

## Power supply unit - UNO-PS/1AC/24DC/240W - 2904372

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Primary-switched UNO power supply for DIN rail mounting, input: single-phase, output: 24 V DC/240 W

### Product Description

UNO POWER power supplies - compact with basic functionality

Thanks to their high power density, compact UNO POWER power supplies offer the ideal solution for loads up to 240 W, particularly in compact control boxes. The power supply units are available in various performance classes and overall widths. Their high degree of efficiency and low idling losses ensure a high level of energy efficiency.

### Your advantages

- ✓ Flexible mounting by simply snapping onto the DIN rail
- ✓ More space in the control cabinet with up to 20 % higher power density
- ✓ Maximum energy efficiency, thanks to over 90 % efficiency and extremely low idling losses under 0.3 W
- ✓ Outdoor installation, thanks to the wide temperature range from -25°C to +70°C



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	795.100 g
Custom tariff number	85044070
Country of origin	Vietnam

### Technical data

#### Dimensions

Width	45 mm
Height	130 mm
Depth	125 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 (> 55 °C Derating: 2.5 %/K)
Ambient temperature (start-up type tested)	-25 °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

### Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC (< 95 V AC Derating 1 %/V)
AC frequency range	50 Hz ... 60 Hz
Frequency range ( $f_N$ )	50 Hz ... 60 Hz #10 %
Current consumption	2.69 A (100 V AC)
	1.08 A (240 V AC)
Nominal power consumption	260 VA
Inrush current	< 80 A (typical)
Mains buffering time	> 10 ms (120 V AC)
	> 10 ms (230 V AC)
Input fuse	5 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (Characteristics B, C, D, K)
Power factor (cos phi)	0.99
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 ( $U_{Set}$ )	24 V DC ... 28 V DC ±1 %
Nominal output current ( $I_N$ )	10 A (-25 °C ... 55 °C)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	No
Feedback voltage resistance	< 35 V DC
Protection against overvoltage at the output (OVP)	≤ 35 V DC
Control deviation	change in load, static 10 % ... 90 %
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 50 mV <sub>PP</sub> (with nominal values)
Output power	240 W
Typical response time	< 1 s
Maximum power dissipation in no-load condition	< 1.1 W
Power loss nominal load max.	< 18.8 W

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## Technical data

### General

Net weight	0.66 kg
Efficiency	typ. 90 % (120 V AC)
	typ. 93 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 641000 h (40 °C)
Insulation voltage input/output	4 kV AC (type test)
	3 kV AC (routine test)
Degree of protection	IP20
Protection class	I (in closed control cabinet)
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Housing material	Aluminum / polycarbonate
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: 0 mm horizontally, 30 mm vertically

### Connection data, input

Connection method	Screw 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	8 mm
Screw thread	M3

### Connection data, output

Connection method	Screw 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	8 mm
Screw thread	M3

### 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 62368-1/VDE 0805 (SELV)

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## Technical data

### Standards

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 62368-1 (SELV) und EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Mains variation/undervoltage	EN 61000-4-11

### Conformance/approvals

UL approvals	UL/C-UL listed UL 508
	UL/C-UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location)
	UL/C-UL Recognized UL 60950-1
CSA	CAN/CSA-C22.2 No. 60950-1-07
	CSA-C22.2 No. 107.1-01
	CAN/CSA-C22.2 No. 213 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location)

### EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electrostatic discharge	EN 61000-4-2
Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 GHz ... 3 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	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B
Surge voltage load (surge)	EN 61000-4-5
Input	2 kV (Test Level 3 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B
Conducted interference	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz

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## Technical data

### EMC data

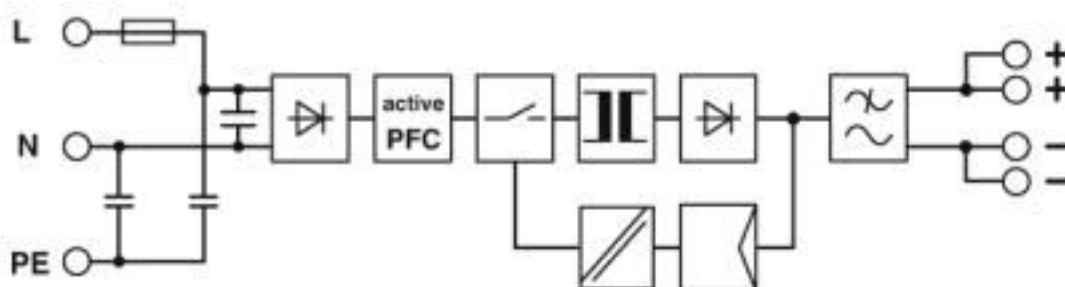
Voltage	10 V (Test Level 3)
Comments	Criterion A
Voltage dips	EN 61000-4-11
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Block diagram



## Classifications

### eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 4.0	27040700
eCl@ss 4.1	27040700
eCl@ss 5.0	27049000
eCl@ss 5.1	27049000
eCl@ss 6.0	27049000
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

### ETIM

ETIM 4.0	EC000599
ETIM 5.0	EC002540
ETIM 6.0	EC002540
ETIM 7.0	EC002540

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## Classifications

### UNSPSC

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

## Approvals

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#### Approvals

UL Listed / UL Recognized / cUL Recognized / IECEE CB Scheme / cUL Listed / EAC / cULus Recognized / cULus Listed

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

### 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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UL Recognized		<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 214596
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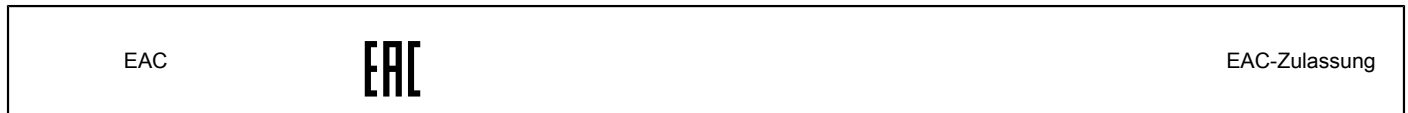
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 214596
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IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DK-42444-UL
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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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### Approvals



### Accessories

#### Accessories

##### Device circuit breakers

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.

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.

#### Device protection

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.

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### Accessories

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.

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### Redundancy module

Redundancy module - UNO-DIODE/5-24DC/2X10/1X20 - 2905489



Redundancy module, 5 V - 24 V DC, 2 x 10 A, 1 x 20 A.