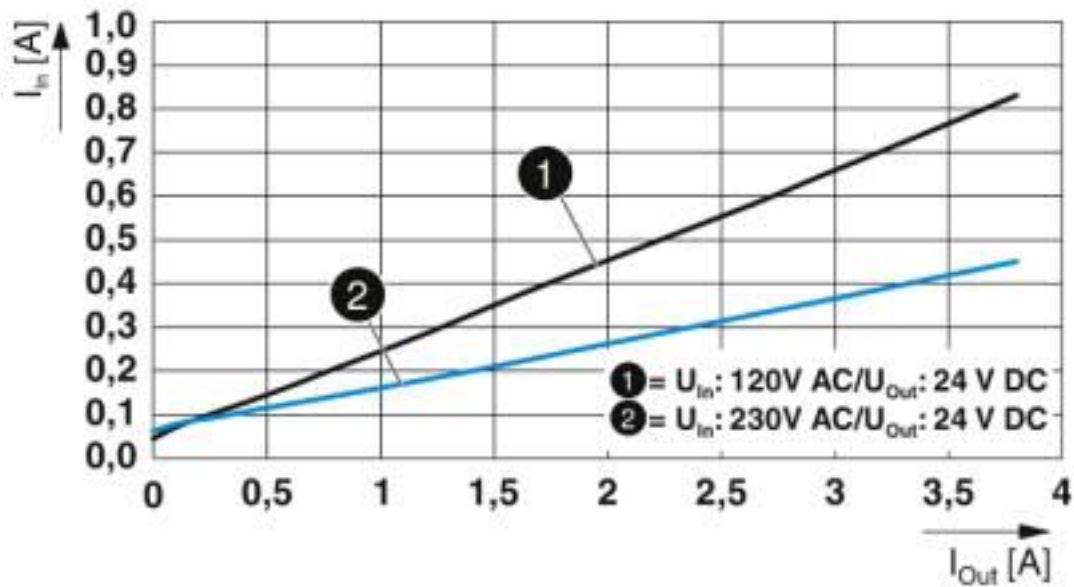
Block diagram



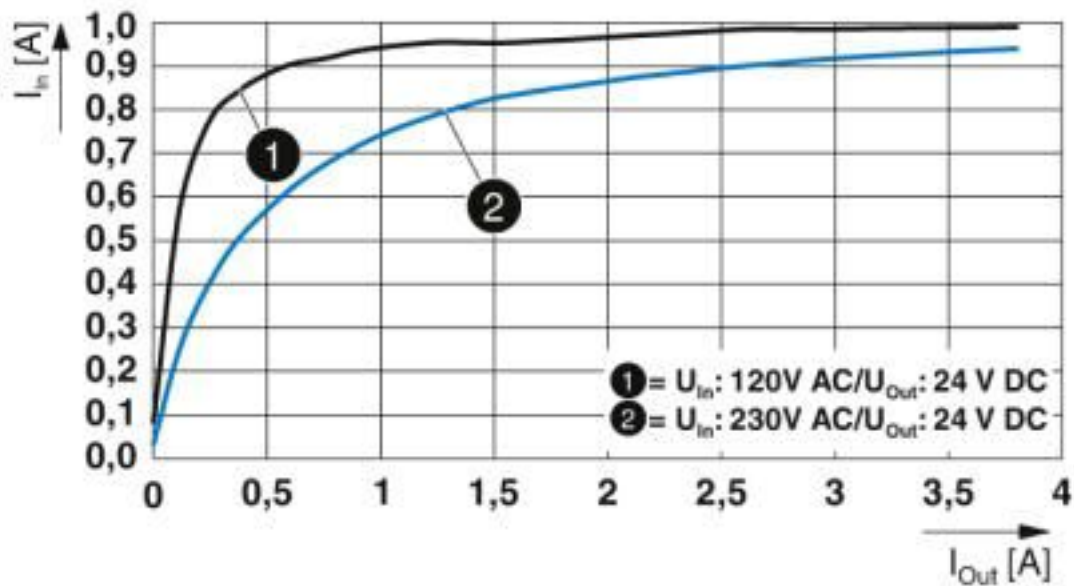


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Diagram

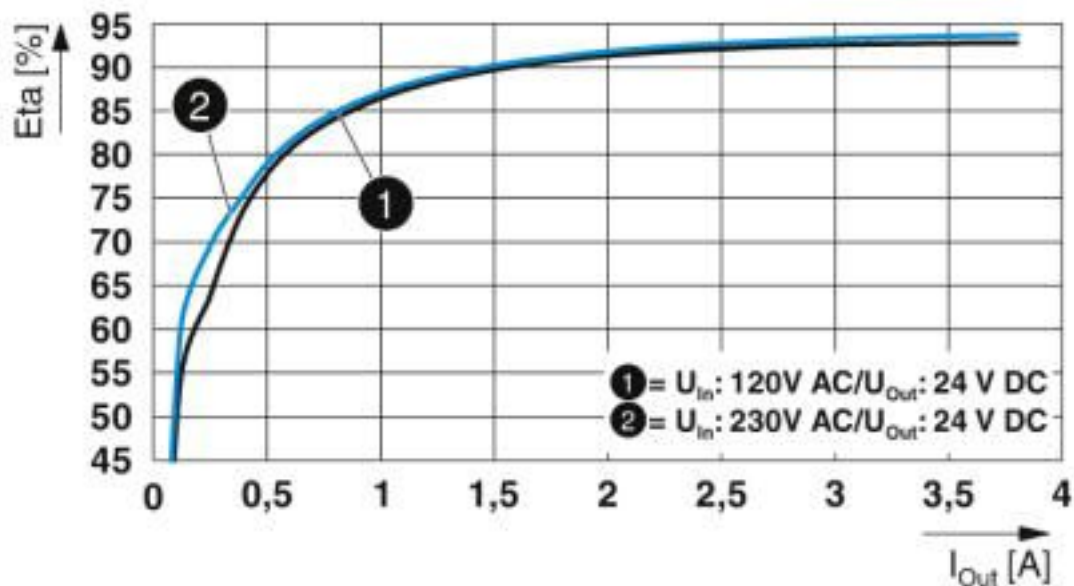


Diagram



## Power supply unit - QUINT4-PS/1AC/24DC/3.8/PT - 2909577

Diagram



### Classifications

#### eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 5.1	27242213
eCl@ss 6.0	27049000
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

#### ETIM

ETIM 6.0	EC002540
ETIM 7.0	EC002540

#### UNSPSC

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

### Approvals

#### Approvals

# Power supply unit - QUINT4-PS/1AC/24DC/3.8/PT - 2909577

## Approvals

### Approvals

UL Listed / IECCE CB Scheme / cUL Listed / EAC / cULus Listed

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### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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## Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	SI-6230
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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EAC			RU*DE*08.B.01873/19
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cULus Listed			
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## Accessories

### Accessories

#### Device circuit breakers

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



Multi-channel electronic device 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.

## Power supply unit - QUINT4-PS/1AC/24DC/3.8/PT - 2909577

### Accessories

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



Multi-channel electronic device 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.

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



Multi-channel electronic device 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.

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### Device protection

Type 3 surge protection device - PLT-SEC-T3-230-FM-PT - 2907928



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

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Type 3 surge protection device - PLT-SEC-T3-24-FM-PT - 2907925



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.

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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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