

## Power supply unit - UNO-PS/1AC/24DC/ 60W - 2902992

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Primary-switched UNO POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/60 W

### Product Description

UNO POWER power supplies with basic functionality

Thanks to their high power density, compact UNO POWER power supplies are 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.

### Why buy this product

- ✓ 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 STK                                                                                                   |
| GTIN                                 | <br>4 046356 729208 |
| GTIN                                 | 4046356729208                                                                                           |
| Weight per Piece (excluding packing) | 200.000 g                                                                                               |
| Custom tariff number                 | 85044030                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Dimensions

|        |       |
|--------|-------|
| Width  | 35 mm |
| Height | 90 mm |
| Depth  | 84 mm |

#### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP20 |
|----------------------|------|

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## Technical data

### Ambient conditions

|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Ambient temperature (operation)                | -25 °C ... 70 °C (> 55° C derating : 2.5%/K) |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °C                             |
| Max. permissible relative humidity (operation) | ≤ 95 % (at 25 °C, non-condensing)            |
| Noise immunity                                 | EN 61000-6-2:2005                            |

### Input data

|                                     |                                           |
|-------------------------------------|-------------------------------------------|
| Nominal input voltage range         | 100 V AC ... 240 V AC                     |
| Input voltage range                 | 85 V AC ... 264 V AC                      |
| AC frequency range                  | 45 Hz ... 65 Hz                           |
| Current consumption                 | 1 A (120 V AC)                            |
|                                     | 0.6 A (230 V AC)                          |
| Inrush surge current                | < 30 A (typical)                          |
| Power failure bypass                | > 20 ms (120 V AC)                        |
|                                     | > 85 ms (230 V AC)                        |
| Input fuse                          | 2.5 A (slow-blow, internal)               |
| Choice of suitable circuit breakers | 6 A ... 16 A (Characteristics B, C, D, K) |
| Type of protection                  | Transient surge protection                |
| Protective circuit/component        | Varistor                                  |

### Output data

|                                                |                                                  |
|------------------------------------------------|--------------------------------------------------|
| Nominal output voltage                         | 24 V DC ±1 %                                     |
| Nominal output current (I <sub>N</sub> )       | 2.5 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                           | yes                                              |
| Control deviation                              | < 1 % (change in load, static 10 % ... 90 %)     |
|                                                | < 2 % (Dynamic load change 10 % ... 90 %, 10 Hz) |
|                                                | < 0.1 % (change in input voltage ±10 %)          |
| Residual ripple                                | < 30 mV <sub>PP</sub> (with nominal values)      |
| Output power                                   | 60 W                                             |
| Typical response time                          | < 1 s                                            |
| Maximum power dissipation in no-load condition | < 0.3 W                                          |
| Power loss nominal load max.                   | < 7 W                                            |

### General

|                                 |                                          |
|---------------------------------|------------------------------------------|
| Net weight                      | 0.2 kg                                   |
| Efficiency                      | > 90 % (for 230 V AC and nominal values) |
| Insulation voltage input/output | 4 kV AC (type test)                      |
|                                 | 3 kV AC (routine test)                   |
| Protection class                | II (in closed control cabinet)           |
| MTBF (IEC 61709, SN 29500)      | > 785000 h (40°C)                        |
| Mounting position               | horizontal DIN rail NS 35, EN 60715      |

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## Technical data

### General

|                       |                                                |
|-----------------------|------------------------------------------------|
| 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 and Regulations

|                                                                                                                                  |                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Electromagnetic compatibility                                                                                                    | Conformance with EMC Directive 2014/30/EU                         |
| Shock                                                                                                                            | 18 ms, 30g, in each space direction (according to IEC 60068-2-27) |
| Noise immunity                                                                                                                   | EN 61000-6-2:2005                                                 |
| Connection in acc. with standard                                                                                                 | CUL                                                               |
| Standards/regulations                                                                                                            | EN 61000-4-2                                                      |
|                                                                                                                                  | EN 61000-4-3                                                      |
|                                                                                                                                  | EN 61000-4-4                                                      |
|                                                                                                                                  | EN 61000-4-5                                                      |
|                                                                                                                                  | EN 61000-4-6                                                      |
|                                                                                                                                  | EN 61000-4-11                                                     |
| Standard - Safety of transformers                                                                                                | EN 61558-2-16                                                     |
| Standard - Electrical safety                                                                                                     | IEC 60950-1/VDE 0805 (SELV)                                       |
| 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 60950-1 (SELV) and EN 60204-1 (PELV)                          |
| Standard - Safe isolation                                                                                                        | DIN VDE 0100-410                                                  |
| Standard - Limitation of mains harmonic currents                                                                                 | EN 61000-3-2                                                      |
| UL approvals                                                                                                                     | UL Listed UL 508                                                  |

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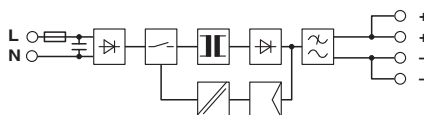
## Technical data

### Standards and Regulations

|                                                                                        |                                                                                      |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                                                                        | UL/C-UL Recognized UL 60950                                                          |
|                                                                                        | NEC Class 2 as per UL 1310                                                           |
|                                                                                        | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D T4A (Hazardous Location) |
| Vibration (operation)                                                                  | < 15 Hz, amplitude $\pm 2.5$ mm (according to IEC 60068-2-6)                         |
|                                                                                        | 15 Hz ... 150 Hz, 2.3g, 90 min.                                                      |
| Low Voltage Directive                                                                  | Conformance with LV directive 2006/95/EC                                             |
| Approval - requirement of the semiconductor industry with regard to mains voltage dips | EN 61000-4-11                                                                        |
| Information technology equipment - safety (CB scheme)                                  | CB Scheme                                                                            |

## Drawings

Block diagram



## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27040702 |
| eCl@ss 4.1 | 27040702 |
| eCl@ss 5.0 | 27049002 |
| eCl@ss 5.1 | 27049002 |
| eCl@ss 6.0 | 27049002 |
| eCl@ss 7.0 | 27049002 |
| eCl@ss 8.0 | 27049002 |
| eCl@ss 9.0 | 27040701 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000599 |
| ETIM 5.0 | EC002540 |
| ETIM 6.0 | EC002540 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211502 |
| UNSPSC 7.0901 | 39121004 |
| UNSPSC 11     | 39121004 |
| UNSPSC 12.01  | 39121004 |

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### Classifications

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39121004 |
|-------------|----------|

### Approvals

#### Approvals

#### Approvals

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

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

### Approval details

|               |                                                                                     |                                                                                                                                                       |               |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|           |                                                                                     |                                                                                                                                                       |               |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                |                                                                                     |                                                                                                                                                       |               |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|            |                                                                                     |                                                                                                                                                       |               |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                 |                                                                                     |                                                           |                |
|-----------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------|
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DK-29076-A2-UL |
|-----------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------|

|     |                                                                                     |               |
|-----|-------------------------------------------------------------------------------------|---------------|
| EAC |  | EAC-Zulassung |
|-----|-------------------------------------------------------------------------------------|---------------|

|     |                                                                                     |                          |
|-----|-------------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU C-<br>DE.A*30.B.01082 |
|-----|-------------------------------------------------------------------------------------|--------------------------|

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### Approvals

cULus Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

cULus Listed

### Accessories

#### Accessories

#### 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.