

**PRO TOP1 960W 48V 20A****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

PROtop combines highest efficiency and compact housings with high durability and direct parallel connection without diode modules. This reduces costs and creates space in the cabinet. Due to the powerful DCL technology, even difficult loads - motors, for instance - are operated smoothly, while circuit breakers are triggered reliably. The good communication capability allows permanent condition monitoring and full integration with control systems.

**General ordering data**

|            |                                                   |
|------------|---------------------------------------------------|
| Version    | Power supply, switch-mode power supply unit, 48 V |
| Order No.  | <a href="#">2466920000</a>                        |
| Type       | PRO TOP1 960W 48V 20A                             |
| GTIN (EAN) | 4050118481600                                     |
| Qty.       | 1 pc(s).                                          |

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## Technical data

## Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 125 mm  | Depth (inches)  | 4.921 inch |
| Height     | 130 mm  | Height (inches) | 5.118 inch |
| Width      | 124 mm  | Width (inches)  | 4.882 inch |
| Net weight | 3,382 g |                 |            |

## Temperatures

|                                   |                           |                       |                |
|-----------------------------------|---------------------------|-----------------------|----------------|
| Storage temperature               | -40 °C...85 °C            | Operating temperature | -25 °C...70 °C |
| Humidity at operating temperature | 5...95 %, no condensation |                       |                |

## Environmental Product Compliance

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

## Input

|                                                      |                                         |       |
|------------------------------------------------------|-----------------------------------------|-------|
| AC input voltage range                               | 85...277 V AC                           |       |
| Connection system                                    | PUSH IN                                 |       |
| Current consumption in relation to the input voltage | Voltage type                            | AC    |
|                                                      | Input voltage                           | 100 V |
|                                                      | Input current                           | 12 A  |
|                                                      | Voltage type                            | DC    |
|                                                      | Input voltage                           | 120 V |
|                                                      | Input current                           | 12 A  |
| DC input voltage range                               | 80 ... 410 V DC                         |       |
| 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

|                                             |                               |       |
|---------------------------------------------|-------------------------------|-------|
| Connection system                           | PUSH IN                       |       |
| DCL - peak load reserve                     | Multiple of the rated current | 150 % |
|                                             | Boost duration                | 5 s   |
|                                             | Multiple of the rated current | 400 % |
|                                             | Boost duration                | 15 ms |
| Mains failure bridge-over time              | > 20 ms @ 115V AC/ 230 VAC    |       |
| Nominal output current for U <sub>nom</sub> | 20 A @ 60 °C                  |       |
| Output power                                | 960 W                         |       |
| Output voltage, max.                        | 56 V                          |       |
| Output voltage, min.                        | 45 V                          |       |
| Parallel connection option                  | yes, max 10                   |       |
| Protection against inverse voltage          | Yes                           |       |
| Ramp-up time                                | ≤ 100 ms                      |       |
| Rated output voltage                        | 48 V DC ± 1 %                 |       |
| Residual ripple, breaking spikes            | < 100 mV <sub>pp</sub>        |       |

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## General data

|                                        |                                                                                                                                                                                                                                            |                          |                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|
| AC failure bridging time @ $I_{nom}$   | > 20 ms @ 230 V AC / > 20 ms @ 115 V AC                                                                                                                                                                                                    | Conformal coating        | No                         |
| Degree of efficiency                   | 94%                                                                                                                                                                                                                                        | Derating                 | > 60°C (2.5% / 1°C)        |
| Earth leakage current, max.            | 3.5 mA                                                                                                                                                                                                                                     | Housing version          | Metal, corrosion resistant |
| 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    | -25 °C...70 °C             |
| Power factor (approx.)                 | > 0.9                                                                                                                                                                                                                                      | Short-circuit protection | Yes, internal              |
| Surge voltage category                 | III, II                                                                                                                                                                                                                                    |                          |                            |

