Netzteil
Power Supply

TPS 100 – 600
TPS 101 – 601
2. Understanding The Power Supply

2.1. Main Features

Power supply rear panel, TPS 300/301 as an example

X1 Connection to the mains
X2 Connection to the Electronic Drive Unit TC
F1 Fuse
F2 Fuse
S1 ON/OFF switch

Power supplies are used to supply voltage to Pfeiffer Vacuum turbomolecular pumps with integrated Electronic Drive Units TC. The output voltage is safely separated from the mains voltage in compliance with the European Industrial Standard EN 60 742.

Power supplies are available in the following versions:
- For wall and standard runner fitting
  (TPS 100, 150, 200, 300, 600)
- As a 19" insert unit
  (TPS 101, 201, 301, 601)
- As a 19" insert unit with the Display Control Unit [DCU]
  (please see separate Operating Instructions PM 800 477 BN for the DCU)

Mains voltage is supplied via a mains cable with the following optional plugs:

<table>
<thead>
<tr>
<th>Mains cable</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schuko plug (230 V)</td>
<td>P 4564 309 ZA</td>
</tr>
<tr>
<td>UL-plug (208 V)</td>
<td>P 4564 309 ZF</td>
</tr>
<tr>
<td>UL-plug (115 V)</td>
<td>P 4564 308 ZE</td>
</tr>
</tbody>
</table>

Proper use
- Power supplies may only be used to supply voltage to Pfeiffer Vacuum turbomolecular drag pumps integrated with Electronic Drive Units TC.
- Only those versions of the power supply listed here may be used.
- Power supplies may only be used under the operating conditions set out in Section 5. Technical Data.

Improper use
The following is regarded, inter alia, as improper:
- The use for purposes not covered above, in particular:
  - For connection to pumps and units which, according to their operating instructions, do not provide for such connection;
  - For connection to units where touchable, voltage carrying parts are involved.

Improper use will cause all claims for liability and guarantees to be forfeited.
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Please note: Current operating instructions are available via
www.pfeiffer-vacuum.de/infoservice.

1. Safety Instructions

   - Read and follow all instructions in this manual.
   - Inform yourself regarding:
     - Hazards which can be caused by the power supply;
     - Hazards which can be caused by your system.
   - Observe the safety and accident prevention regulations.
   - Regularly check that all accident prevention measures are
     being complied with.
   - Do not carry out any unauthorised conversions or
     alterations to the power supply.
   - The TPS 300/301 and TPS 600/601 power supply output
     voltages are dangerous to touch. Only use original
     connecting cable for connection to the TC. The power
     supply is designed according to protection class I. It must
     have a connection with advanced earthed conductor
     contact (PE).
   - When returning the power supply please note the shipping
     instructions in Section 4.

1.1. For Your Orientation

Instruction in the text
   ➞ Working instruction: Here, you have to do something.

Abbreviations used
   DCU = Display and operating unit
   TC = Electronic drive unit, turbopump
   TPS = Power supply

1.2. Pictogram Definitions

   ! WARNING
   Warning, danger of personal injury.

   ! CAUTION
   Caution, danger of damage to the power supply
   or to the system.

   ! PLEASE NOTE
   Please note, attention to particularly important
   information on the product, handling the
   product or to a particular part of the documenta-
   tion.
2. Understanding The Power Supply

2.1. Main Features

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  (please see separate Operating Instructions PM 800 477 BN for the DCU)
3. Installation

3.1. Connection To The Mains

**WARNING**
Do not carry out any unauthorised conversions or alterations to the power supply.

**CAUTION**
The power supply should be connected to the mains in accordance with local regulations. Please refer to the technical data for the connection voltage ranges of the individual units. Protection type IP 20 applies to the units.

⇒ Plug mains connection cable into mains connection X1 (please see 2.1.).

3.2. Assembly

**Power Supplies TPS 100, TPS 150, TPS 200, TPS 300 and TPS 600 / Fitting the TPS to walls**

⇒ Screw wall attachment plate 105a to the side panel of the TPS with the set of screws 105d provided.
⇒ Secure the power supply to the wall (for dimensions please see 5.1.).
⇒ Ensure adequate air circulation.

**Fitting the TPS to standard runners**

⇒ Screw the standard runner clamping part 105c (included) with ever two screws 105f to wall attachment plate 105a.
⇒ Screw the wall attachment plate to the side panel of the TPS with enclosed screw set 105d.
⇒ Ensure adequate air circulation.

**CAUTION**
Do not use screws longer than 105d (6.5 mm) for wall and standard runner fitting on account of the danger of short circuits.

**Inserting into a 19"/3HE rack**

When fitting, free circulation must be ensured. The minimum distance to the cooling openings above and below is ≥ 50 mm.

**Power Supplies TPS 101, TPS 201 and TPS 301**

⇒ Unscrew the two screws from the front of the Power Supply TPS.
⇒ Screw front panel 105b to the power supply using screws 105e provided.
⇒ Insert the power supply into the rack and secure.

**Power Supply TPS 601**

⇒ Insert the Power Supply TPS 601 into the rack and secure.

