

**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.  | <a href="#">1469510000</a>                        |
| 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 |
|---------------------|----------------|-----------------------|----------------|

## Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

## 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                              |
| Recommended back-up fuse | 6 A / DI, safety fuse<br>16 A, Char. B, circuit breaker<br>6...8 A, Char. C, circuit breaker | Surge protection          | Varistor                              |

## Output

|                                      |                                        |                                    |                  |
|--------------------------------------|----------------------------------------|------------------------------------|------------------|
| Capacitive load                      | unrestricted                           | Connection system                  | Screw connection |
| 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 <sub>pp</sub> @ 24 V DC, $I_N$ |                                    |                  |

## General data

|                                                   |                                                                                                                                                                         |                                       |                            |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------|
| 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                                                                                                                                                  | Operating temperature                 | -25 °C...70 °C             |
| Power factor (approx.)                            | > 0.98...230 V AC / > 0.98...115 V AC                                                                                                                                   | Protection against over-heating       | Yes                        |
| Protection against reverse voltages from the load | 30...35 V DC                                                                                                                                                            | Short-circuit protection              | Yes                        |

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Catalogue status 22.10.2021 / We reserve the right to make technical changes.

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## Technical data

## EMC / shock / vibration

|                                              |                                                                                                                                                                          |                                                |                              |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------|
| Interference immunity test acc. to           | EN 61000-4-2 (ESD),<br>EN 61000-4-3 (RS), EN<br>61000-4-4 (burst), EN<br>61000-4-5 (surge), EN<br>61000-4-6 (conducted),<br>EN61000-4-8 (Fields),<br>EN61000-4-11 (Dips) | Limiting of mains voltage harmonic<br>currents | According to EN<br>61000-3-2 |
| Noise emission in accordance with<br>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<br>50178                                                                                                                                             |                                                |                              |

## Insulation coordination

|                                  |                       |                    |   |
|----------------------------------|-----------------------|--------------------|---|
| 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 /<br>VDE0160          |
| Protection against dangerous shock<br>currents | Acc. to VDE0106-101                                          | Protective separation / protection<br>against electrical shock | VDE0100-410 / acc. to<br>DIN57100-410 |
| Safety extra-low voltage                       | SELV acc. to IEC 60950-1,<br>PELV according to EN<br>60204-1 | Safety transformers for switch-mode<br>power supplies          | According to EN<br>61558-2-16         |

## Connection data (input)

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

## Connection data (output)

|                                              |                     |                                              |                     |
|----------------------------------------------|---------------------|----------------------------------------------|---------------------|
| Conductor cross-section, AWG/kcmil ,<br>max. | 10                  | Conductor cross-section, AWG/kcmil ,<br>min. | 26                  |
| Conductor cross-section, flexible , max.     | 2.5 mm <sup>2</sup> | Conductor cross-section, flexible , min.     | 0.5 mm <sup>2</sup> |
| Conductor cross-section, rigid , max.        | 6 mm <sup>2</sup>   | Conductor cross-section, rigid , min.        | 0.5 mm <sup>2</sup> |
| 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<br>>21.6 V DC/ <20.4 V DC,<br>overload |                  |     |

## Approvals

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

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**Technical data****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 |             |             |

**Approvals**

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E258476 |

**Downloads**

|                                             |                                           |
|---------------------------------------------|-------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of Conformity</a> |
| Engineering Data                            | <a href="#">STEP</a>                      |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>              |
| User Documentation                          | <a href="#">Operating instructions</a>    |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>  |

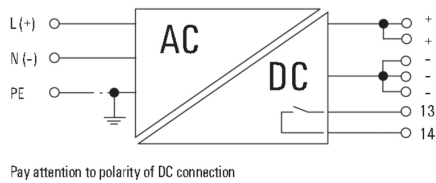
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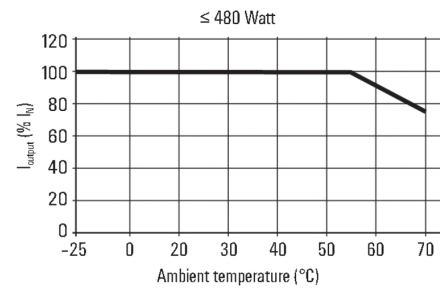
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

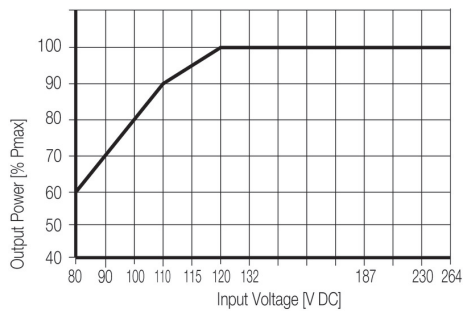
### Electric symbol



### Derating curve



### Derating curve



### Derating curve