## EMC / shock / vibration

|                                    |                                                                                                                                                                                       |                                           |                                                            |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------|
| Interference immunity test acc. to | EN 55032:2015, EN 55024:2010/A1:2015, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011 | Noise emission in accordance with EN55032 |                                                            |
| Shock resistance IEC 60068-2-27    | 30 g in all directions                                                                                                                                                                | Vibration resistance IEC 60068-2-6        | Class B<br>2.3 g (on DIN rail), 4 g (with direct mounting) |

## Insulation coordination

|                                   |                           |                                  |                       |
|-----------------------------------|---------------------------|----------------------------------|-----------------------|
| Humidity at operating temperature | 5...95 %, no condensation | Insulation voltage, input/output | 3.5 kV                |
| Pollution severity                | 2                         | Protection class                 | I, with PE connection |
| Surge voltage category            | III, II                   |                                  |                       |

## 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 62368-1, 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.              | 4                    | Conductor cross-section, AWG/kcmil, min. | 20                 |
| Conductor cross-section, flexible, min.               | 0.75 mm <sup>2</sup> | Conductor cross-section, rigid, max.     | 16 mm <sup>2</sup> |
| Conductor cross-section, rigid, min.                  | 0.75 mm <sup>2</sup> | Connection system                        | PUSH IN            |
| Wire connection cross section, flexible (input), max. | 16 mm <sup>2</sup>   |                                          |                    |

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## Connection data (output)

|                                           |                    |                                           |                      |
|-------------------------------------------|--------------------|-------------------------------------------|----------------------|
| Conductor cross-section, AWG/kcmil , max. | 4                  | Conductor cross-section, AWG/kcmil , min. | 20                   |
| Conductor cross-section, flexible , max.  | 16 mm <sup>2</sup> | Conductor cross-section, flexible , min.  | 0.75 mm <sup>2</sup> |
| Conductor cross-section, rigid , max.     | 16 mm <sup>2</sup> | Conductor cross-section, rigid , min.     | 0.75 mm <sup>2</sup> |
| Connection system                         | PUSH IN            | Number of terminals                       | 5 (+ + / - -)        |

## Connection data (signal)

|                                      |                      |                                      |                     |
|--------------------------------------|----------------------|--------------------------------------|---------------------|
| Wire connection method               | PUSH IN              | Wire cross-section, AWG/kcmil , max. | 16                  |
| Wire cross-section, AWG/kcmil , min. | 26                   | Wire cross-section, solid , max.     | 1.5 mm <sup>2</sup> |
| Wire cross-section, solid , min.     | 0.14 mm <sup>2</sup> |                                      |                     |

## Signalling

|                          |                                          |                                                                                                                                                                 |
|--------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Floating contact         | 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 |
| Status relay (max. load) | Yes<br>Output voltage OK (30 V DC / 1 A) |                                                                                                                                                                 |

## Approvals

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

## 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 |             |             |

## Approvals

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E258476 |

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### Downloads

|                                             |                                                                                                |
|---------------------------------------------|------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of Conformity</a>                                                      |
| Engineering Data                            | <a href="#">STEP</a>                                                                           |
| Engineering Data                            | <a href="#">EPLAN</a>                                                                          |
| User Documentation                          | <a href="#">Operating instruction</a>                                                          |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                       |
| Brochures                                   | <a href="#">Produkt Information PROTOP DE</a><br><a href="#">Produkt Information PROTOP EN</a> |

## PRO TOP1 960W 48V 20A

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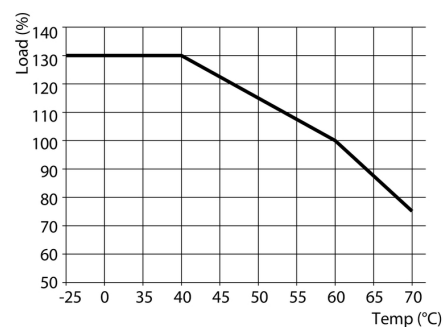
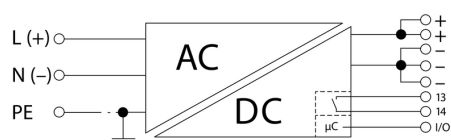
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# Drawings



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