

PROeco PRO ECO 120W 24V 5A

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
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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 120W 24V 5A |
| Order No. | 1469480000 |
| Version | Power supply, switch-mode power supply unit, 24 V |
| GTIN (EAN) | 4050118275476 |
| Qty. | 1 Stück |

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Technische Daten

Dimensions and weights

| | | | |
|------------|--------|-----------------|------------|
| Width | 40 mm | Width (inches) | 1.575 inch |
| Height | 125 mm | Height (inches) | 4.921 inch |
| Depth | 100 mm | Depth (inches) | 3.937 inch |
| Net weight | 675 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 | 1,26 A @ 230 V AC / 2,24 A @ 110 V AC | AC input voltage range | 85...264 V AC (Derating @ 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 | Rated input voltage | 100...240 V AC (wide-range input) |
| Recommended back-up fuse | 4 A / DI, safety fuse 6 A, Char. B, circuit breaker 3...5 A, Char. C, circuit breaker | Surge protection | Varistor |

output

| | | | |
|--|--|----------------------------|--|
| Capacitive load | unrestricted | Connection system | Screw connection |
| Continuous output current @ U_{Rated} | 5 A @ 55 °C, 3,75 A @ 70 °C | Output power | 120 W |
| Output voltage | 24 V | Output voltage | 22...28 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_{Nom} | 5 A at 55 °C | Rated output voltage | 24 V DC ± 1 % |
| Residual ripple, breaking spikes | < 50 mV _{SS} @ 24 V DC, I_N | | |

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General data

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|---------------------------------------|--|---|--|
| AC failure bridging time @ I_{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 | 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.) | > 0.5 @ 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 |

EMC / shock / vibration

| | | | |
|---|---------------------------------|------------------------------------|--|
| Limiting of mains voltage harmonic currents | in accordance with EN 61000-3-2 | Noise emission acc. to EN55023 | 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 ² | Conductor cross-section, rigid, max. | 6 mm ² |
| Conductor cross-section, rigid, min. | 0.5 mm ² | 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 ² |

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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 ² | Conductor cross-section, flexible , min. | 0.5 mm ² |
| Conductor cross-section, rigid , max. | 6 mm ² | Conductor cross-section, rigid , min. | 0.5 mm ² |
| 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 | DE_PA5200_160202_001.pdf |
| Brochure/Catalogue | CAT 4.3 ELECTR 15/16 EN |
| Engineering Data | EPLAN, WSCAD, Zuken E3.S |
| Engineering Data | STEP |
| User Documentation | Operating instructions Operating instructions |

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Zeichnungen

Electric symbol



Derating curve

