

**PRO ECO 120W 24V 5A****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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="#">1469480000</a>                        |
| Type       | PRO ECO 120W 24V 5A                               |
| GTIN (EAN) | 4050118275476                                     |
| Qty.       | 1 pc(s).                                          |

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## Technical data

## Dimensions and weights

|            |        |                 |            |
|------------|--------|-----------------|------------|
| Depth      | 100 mm | Depth (inches)  | 3.937 inch |
| Height     | 125 mm | Height (inches) | 4.921 inch |
| Width      | 40 mm  | Width (inches)  | 1.575 inch |
| Net weight | 675 g  |                 |            |

## Temperatures

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

## Input

|                        |                                       |                           |                                                                                             |
|------------------------|---------------------------------------|---------------------------|---------------------------------------------------------------------------------------------|
| AC current consumption | 1,26 A @ 230 V AC / 2,24 A @ 110 V AC | AC input voltage range    | 85...264 V AC (derating at 100 V AC)                                                        |
| Connection system      | Screw connection                      | DC current consumption    | 0,39 A @ 370 V DC / 1,16 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. 40 A                             | Nominal power consumption | 137.9 VA                                                                                    |
| Rated input voltage    | 100...240 V AC                        | Recommended back-up fuse  | 4 A / DI, safety fuse<br>6 A, Char. B, circuit breaker<br>3...5 A, Char. C, circuit breaker |
| Surge protection       | Varistor                              |                           |                                                                                             |

## Output

|                                                  |                             |                                             |                                       |
|--------------------------------------------------|-----------------------------|---------------------------------------------|---------------------------------------|
| Capacitive load                                  | unrestricted                | Connection system                           | Screw connection                      |
| Continuous output current @ $U_{\text{Nominal}}$ | 5 A @ 55 °C, 3,75 A @ 70 °C | Nominal output current for $U_{\text{nom}}$ | 5 A at 55 °C                          |
| Output power                                     | 120 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. 5                           |
| 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 @ $I_{\text{nom}}$ | > 80 ms @ 230 V AC / > 20 ms @ 115 V AC                                                                                                                                                                               | Degree of efficiency                              | 87 %                                 |
| Earth leakage current, max.                 | 3.5 mA                                                                                                                                                                                                                | Housing version                                   | Metal, corrosion resistant           |
| Indication                                  | Green LED ( $U_{\text{output}} > 21.6 \text{ V DC}$ ), Yellow LED ( $I_{\text{output}} > 90 \% I_{\text{Rated typ.}}$ ), red LED (overload, overtemperature, short-circuit, $U_{\text{output}} < 20.4 \text{ V DC}$ ) | Max. perm. air humidity (operational)             | 5 %...95 % RH                        |
| Mounting position, installation notice      | on terminal rail TS 35                                                                                                                                                                                                | Power factor (approx.)                            | > 0.5...230 V AC / > 0.53...115 V AC |
| Power loss, idling                          | 4 W                                                                                                                                                                                                                   | Power loss, nominal load                          | 15 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                                                                                                                                                                                                                    |                                                   |                                      |

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## 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 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 / 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 /<br>VDE0160          |
| Protection against dangerous shock 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 AWG              | Conductor cross-section, AWG/kcmil ,<br>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                          | 3 for L/N/PE        | Tightening torque, max.                                  | 0.6 Nm              |
| Tightening torque, min.                      | 0.5 Nm              | Wire connection cross section, flexible<br>(input), max. | 2.5 mm <sup>2</sup> |

## Connection data (output)

|                                              |                     |                                              |                     |
|----------------------------------------------|---------------------|----------------------------------------------|---------------------|
| Conductor cross-section, AWG/kcmil ,<br>max. | 12 AWG              | Conductor cross-section, AWG/kcmil ,<br>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                          | 6 (++,-, 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<br>>21.6 V DC/ <20.4 V DC,<br>overload |                  |     |

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## 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 |
| ECLASS 14.0 | 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. (cULus) | E258476    |

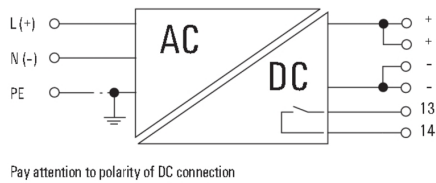
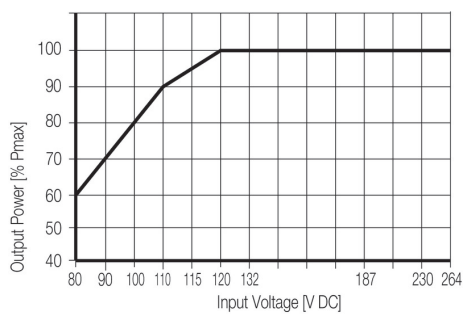
## Downloads

|                                             |                                                                                                                                        |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 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>                                                                                                        |
| Engineering Data                            | <a href="#">Zuken E3.S</a>                                                                                                             |
| User Documentation                          | <a href="#">Operating instructions</a>                                                                                                 |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                                                               |

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**Drawings****Electric symbol****Derating curve****Derating curve****Derating curve**