

UNO-PS/1AC/12DC/ 55W/H - Power supply



1088850

<https://www.phoenixcontact.com/us/products/1088850>

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Primary-switched power supply unit UNO POWER, Screw connection, DIN rail mounting, IEC 60335-1, input: 1-phase, output: 12 V DC / 4.6 A

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.

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 ... +70 °C



Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1088850 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CM14 |
| Product key | CMPU1Y |
| GTIN | 4055626890654 |
| Weight per piece (including packing) | 239.2 g |
| Weight per piece (excluding packing) | 200 g |

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| | |
|-----------------------|----------|
| Customs tariff number | 85044095 |
| Country of origin | VN |

Technical data

Input data

AC operation

| | |
|--|---|
| Nominal input voltage range | 100 V AC ... 240 V AC |
| Input voltage range | 85 V AC ... 264 V AC |
| Input voltage range AC | 85 V AC ... 264 V AC |
| Voltage type of supply voltage | AC |
| Inrush current | < 30 A (typical) |
| Inrush current integral (I^2t) | < 0.5 A ² s |
| Frequency range (f_N) | 50 Hz ... 60 Hz \pm 10 % |
| Mains buffering time | > 20 ms (120 V AC) > 90 ms (230 V AC) |
| Current consumption | 1.3 A (100 V AC) 0.6 A (240 V AC) |
| Nominal power consumption | 127 VA |
| Protective circuit | Transient surge protection; Varistor |
| Power factor (cos phi) | 0.49 |
| Typical response time | < 1 s |
| Input fuse | 2 A (slow-blow, internal) |
| Recommended breaker for input protection | 6 A ... 16 A (Characteristics B, C, D, K) |

Output data

| | |
|--|--|
| Efficiency | typ. 87 % (120 V AC) typ. 88 % (230 V AC) |
| Nominal output voltage | 12 V DC |
| Nominal output current (I_N) | 4.6 A (-25 °C ... 55 °C) |
| Derating | 55 °C ... 70 °C (2.5 %/K) |
| Feedback voltage resistance | < 25 V DC |
| Protection against overvoltage at the output (OVP) | \leq 25 V DC |
| Control deviation | < 1 % (change in load, static 10 % ... 90 %) < 3 % (Dynamic load change 10 % ... 90 %, 10 Hz) < 0.1 % (change in input voltage \pm 10 %) |
| Residual ripple | < 30 mV _{PP} (with nominal values) |
| Short-circuit-proof | yes |
| Output power | 55 W |
| Maximum no-load power dissipation | < 0.3 W |
| Power loss nominal load max. | < 8 W |
| Rise time | < 0.5 s (U_{OUT} (10 % ... 90 %)) |
| Response time | < 2 ms |
| Connection in parallel | yes, for redundancy and increased capacity |
| Connection in series | yes |
| Fuse protection (secondary side) | electronic |

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Connection data

Input

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross-section, rigid min. | 0.2 mm ² |
| Conductor cross-section, rigid max. | 2.5 mm ² |
| Conductor cross-section flexible min. | 0.2 mm ² |
| Conductor cross-section flexible max. | 2.5 mm ² |
| Conductor cross-section AWG min. | 24 |
| Conductor cross-section AWG max. | 14 |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

Output

| | |
|---------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross-section, rigid min. | 0.2 mm ² |
| Conductor cross-section, rigid max. | 2.5 mm ² |
| Conductor cross-section flexible min. | 0.2 mm ² |
| Conductor cross-section flexible max. | 2.5 mm ² |
| Conductor cross-section AWG min. | 24 |
| Conductor cross-section AWG max. | 14 |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

Signaling

| | |
|--------------------|-----|
| Types of signaling | LED |
|--------------------|-----|

Electrical properties

| | |
|------------------|---|
| Number of phases | 1 |
|------------------|---|

Product properties

| | |
|----------------------------|--------------------|
| Product type | Power supply |
| Product family | UNO POWER |
| MTBF (IEC 61709, SN 29500) | > 865000 h (40 °C) |

Insulation characteristics

| | |
|---------------------|--------------------------------|
| Protection class | II (in closed control cabinet) |
| Degree of pollution | 2 |

Dimensions

| | |
|-------|-------|
| Width | 35 mm |
|-------|-------|

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| | |
|--------|-------|
| Height | 90 mm |
| Depth | 84 mm |

Installation dimensions

| | |
|----------------------------------|---------------|
| Installation distance right/left | 0 mm / 0 mm |
| Installation distance top/bottom | 30 mm / 30 mm |

Mounting

| | |
|-------------------------|--|
| Mounting type | DIN rail mounting |
| Assembly note | alignable: 0 mm horizontally, 30 mm vertically |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| With protective coating | no |

Material specifications

| | |
|--|------------------------|
| Flammability rating according to UL 94 (housing / terminal blocks) | V0 |
| Housing material | Plastic |
| Housing material | PC |
| Foot latch material | POM (Polyoxymethylene) |

