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

Data Sheet

MiniLine ML95.100
with DC 24-28V / 95W

- Adjustable output voltage
  up to DC 24-28V
- PULS Overload Design™
  (high output overload capability)
- 115/230V Auto Select Input
- Limited Power Source, NEC class 2 and
  Hazardous Location Class I Div. 2
- Mounted and connected
  in record time, no tools required
- World-wide approvals (UL, EN, CSA) for
  industry and office/home
- Tiny: WxHxD = 73 x 75 x 103mm

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Mini is more.
Technical Data ML95.100

**Input**

| Input voltage | AC 100-240V (Auto Select), 47...63 Hz (AC 85...132V / AC 184...264V, DC 220...375V N+) |
| Input current | <2.0 A (@ AC 100V, 95 W Pout) |
| External fusing | not required, unit provides internal fuse (T3A15H, not accessible) |
| Transient immunity | Transient resistance acc. to VDE 0160/W2 (750V/1.3 ms) over entire load range |
| Hold-up time | >40 ms @ AC 230V, 24.5V / 3.9 A |

**Efficiency, Reliability**

| Efficiency | typ. 90% (AC 230V, 24.5V / 3.9 A) (see also diagram below) |
| Losses | typ. 10.5 W (AC 230V, 24.5V / 3.9 A) |
| MTBF (Reliability) | approx. 500,000 h acc. to Siemensnorm SN 29500 (24.5 V / 4.2 A, AC 230V, Tamb = +40°C) |

Prior to shipment, every unit undergoes the following tests in order to isolate any defective units which might suffer an early failure:

- Run-in/burn-in (Full load, Tamb = +60°C, on/off cycle)
- Functional test (100%)

**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 (2.871 in x 2.951 in x 4.061 in + DIN rail)
- Depth incl. terminals: 98 mm (3.85in) + DIN rail
- Weight: 360 g

Mounting orientation:

- 90° or 180° (cf. ‘Output’)

Ventilation/Cooling:

- Normal convection, no fan required
- Free space cooling recommended: 25 mm (1in) on sides with ventilation grid

Easy snap-on mounting onto the DIN-rail (TS35/7.5 or TS35/15).

Unit sits safely and firmly on the rail; no tools required even to remove:

- Easy snap-on mounting onto the DIN-rail (TS35/7.5, or TS35/15).
- Free space for cooling, vibration-resistant and maintenance-free:
  - 2 terminals per output

**Output**

| Output voltage | DC 24-28V (adj. by front panel potentiometer) |
| Output current | >20 ms @ AC 100V, 24.5V / 3.9 A |
| Hold-up time | >20 ms @ AC 196V, 24.5V / 3.9 A |
| Overvoltage prot. (OVP) | >40 ms @ AC 230V, 24.5V / 3.9 A |
| Ripple/Noise | <50mVpp (20 MHz bandwidth, 50 Ω measurement) |

**Environmental Data, EMC, Safety**

Ambient temperature range (measured 25 mm below unit):

- -25°C...+85°C
- -10°C...+70°C (for derating see diagram below)

Humidity:

- max. 95% (without condensation)

Electromagnetic emissions (EME):

- Class B (EN 55011, EN 55032) incl. output noise suppression
- EN 61000-3-2 (PFC)

Electromagnetic immunity (EMI):

- EN 61000-6-2 (includes EN 61000-6-1)

Safety:

- SELV (IEC/UL 60950-1), PELV (EN 50178)

Prot./class/degree:

- Class I (IEC 60950-1-1) IP20 (EN 60529)

The PSU complies with all major safety approvals for EU (EN IEC 61010-2-01, USA (UL 60950-1: E137006), UL508 LISTED: E198865, Canada (CAN/CSA-C22.2 No 60950-1 CUR, CAN/CSA-C22.2 No. 14 [CUL]) CB Scheme (IEC 60950-1, IEC 61010-2-01), Hazardous Location Class I Div 2, NEC Class

Design details – for your advantage:

- 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
- Easy, quick, durable and reliable installation.

**Diagrams**

- Output characteristic Vout/Iout
- Efficiency (@ Vout = 24.5V, typ.)
- Derating of output power
- Hold-up time with ACin