

**PRO ECO 240W 48V 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, 48 V |
| Order No.  | <a href="#">1469590000</a>                        |
| Type       | PRO ECO 240W 48V 5A                               |
| GTIN (EAN) | 4050118275773                                     |
| 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      | 60 mm   | Width (inches)  | 2.362 inch |
| Net weight | 1.014 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   | 1.2 A @ 230 V AC / 2.4 A @ 115 V AC                                                          | AC input voltage range    | 85...264 V AC (derating at 100 V AC) |
| Connection system        | Screw connection                                                                             | DC current consumption    | 1.2 A @ 370 V DC / 2.4 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. 10 A                                                                                    | Nominal power consumption | 260.9 VA                             |
| Recommended back-up fuse | 4 A / DI, safety fuse<br>10 A, Char. B, circuit breaker<br>3...4 A, Char. C, circuit breaker | Surge protection          | Varistor                             |

**Output**

|                                                  |                             |                                             |                                |
|--------------------------------------------------|-----------------------------|---------------------------------------------|--------------------------------|
| Capacitive load                                  | unrestricted                | Connection system                           | Screw connection               |
| Continuous output current @ U <sub>Nominal</sub> | 5 A @ 55 °C, 3.75 A @ 70 °C | Nominal output current for U <sub>nom</sub> | 5 A at 55 °C                   |
| Output power                                     | 240 W                       | Output voltage, max.                        | 56 V                           |
| Output voltage, min.                             | 42 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                             | 48 V DC ± 1 %               | Residual ripple, breaking spikes            | < 100 mV ss @ 48 V DC, I Nenn  |

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## Technical data

## General data

|                                                   |                                                                                                                                                                         |                                       |                            |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------|
| AC failure bridging time @ $I_{nom}$              | > 20 ms @ 230 V AC / > 20 ms @ 115 V AC                                                                                                                                 | Degree of efficiency                  | 92 %                       |
| 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.)                            | > 0.94 @ 230 V AC / > 0.99 @ 115 V AC                                                                                                                                   | Power loss, idling                    | 3 W                        |
| Power loss, nominal load                          | 23 W                                                                                                                                                                    | Protection against over-heating       | Yes                        |
| Protection against reverse voltages from the load | 58...65 V DC                                                                                                                                                            | 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 <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 (input), max. | 2.5 mm <sup>2</sup> |                                           |                   |

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## Technical data

## Connection data (output)

|                                           |                     |                                           |                     |
|-------------------------------------------|---------------------|-------------------------------------------|---------------------|
| Conductor cross-section, AWG/kcmil , max. | 12                  | Conductor cross-section, AWG/kcmil , 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                       | 6 (+,-, 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 |
|-------------------------|---------|-------------------|-------|

## 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 |

## Approvals

Approvals



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

## Downloads

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

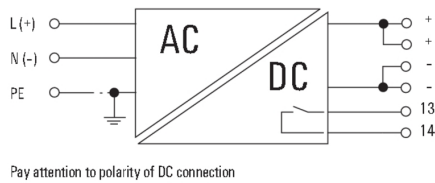
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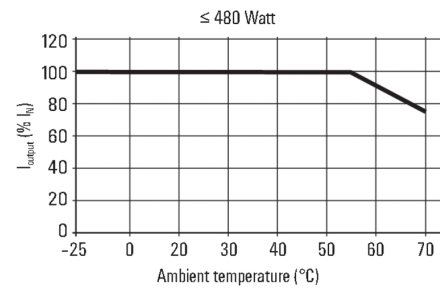
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## Drawings

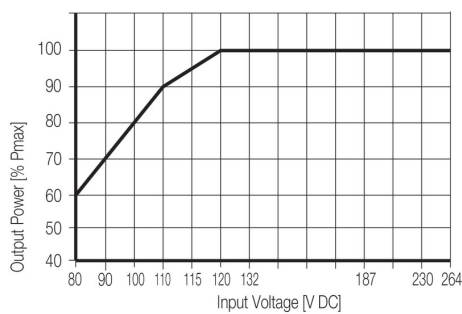
### Electric symbol



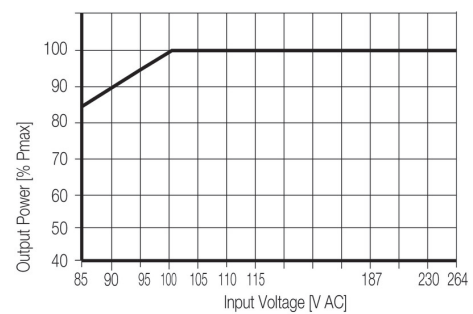
### Derating curve



### Derating curve



### Derating curve



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