

**PROeco**  
**PRO ECO 240W 48V 5A**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
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**

|            |   |
|------------|---|
| Type       | PRO ECO 240W 48V 5A                               |
| Order No.  | <a href="#">1469590000</a>                        |
| Version    | Power supply, switch-mode power supply unit, 48 V |
| GTIN (EAN) | 4050118275773                                     |
| Qty.       | 1 Stück   |

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## Technische Daten

### Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 60 mm   | Width (inches)  | 2.362 inch |
| Height     | 125 mm  | Height (inches) | 4.921 inch |
| Depth      | 100 mm  | Depth (inches)  | 3.937 inch |
| Net weight | 1.014 g |                 |            |

### Temperatures

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

### 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 @ 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  | Rated input voltage    | 100...240 V AC (wide-range input)   |
| 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>Rated</sub>    | 5 A @ 55 °C, 3,75 A @ 70 °C              | Output power               | 240 W                                    |
| Output voltage                                    | 48 V                                     | Output voltage             | 42...56 V (adjustable via potentiometer) |
| Overload protection                               | Yes                                      | Parallel connection option | yes, max. 5                              |
| Protection against inverse voltage                | Yes                                      | Ramp-up time               | ≤ 100 ms                                 |
| Rated (nominal) output current @ U <sub>Nom</sub> | 5 A at 55 °C                             | Rated output voltage       | 48 V DC ± 1 %                            |
| Residual ripple, breaking spikes                  | < 100 mV ss @ 48 V DC, I <sub>Nenn</sub> |                            |  |

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### 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                            | LED green ( $U_{output} > 21.6$ V DC), LED yellow ( $I_{output} > 90\% I_{Rated}$ typ. ), LED red (overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC) | MTBF  | > 500,000 h acc. to IEC 1709 (SN29500) |
| 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                         |
| Protection degree                     | IP20   | Short-circuit protection                          | Yes                                    |

### EMC / shock / vibration

|   |                                 |                                    |  |
|---|---------------------------------|------------------------------------|--|
| Limiting of mains voltage harmonic currents | in accordance with EN 61000-3-2 | Noise emission acc. to EN55022     | Class B  |
| Vibration resistance IEC 60068-2-6          | 1 g according to EN50178        | 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) |
| Shock resistance IEC 60068-2-27             | 15 g In all directions          |                                    |  |

### Insulation coordination

|                                   |                       |                                  |      |
|-----------------------------------|-----------------------|----------------------------------|------|
| Class of protection               | I, with PE connection | Insulation voltage input / earth | 2 kV |
| Insulation voltage output / earth | 0.5 kV                | Insulation voltage, input/output | 3 kV |
| Pollution severity                | 2                     |                                  |      |

### 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 EN60950, PELV acc. to EN60204 | Safety transformers for switch-mode power supplies          | nach EN61558-2-16                  |

### 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    |
| 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 (input), max. | 2.5 mm <sup>2</sup> |

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## Technische Daten

### 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)   |
| 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 |                  |     |

### Approvals

Institute (cULus)



Certificate no. (cULus)

E258476

### Classifications

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 5.0   | EC002541    | ETIM 6.0   | EC002540    |
| eClass 6.2 | 27-04-90-04 | eClass 7.1 | 27-04-90-04 |
| eClass 8.1 | 27-04-90-04 | eClass 9.0 | 27-04-07-03 |
| eClass 9.1 | 27-04-07-01 |            |             |

### Product information

Descriptive text ordering data      The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

### Approvals

Approvals



ROHS

Conform

### Downloads

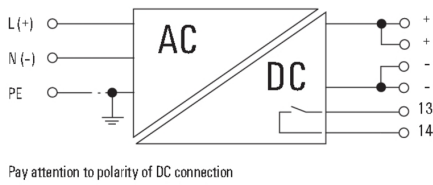
|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">DE_PA5200_160202_001.pdf</a>   |
| Brochure/Catalogue                          | <a href="#">CAT 4.3 ELECTR 15/16 EN</a>  |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>   |
| User Documentation                          | <a href="#">Operating instructions</a><br><a href="#">Operating instructions</a> |

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# Zeichnungen

### Electric symbol



### Derating curve