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**Installing the power supplies**

<table>
<thead>
<tr>
<th>105</th>
<th>Power Supply TPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>105a</td>
<td>Wall attachment plate</td>
</tr>
<tr>
<td>105b</td>
<td>Front panel</td>
</tr>
<tr>
<td>105c</td>
<td>Standard runner holder</td>
</tr>
<tr>
<td>105d</td>
<td>Screw (M2.9 x 6.5; DIN 7982)</td>
</tr>
<tr>
<td>105e</td>
<td>Screw (M3 x 8; DIN 966)</td>
</tr>
<tr>
<td>105f</td>
<td>Screw (M2.2 x 10; DIN 7983)</td>
</tr>
</tbody>
</table>
4. Maintenance/Service

No maintenance is required on the power supply.

No liability for personal injury nor material damage will be accepted for damages and operational interruptions which have been caused by improper maintenance; in addition, all guarantees become invalid.

Do make use of our service facilities

In the event that repairs are necessary to your power supply, a number of options are available to you to ensure any system down time is kept to a minimum:
- Return the unit to the manufacturer for repairs.
- Replace the unit with a new value exchange unit.

Local Pfeiffer Vacuum representatives can provide full details.

Repair orders are carried out according to our general conditions of sale and supply. If repairs are necessary, please send the pump to your nearest Pfeiffer Vacuum Service Center.

Contact addresses and telephone hotline

Contact addresses and telephone numbers can be found on the back cover of these operating instructions.

5. Technical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Unit</th>
<th>TPS 100/101</th>
<th>TPS 150</th>
<th>TPS 200/201</th>
<th>TPS 300/301</th>
<th>TPS 500/601</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection voltage</td>
<td>VAC</td>
<td>90-132</td>
<td>50-60</td>
<td>90-132</td>
<td>50-60</td>
<td>90-132</td>
</tr>
<tr>
<td>Frequency</td>
<td>Hz</td>
<td>185-265</td>
<td>185-265</td>
<td>185-265</td>
<td>185-265</td>
<td>185-265</td>
</tr>
<tr>
<td>Max. power consumption</td>
<td>VA</td>
<td>125</td>
<td>170</td>
<td>230</td>
<td>350</td>
<td>590</td>
</tr>
<tr>
<td>Protection class(1)</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Output voltage</td>
<td>VDC</td>
<td>24</td>
<td>24</td>
<td>48</td>
<td>72</td>
<td>140</td>
</tr>
<tr>
<td>Continuous/max. output current</td>
<td>A</td>
<td>4.1/4.6</td>
<td>6.2</td>
<td>4.1/4.6</td>
<td>4.1/4.6</td>
<td>3.8/4.4</td>
</tr>
<tr>
<td>Continuous/max. output power</td>
<td>W</td>
<td>100/110</td>
<td>120/150</td>
<td>200/220</td>
<td>230/260</td>
<td>530/618</td>
</tr>
<tr>
<td>Permissible ambient temperature</td>
<td>°C</td>
<td>5-40</td>
<td>5-40</td>
<td>5-40</td>
<td>5-40</td>
<td>5-40</td>
</tr>
<tr>
<td>Relative humidity, max.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at 35 °C</td>
<td>%</td>
<td>80</td>
<td>90</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>at 40 °C</td>
<td>%</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Protection system</td>
<td></td>
<td>IP 20</td>
<td>IP 20</td>
<td>IP 20</td>
<td>IP 20</td>
<td>IP 20</td>
</tr>
<tr>
<td>Fuse 5 x 20 mm</td>
<td>A</td>
<td>T2</td>
<td>T4</td>
<td>T4</td>
<td>T5</td>
<td>F10</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>1.2</td>
<td>1.4</td>
<td>1.4</td>
<td>1.7</td>
<td>2.5</td>
</tr>
</tbody>
</table>

1) Mains with earthed conductor
5.1. Dimensions

**Table of Dimensions (mm)**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPS 100/101</td>
<td>190</td>
<td>192.5</td>
<td>128.5</td>
<td>106</td>
<td>48</td>
<td>50.5</td>
<td>35.5</td>
</tr>
<tr>
<td>TPS 150</td>
<td>190</td>
<td>192.5</td>
<td>128.5</td>
<td>106</td>
<td>68</td>
<td>70.8</td>
<td>55.9</td>
</tr>
<tr>
<td>TPS 200/201</td>
<td>190</td>
<td>192.5</td>
<td>128.5</td>
<td>106</td>
<td>68</td>
<td>70.8</td>
<td>55.9</td>
</tr>
<tr>
<td>TPS 300/301</td>
<td>190</td>
<td>192.5</td>
<td>128.5</td>
<td>106</td>
<td>105</td>
<td>106.3</td>
<td>91.4</td>
</tr>
<tr>
<td>TPS 600/601</td>
<td>229</td>
<td>229</td>
<td>128.5</td>
<td>111</td>
<td>140.5</td>
<td>141.9</td>
<td>127</td>
</tr>
</tbody>
</table>

1) TE = Rack design partitions, 19" German Industrial Standard DIN 41 488 is divided into 44 partitions.

**Wall Attachment**

![Wall Attachment Diagram](image-url)