

**PROtop
PRO TOP1 960W 24V 40A EX**

Weidmüller Interface GmbH & Co. KG
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High-end power supplies must perform efficiently and reliably, even in challenging industrial environments. This requires high power reserves, a long service life and optimal protection against overvoltage, vibration and extreme temperature conditions.

New DCL technology gives PROtop an outstanding dynamic range. This can be used for the reliable triggering of circuit breakers or for powerful motor starts.

General ordering data

| | |
|------------|---|
| Type | PRO TOP1 960W 24V 40A EX |
| Order No. | 2467010000 |
| Version | Power supply, switch-mode power supply unit, 24 V |
| GTIN (EAN) | 4050118481914 |
| Qty. | 1 pc(s). |

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Technical data
Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Width | 139 mm | Width (inches) | 5.472 inch |
| Height | 130 mm | Height (inches) | 5.118 inch |
| Depth | 125 mm | Depth (inches) | 4.921 inch |
| Net weight | 3,382 g | | |

Temperatures

| | | | |
|-----------------------------------|---------------------------|-----------------------------|----------------|
| Humidity at operating temperature | 5...100 % no condensation | Operating temperature, max. | 70 °C |
| Operating temperature, min. | -40 °C | Storage temperature, max. | 85 °C |
| Storage temperature, min. | -40 °C | Operating temperature | -40 °C...70 °C |
| Storage temperature | -40 °C...85 °C | | |

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

Input

| | | | |
|--------------------------|---|-----------------------|---------------------------------|
| AC input voltage range | 85...277 V AC | Connection system | Clamping yoke |
| DC input voltage range | 80 ... 410 V DC | Dielectric strength | max. 300 V AC ≤ 15 s |
| Frequency range AC | 45...65 Hz | Input fuse (internal) | Yes |
| Inrush current | max. 15 A | Rated input voltage | 100 - 240 V AC / 120 - 340 V DC |
| Recommended back-up fuse | 16 A, DI / 16 A, Char. B / 16 A, Char C | Surge protection | Varistor |

output

| | | | |
|------------------------------------|-------------------------------------|--------------------------------------|--|
| DCL - peak load reserve | 150 % (5 s); 400 % (15 ms) | Connection system | Clamping yoke connection |
| Mains failure bridge-over time | > 20 ms @ 115V AC/ 230 VAC | Nominal output current for U_{nom} | 40 A @ 60 °C |
| Output power | 960 W | Output voltage | 24 V |
| Output voltage | 22.5...29 V | Parallel connection option | yes, max 10 |
| Protection against inverse voltage | Yes | Ramp-up time | ≤ 100 ms |
| Rated output voltage | 24 V DC ± 1 % | Reserve capacity @ $U_{Nominal}$ | 130% permanent at ≤ 40°C, 150 % (5 s) |
| Residual ripple, breaking spikes | < 50 mVss @ U_{Nennr} , Full Load | Triggerable circuit breakers | B6, B10, B16, B20, B25, C2, C4, C6, C10, C13 |

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Technical data
General data

| | | | |
|---|--|--|--|
| AC failure bridging time @ I _{nom} | > 20 ms @ 230 V AC / > 20 ms @ 115 V AC | Conformal coating | Yes |
| Degree of efficiency | 94% | Derating | > 60°C (2.5% / 1°C) |
| Earth leakage current, max. | 3.5 mA | Housing version | Metal, corrosion resistant |
| MTBF | > 1.000.000 h according IEC 1709 (SN29500) | Mounting position, installation notice | Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring active subassemblies with full load, 5 mm with passive neighbouring subassemblies, direct row mounting with 90% rated load |
| Operating temperature | -40 °C...70 °C | Power factor (approx.) | > 0.9 |
| Power loss, idling | 5 W | Power loss, nominal load | 61.3 W |
| Protection degree | IP20 | Series switching capability | Yes |
| Short-circuit protection | Yes, internal | Surge voltage category | III |

EMC / shock / vibration

| | | | |
|---|--|------------------------------------|---|
| Noise emission in accordance with EN55032 | Class B | Vibration resistance IEC 60068-2-6 | 2.3 g (on DIN rail), 4 g (with direct mounting) |
| Interference immunity test acc. to | EN 55032:2015, EN 55024:2010/A1:2015, EN 55035:2017, EN 61000-3-2:2014, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011 | Shock resistance IEC 60068-2-27 | 30 g in all directions |

Insulation coordination

| | | | |
|-----------------------------------|---------------------------|-----------------------------------|-----------------------|
| Humidity at operating temperature | 5...100 % no condensation | Insulation voltage output / earth | 0.5 kV |
| Insulation voltage output / earth | 3.2 kV | Insulation voltage, input/output | 3.5 kV |
| Pollution severity | 2 | Protection degree | I, with PE connection |
| Surge voltage category | III | | |

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 according to EN 60950, PELV according to EN 60204 | Safety transformers for switch-mode power supplies | according to EN 61558-2-16 |

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Technical data**Connection data (input)**

| | | | |
|---|----------------------|---|-------------------|
| Conductor cross-section, AWG/kcmil , max. | 10 | Conductor cross-section, AWG/kcmil , min. | 26 |
| Conductor cross-section, flexible , min. | 0.22 mm ² | Conductor cross-section, rigid , max. | 6 mm ² |
| Conductor cross-section, rigid , min. | 0.18 mm ² | Connection system | Clamping yoke |
| Number of terminals | 3 for L/N/PE | Screwdriver blade | 0.8 x 4.0 |
| Wire connection cross section, flexible (input), max. | 4 mm ² | | |

Connection data (output)

| | | | |
|---|--------------------------|---|---------------------|
| Conductor cross-section, AWG/kcmil , max. | 6 | Conductor cross-section, AWG/kcmil , min. | 22 |
| Conductor cross-section, flexible , max. | 16 mm ² | Conductor cross-section, flexible , min. | 6 mm ² |
| Conductor cross-section, rigid , max. | 16 mm ² | Conductor cross-section, rigid , min. | 0.2 mm ² |
| Connection system | Clamping yoke connection | Number of terminals | 5 (+ + / - - -) |
| Screwdriver blade | 1.0 x 5.5 | | |



Connection data (signal)

| | | | |
|--|---------------------|--|---------------------|
| Wire connection cross-section, flexible (signal), max. | 1.5 mm ² | Wire connection cross-section, flexible (signal), min. | 0.2 mm ² |
| Wire cross-section, AWG/kcmil , max. | 16 | Wire cross-section, AWG/kcmil , min. | 28 |
| Wire cross-section, solid , max. | 1.5 mm ² | Wire cross-section, solid , min. | 0.2 mm ² |

Signalling

| | |
|---------------|---|
| LED green/red | Green: Operation (failure-free), Flashing green: advance warning $I > 90\%$, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error |
|---------------|---|

Approvals

| | | | |
|---------------------|---|---------------------------|---------|
| Institute (cULus) |  | Certificate no. (cULus) | E258476 |
| Institute (cULusEX) |  | Certificate no. (cULusEX) | E470829 |

Classifications

| | | | |
|------------|-------------|------------|-------------|
| ETIM 6.0 | EC002540 | eClass 6.2 | 27-04-90-04 |
| eClass 9.0 | 27-04-07-01 | eClass 9.1 | 27-04-07-01 |

Data sheet**PROtop
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Technical data**Approvals**

Approvals



ROHS

Conform

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Conformity[Declaration of Conformity](#)

Engineering Data

[STEP](#)

User Documentation

[IS PRO TOP1 960W 24V 40A EX](#)

Data sheet

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Drawings

