

PRO ECO 480W 24V 20A

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



You are looking for a reliable power supply with basic functions.

With PROeco we can offer you low-cost switch-mode power supply units with

high efficiency and system capability. Let's connect.

In the series production of machines, in particular, switch-mode power supply units with

above-average performance values can deliver genuine competitive advantages.

The low-cost PROeco series offers all the basic functions and delivers impressively

high performance and flexibility.

Our PROeco switch-mode power supply units feature a compact design, high

efficiency and are extremely easy to maintain. Thanks to temperature protection,

short-circuit and overload resistance they can be universally used in all

applications.

Wide-ranging safety functions and compatibility with our diode and capacitance modules, together with UPS

components for setting up a

redundant power supply, characterise solutions with PROeco.

General ordering data

| | |
|------------|---|
| Version | Power supply, switch-mode power supply unit, 24 V |
| Order No. | 1469510000 |
| Type | PRO ECO 480W 24V 20A |
| GTIN (EAN) | 4050118275483 |
| Qty. | 1 pc(s). |

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Technical data
Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Depth | 120 mm | Depth (inches) | 4.724 inch |
| Height | 125 mm | Height (inches) | 4.921 inch |
| Width | 100 mm | Width (inches) | 3.937 inch |
| Net weight | 1,557 g | | |

Temperatures

| | | | |
|-----------------------------|----------------|-----------------------------|----------------|
| Storage temperature | -40 °C...85 °C | Operating temperature | -25 °C...70 °C |
| Operating temperature, min. | -25 °C | Operating temperature, max. | 70 °C |

Input

| | | | |
|------------------------|--------------------------------------|---------------------------|--|
| AC current consumption | 2,37 A @ 230 V AC / 5,2 A @ 110 V AC | AC input voltage range | 85...264 V AC (derating at 100 V AC) |
| Connection system | Screw connection | DC current consumption | 1,55 A @ 370 V DC / 4,65 A @ 120 V DC |
| DC input voltage range | 80...370 V DC (Derating @ 120 V DC) | Frequency range AC | 47...63 Hz |
| Input frequency | 47...63 Hz | Input fuse (internal) | Yes |
| Inrush current | max. 5 A | Nominal power consumption | 527.5 VA |
| Rated input voltage | 100...240 V AC | Recommended back-up fuse | 6 A / DI, safety fuse 16 A, Char. B, circuit breaker 6...8 A, Char. C, circuit breaker |
| Surge protection | Varistor | | |

Output

| | | | |
|--|----------------------------|---|---|
| Capacitive load | unrestricted | Connection system | Screw connection |
| Continuous output current @ U _{Nominal} | 20 A @ 55 °C, 15 A @ 70 °C | Nominal output current for U _{nom} | 20 A @ 55 °C |
| Output power | 480 W | Output voltage, max. | 28 V |
| Output voltage, min. | 22 V | Output voltage, note | (adjustable via potentiometer) |
| Overload protection | Yes | Parallel connection option | yes, max. 3 |
| Protection against inverse voltage | Yes | Ramp-up time | ≤ 100 ms |
| Rated output voltage | 24 V DC ± 1 % | Residual ripple, breaking spikes | < 50 mV _{pp} @ 24 V DC, I _N |

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General data

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|--|--|---|---------------------------------------|
| AC failure bridging time @ I_{nom} | > 20 ms @ 230 V AC / > 20 ms @ 115 V AC | Degree of efficiency | 91% |
| Earth leakage current, max. | 3.5 mA | Housing version | Metal, corrosion resistant |
| Indication | Green LED ($U_{output} > 21.6$ V DC), Yellow LED ($I_{output} > 90\%$ I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC) | Max. perm. air humidity (operational) | 5 %...95 % RH |
| Mounting position, installation notice | on terminal rail TS 35 | Power factor (approx.) | > 0.98...230 V AC / > 0.98...115 V AC |
| Power loss, idling | 5 W | Power loss, nominal load | 43 W |
| Protection against over-heating | Yes | Protection against reverse voltages from the load | 30...35 V DC |
| Protection degree | IP20 | Short-circuit protection | Yes |
| Surge voltage category | II | | |

EMC / shock / vibration

| | | | |
|---|--|---|---------------------------|
| Interference immunity test acc. to | EN 61000-4-2 (ESD), EN 61000-4-3 (RS), EN 61000-4-4 (burst), EN 61000-4-5 (surge), EN 61000-4-6 (conducted), EN61000-4-8 (Fields), EN61000-4-11 (Dips) | Limiting of mains voltage harmonic currents | According to EN 61000-3-2 |
| Noise emission in accordance with EN55032 | Class B | Shock resistance IEC 60068-2-27 | 15 g In all directions |
| Vibration resistance IEC 60068-2-6 | 1 g according to EN 50178 | | |