Environmental and real-life conditions

Ambient conditions

| | |
|--|--|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 55 °C Derating: 2.5 %/K) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Climatic class | 3K3 (in acc. with EN 60721) |
| Max. permissible relative humidity (operation) | ≤ 95 % (at 25 °C, non-condensing) |
| Shock | 18 ms, 30g, in each space direction (according to IEC 60068-2-27) |
| Vibration (operation) | < 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) 15 Hz ... 150 Hz, 2.3g, 90 min. |

Standards and regulations

| | |
|--|--|
| Budgetary standard | IEC 60335-1 |
| Standard – Limitation of mains harmonic currents | EN 61000-3-2 |
| Standard - Electrical safety | IEC 62368-1 (SELV) |
| Standard – Safety extra-low voltage | IEC 62368-1 (SELV) und EN 60204-1 (PELV) |
| Standard - Safe isolation | DIN VDE 0100-410 |
| Standard - Safety of transformers | EN 61558-2-16 |
| Approval - requirement of the semiconductor industry with regard to mains voltage dips | EN 61000-4-11 |

Mains voltage dips

| | |
|--------------------------|---|
| Standard designation | Requirement of the semiconductor industry with regard to mains voltage dips |
| Standards/specifications | SEMI F47 - 0706 (180 V AC) |

Approvals

| | |
|--------------|--|
| 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 T4A (Hazardous Location) |
| 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 T4A (Hazardous Location) |
| | UL/C-UL Recognized UL 60950-1 |

Conformity/Approvals

| | |
|----------------------------------|---|
| SIL in accordance with IEC 61508 | 0 |
|----------------------------------|---|

EMC data

| | |
|-------------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Low Voltage Directive | Conformance with Low Voltage Directive 2014/35/EC |
| EMC requirements for noise immunity | EN 61000-6-2 |

Electrostatic discharge

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

Electrostatic discharge

| | |
|-------------------|---------------------|
| Contact discharge | 6 kV (Test Level 3) |
| Discharge in air | 8 kV (Test Level 3) |
| Comments | Criterion A |

Electromagnetic HF field

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-3 |
|-----------------------|--------------|

Electromagnetic HF field

| | |
|---------------------|-----------------------|
| Frequency range | 80 MHz ... 1 GHz |
| Test field strength | 10 V/m (Test Level 3) |

Fast transients (burst)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-4 |
|-----------------------|--------------|

Fast transients (burst)

| | |
|----------|------------------------------------|
| Input | 4 kV (Test Level 4 - asymmetrical) |
| Output | 2 kV (Test Level 3 - asymmetrical) |
| Comments | Criterion A |

Surge voltage load (surge)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

Surge voltage load (surge)

| | |
|--------|-------------------------------------|
| Input | 1 kV (Test Level 2 - symmetrical) |
| | 2 kV (Test Level 3 - asymmetrical) |
| Output | 0.5 kV (Test Level 1 - symmetrical) |

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| | |
|----------|--------------------------------------|
| | 0.5 kV (Test Level 1 - asymmetrical) |
| Comments | Criterion B |

Conducted interference

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-6 |
|-----------------------|--------------|

Conducted interference

| | |
|-----------------|---------------------|
| Input/Output | asymmetrical |
| Frequency range | 0.15 MHz ... 80 MHz |
| Comments | Criterion A |
| Voltage | 10 V (Test Level 3) |

Criteria

| | |
|-------------|--|
| Criterion A | Normal operating behavior within the specified limits. |
| Criterion B | Temporary impairment to operational behavior that is corrected by the device itself. |

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Drawings

Block diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1088850>



IECEE CB Scheme
Approval ID: SI-7106



EAC
Approval ID: RU S-DE.BL08.W.00764



EAC
Approval ID: RU S-DE.BL08.W.00764



cULus Listed
Approval ID: FILE E 123528



cULus Listed
Approval ID: FILE E 123528



EAC
Approval ID: RU S-DE.BL08.W.00764



IECEE CB Scheme
Approval ID: SI-7106

CoC / Compliance Statement
Approval ID: 24-390-00



EAC
Approval ID: RU S-DE.BL08.W.00764



cULus Listed
Approval ID: FILE E 214596



cULus Listed
Approval ID: FILE E 214596

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EAC

Approval ID: RU S-DE.BL08.W.00764



EAC

Approval ID: RU S-DE.BL08.W.00764



IECEE CB Scheme

Approval ID: NL2-021190



IECEE CB Scheme

Approval ID: NL2-021190

CoC / Compliance Statement

Approval ID: 24-390-00



cULus Listed

Approval ID: FILE E 199827



cULus Listed

Approval ID: FILE E 199827

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27040701 |
| ECLASS-15.0 | 27040701 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002540 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121000 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-25 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| | Lead(CAS: 7439-92-1) |
| SCIP | 2ed60eb6-011e-4d7b-ae07-b0282fba4a96 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 5.168 kg CO2e |
|---------|---------------|

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