PULS does it again:
practical, versatile and reliable like
the SilverLine – yet small like
no other.

MiniLine
with DC 48-56V / 100W

- Mounted and connected
  in record time, no tools required
- World-wide approvals (UL, EN, CSA,
  CB Scheme) for industry and office/
  home
- Tiny: WxHxD = 73 x 75 x 103mm

- Adjustable output voltage
  up to DC 56V
- 115/230V Auto Select Input
- PULS Overload Design™
  (high output overload capability)
- Selectable single/parallel operation
  (jumper)
**Technical Data ML100.105**

### Input

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>AC 100-120/220-240V (Auto Select), 47...63 Hz</td>
</tr>
<tr>
<td>Input current</td>
<td>&lt;2.1A (@ AC 100V_in, 100W Pout)</td>
</tr>
<tr>
<td>External fusing</td>
<td>not required, unit provides internal fuse (T3A15H, not accessible)</td>
</tr>
<tr>
<td>Transient immunity</td>
<td>Transient resistance acc. to VDE 0160 / W2</td>
</tr>
<tr>
<td>Hold-up time</td>
<td>&gt;40 ms @ AC 230V, 48V / 2.1A</td>
</tr>
</tbody>
</table>

### Efficiency, Reliability

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>typ. 91% (AC 230V, 48V / 2.1A)</td>
</tr>
<tr>
<td>MTBF (Reliability)</td>
<td>appr. 500,000 h acc. to Siemensnorm SN 29500</td>
</tr>
<tr>
<td>Power back immunity</td>
<td>63V</td>
</tr>
<tr>
<td>Operating indicator</td>
<td>Green LED</td>
</tr>
</tbody>
</table>

### Construction, Mechanics, Installation

Robust plastic housing (US Patent No. D442, 923S), fine ventilation grid on three housing sides to keep out small parts (e.g. screws), IP20.

Dimensions and weight:
- W x H x D: 73 mm x 75 mm x 103 mm (+ DIN rail)
- Weight: 360 g

Mounting orientation:
- [I], [C] or [F] (cf. ‘Output’)

Ventilation/Cooling:
- Normal convection, no fan required
- Free space f. cooling recom’d.: 25mm on sides with ventilation grid

Easy snap-on mounting onto the DIN-rail (T35S/7,5 or T35S/15).

Connection:
- by Spring Clamp terminals; uniformly firm hold, vibration-resistant and maintenance-free: 2 terminals per output
- Connector size range:
  - flexible cable: 0.3-2.5mm² (28-12 AWG)
  - solid cable: 0.3-4mm² (28-12 AWG)
  - Wire strip length: 6mm (0.24in) recommended

Design details:
- All terminals are easy to reach as mounted on the front panel.
- Input and output are strictly apart from each other (input below, output above) and so cannot be mixed up.
- Mounting and connection do not require any screwdriver.

### Output

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>DC 48.56V (adj, by front panel potentiometer)</td>
</tr>
<tr>
<td>Voltage regulation</td>
<td>stat. &lt;1% Vout (Jumper in pos. ‘Single Use’)</td>
</tr>
<tr>
<td>Overload behaviour</td>
<td>PULS Overload Design™: No switch-off at overload/short-circuit, instead: up to 1.9 ( \frac{I_{\text{rated}}}{2} ). So you need no oversizing to start awkward loads.</td>
</tr>
<tr>
<td>Ripple/Noise</td>
<td>&lt;50mVpp (20 MHz bandw., 50 Ω measurem.)</td>
</tr>
</tbody>
</table>

**Environmental Data, EMC, Safety**

Ambient temperature range (measured 25 mm below unit):
- storage/transport: -25°C ... +85°C
- operation: 0°C ... +70°C (for derating see diagram below)

Humidity:
- max. 95% (without condensation)

Electromagnetic emissions (EME):
- Class B (EN 55011, EN 55022)
- EN 61000-3-2 (PFC)

Electromagnetic immunity (EMI):
- EN 61000-6-2 (includes EN 61000-6-1)

Safe low voltage:
- SELV (EN 60950, VDE0100/7.410), PELV (EN 50178)

Prot. class/degree:
- Class 1 (EN 60950) / IP20 (EN 60529)

This unit fulfills all major safety approvals for EU (EN 60 950, EN 60204-1, EN 50178), USA (UL 60950, E137006, UL508 LISTED, E198865), Canada (CAN/CSA-C22.2 No 60950 [CUR], CAN/CSA-C22.2 No. 14 [CUL]), CB Scheme (IEC 60950).

Product information (ML100e105), Rev.: 4. May 2004. Unless otherwise stated, specifications are valid for AC 230V input voltage, +25°C ambient temperature, and 5 min. run-in time. They are subject to change without prior notice.

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