

PRO ECO3 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. | 1469550000 |
| Type | PRO ECO3 480W 24V 20A |
| GTIN (EAN) | 4050118275742 |
| 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 | 1,300 g | | |

Temperatures

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

Rated data UL

| | |
|-------------------------|---------|
| Certificate No. (cURus) | E255651 |
|-------------------------|---------|

Input

| | | | |
|--|--|------------|--|
| AC input voltage range | 3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC | | |
| Connection system | Screw connection | | |
| Current consumption in relation to the input voltage | Voltage type | 3-phase AC | |
| | Input voltage | 400 V | |
| | Input current | 1.5 A | |
| | Voltage type | 3-phase AC | |
| | Input voltage | 500 V | |
| | Input current | 1.2 A | |
| | Voltage type | DC | |
| | Input voltage | 800 V | |
| | Input current | 0.7 A | |
| | Voltage type | DC | |
| | Input voltage | 450 V | |
| | Input current | 1.2 A | |
| DC input voltage range | 450...800 V DC | | |
| Frequency range AC | 47...63 Hz | | |
| Input frequency | 47...63 Hz | | |
| Input fuse (internal) | Yes | | |
| Inrush current | max. 50 A | | |
| Nominal power consumption | 539.3 VA | | |
| Rated input voltage | 3x 400...3x 500 V AC (wide-range input) | | |
| Recommended back-up fuse | 4 A / DI, safety fuse 3...5 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 |

Creation date August 16, 2023 10:51:04 AM CEST

Catalogue status 04.08.2023 / We reserve the right to make technical changes.

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Technical data

General data

| | | | |
|--|--|---|---|
| AC failure bridging time @ I_{nom} | > 30 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC | Degree of efficiency | 89% |
| 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.) | > 0.55 @ 3 x 500 V AC / > 0.65 @ 3 x 400 V AC |
| Power loss, idling | 8 W | Power loss, nominal load | 48 W |
| Protection against over-heating | Yes | Protection against reverse voltages from the load | 30...35 V DC |
| Protection degree | IP20 | Short-circuit protection | Yes |

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 | | |

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 | | |

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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. (cURus) | E255651 | Certificate no. (cULus) | E258476 |
| Institute (cULus) | CULUS | Institute (cURus) | CURUS |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002540 | ETIM 7.0 | EC002540 |
| ETIM 8.0 | 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 |

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. (cURus) | E255651 |
| Certificate no. (cULus) | E258476 |

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of Conformity |
| Engineering Data | CAD data – STEP |
| Engineering Data | WSCAD, EPLAN |
| User Documentation | Operating instructions |
| Catalogues | Catalogues in PDF-format |

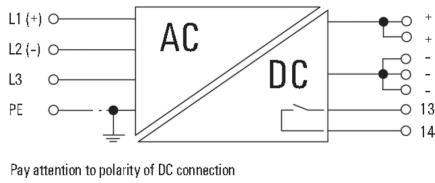
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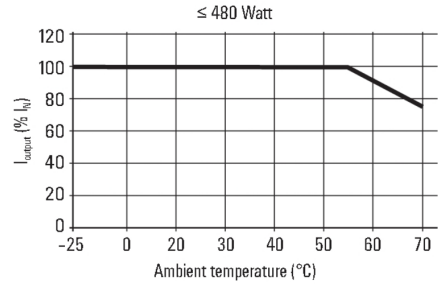
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Drawings

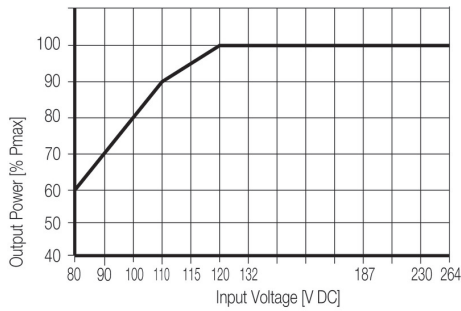
Electric symbol



Derating curve



Derating curve



Derating curve