Insulation coordination

| | | | |
|----------------------------------|-----------------------|-----------------------------------|--------|
| Insulation voltage input / earth | 2 kV | Insulation voltage output / earth | 0.5 kV |
| Insulation voltage, input/output | 3 kV | Pollution severity | 2 |
| Protection class | I, with PE connection | Surge voltage category | II |

Electrical safety (applied standards)

| | | | |
|---|--|---|------------------------------------|
| Electrical machine equipment | Acc. to EN60204 | For use with electronic equipment | Acc. to EN50178 / VDE0160 |
| Protection against dangerous shock currents | Acc. to VDE0106-101 | Protective separation / protection against electrical shock | VDE0100-410 / acc. to DIN57100-410 |
| Safety extra-low voltage | SELV acc. to IEC 60950-1, PELV according to EN 60204-1 | Safety transformers for switch-mode power supplies | According to EN 61558-2-16 |

Connection data (input)

| | | | |
|---|---------------------|--|-------------------|
| Conductor cross-section, AWG/kcmil, max. | 12 | Conductor cross-section, AWG/kcmil, min. | 26 |
| Conductor cross-section, flexible, min. | 0.5 mm ² | Conductor cross-section, rigid, max. | 6 mm ² |
| Conductor cross-section, rigid, min. | 0.5 mm ² | Connection system | Screw connection |
| Wire connection cross section, flexible (input), max. | 2.5 mm ² | | |

Creation date September 6, 2023 6:01:03 PM CEST

Catalogue status 01.09.2023 / We reserve the right to make technical changes.

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Technical data

Connection data (output)

| | | | |
|---|---------------------|---|---------------------|
| Conductor cross-section, AWG/kcmil , max. | 10 | Conductor cross-section, AWG/kcmil , min. | 26 |
| Conductor cross-section, flexible , max. | 2.5 mm ² | Conductor cross-section, flexible , min. | 0.5 mm ² |
| Conductor cross-section, rigid , max. | 6 mm ² | Conductor cross-section, rigid , min. | 0.5 mm ² |
| Connection system | Screw connection | Number of terminals | 7 (+,+,-,13,14) |

Signalling

| | | | |
|---------------------------|---|------------------|-----|
| Contact load (NO contact) | max. 30 V DC / 1 A | Floating contact | Yes |
| Relay on/off | Output voltage >21.6 V DC/ <20.4 V DC, overload | | |

Approbations

| | | | |
|-------------------------|---------|-------------------|-------|
| Certificate no. (cULus) | E258476 | Institute (cULus) | CULUS |
|-------------------------|---------|-------------------|-------|

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002540 | ETIM 7.0 | EC002540 |
| ETIM 8.0 | EC002540 | ETIM 9.0 | EC002540 |
| ECLASS 9.0 | 27-04-07-01 | ECLASS 9.1 | 27-04-07-01 |
| ECLASS 10.0 | 27-04-07-01 | ECLASS 11.0 | 27-04-07-01 |
| ECLASS 12.0 | 27-04-07-01 | ECLASS 13.0 | 27049002 |

Environmental Product Compliance

| | |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1 |
| SCIP | 6d8cdf22-8230-4af8-86c8-3558c716666d |

Approvals

Approvals



| | |
|-------------------------|------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate no. (cULus) | E258476 |

Downloads

| | |
|---|--|
| Approval/Certificate/Document of Conformity | PRO ECO 480W EN 62368-1.pdf PRO ECO 480W UL508 CSA C22.2.pdf Declaration of Conformity |
| Engineering Data | CAD data – STEP |
| User Documentation | Operating instructions |
| Catalogues | Catalogues in PDF-format |

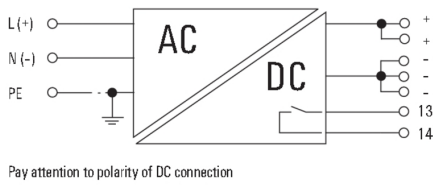
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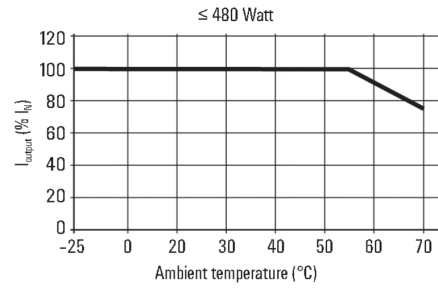
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Drawings

Electric symbol



Derating curve



Derating curve



Derating curve

