

**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.  | <a href="#">1469550000</a>                        |
| Type       | PRO ECO3 480W 24V 20A                             |
| GTIN (EAN) | 4050118275742                                     |
| Qty.       | 1 Stück   |

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## Technische Daten

### 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 |
|---------------------|----------------|-----------------------|----------------|

### 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<br>3...5 A, Char. C, circuit breaker |            |  |
| Surge protection                                     | Varistor   |            |  |

### Output

|  |                            |   |  |
|--|----------------------------|---|--|
| Capacitive load                                  | unrestricted               | Connection system                           | Screw connection                               |
| Continuous output current @ U <sub>Nominal</sub> | 20 A @ 55 °C, 15 A @ 70 °C | Nominal output current for U <sub>nom</sub> | 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 <sub>N</sub> |

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### General data

|  |  |   |   |
|--|--|---|---|
| AC failure bridging time @ $I_{nom}$   | > 30 ms @ 3 x 500 V AC /<br>> 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   |
| 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 AWG              | Conductor cross-section, AWG/kcmil , min.             | 26 AWG              |
| 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                       | 4 for L1/L2/L3/PE   | Tightening torque, max.                               | 0.6 Nm              |
| Tightening torque, min.                   | 0.5 Nm              | Wire connection cross section, flexible (input), max. | 2.5 mm <sup>2</sup> |

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**Technische Daten**

**Connection data (output)**

|   |                     |   |                     |
|---|---------------------|---|---------------------|
| Conductor cross-section, AWG/kcmil , max. | 10 AWG              | Conductor cross-section, AWG/kcmil , min. | 26 AWG              |
| 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)     |
| Tightening torque, max.                   | 0.6 Nm              | Tightening torque, min.                   | 0.5 Nm              |

**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    | 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 | 27-04-07-01 |

**Environmental Product Compliance**

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | 6d8cdf22-8230-4af8-86c8-3558c716666d |
| RoHS Compliance Status               | Compliant with exemption             |
| RoHS Exemption (if applicable/known) | 7a, 7cl                              |

**Approvals**

Approvals



|                         |            |
|-------------------------|------------|
| ROHS                    | Conform    |
| UL File Number Search   | UL Website |
| Certificate No. (cURus) | E255651    |
| Certificate no. (cULus) | E258476    |

**Downloads**

|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">UL508 CSA C22.2 Certificate.pdf</a><br><a href="#">Declaration of Conformity</a><br><a href="#">UK Conformity Assessed</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a>  |
| User Documentation                          | <a href="#">Operating instructions</a>   |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>   |

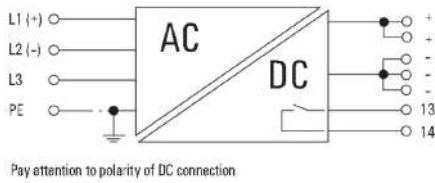
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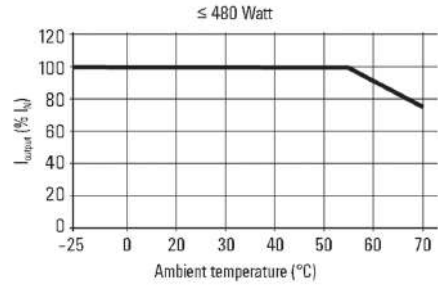
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**Zeichnungen**

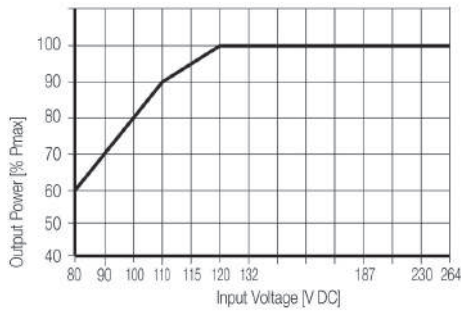
**Electric symbol**



**Derating curve**



**Derating curve**



**Derating curve**

