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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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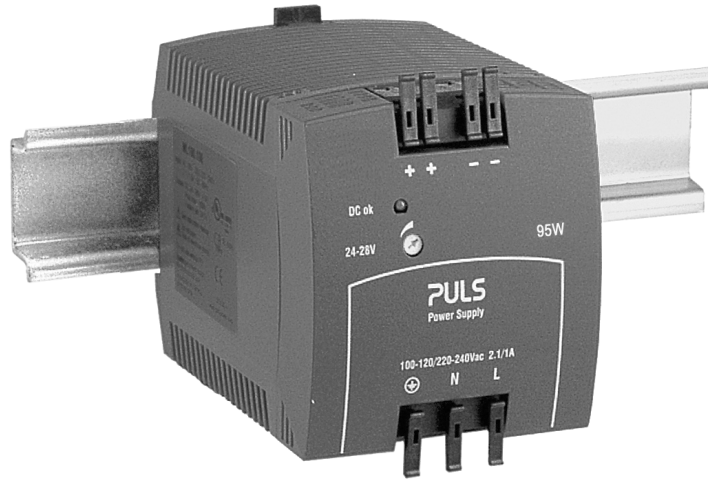
PULS does it again:
practical, versatile and reliable like
the SilverLine – yet small like
no other.

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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 100-120/220-240V (Auto Select), 47...63 Hz (AC 85...132V / AC 184...264V, DC 220...375V N= \oplus and L= \ominus) |
| Input current | <2.0 A (@ AC 100V _{in} , 95 W P _{out}) <0.95 A (@ AC 220V _{in} , 95 W P _{out}) |
| 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 (see diagram below) | >40 ms @ AC 230V, 24.5V / 3.9 A >20 ms @ AC 196V, 24.5V / 3.9 A >20 ms @ AC 100V, 24.5V / 3.9 A |

◆ Efficiency, Reliability

| | |
|--------------------|---|
| Efficiency | typ. 90% (AC 230 V, 24.5 V / 3.9 A) (see also diagram below) |
| Losses | typ. 10.5 W (AC 230V, 24.5 V / 3.9 A) |
| MTBF (Reliability) | appr. 500.000 h acc. to Siemensnorm SN 29500 (24.5 V / 4.2 A, AC 230 V, T _{amb} = +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, T_{amb} = +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
(2.87in x 2.95in x 4.06in + DIN rail)
- Depth incl. terminals: 98 mm (3,85in) + DIN rail
- Weight 360 g

Mounting orientation  (cf. 'Output')

Ventilation/Cooling Normal convection, no fan required

- Free space f. cooling recom'd.: 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

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)
Ferrules admissible
- Wire strip length 6mm (0.24in) recommended

◆ Output

| | |
|--------------------------|---|
| Output voltage | DC 24-28V (adj. by front panel potentiometer) • preset 24.5V ± 0.5% @ 3.9 A |
| Voltage regulation | stat. <1% V _{out} dyn. ±1.5% V _{out} over all |
| Ripple/Noise | <50mV _{PP} (20 MHz bandw., 50 Ω measur.) |
| Overvoltage prot. (OVP) | <36V |
| Output noise suppression | EMI values below EN 61000-6-3, even when using long (>2m), unshielded output cables |
| Rated continuous loading | up to 3.9 A @ 24.5 V / 3.2 A @ 28 V (convection cooling), depending on built-in orientation, V _{in} and T _{amb} For details see derating diagram below |
| Overload behaviour | PULS Overload Design™ : No switch-off at overload/short-circuit, instead: up to 1.4 · I _{rated} . So you need no oversizing to start awkward loads. |
| Protection | Unit is protected against (also permanent) short-circuit, overload and open-circuit. |
| Derating | depending on built-in orientation; see diagram below |
| Parallel operation | possible, no active load sharing |
| Power back immunity | 35V |
| Operating indicator | Green LED |

◆ Environmental Data, EMC, Safety

Ambient temperature range (measured 25 mm below unit)

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

Humidity max. 95% (without condensation)

Electromagnetic emissions (EME) EN 61000-6-3 (includes EN 61000-6-4)
Class B (EN 55011, EN 55022) incl. output noise suppression
EN 61000-3-2 (PFC)

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

Safe low voltage: SELV (EN 60950, VDE0100/T.410), PELV (EN 50178)
Prot. class/degree: Class 1 (EN 60950) / IP20 (EN 60529)

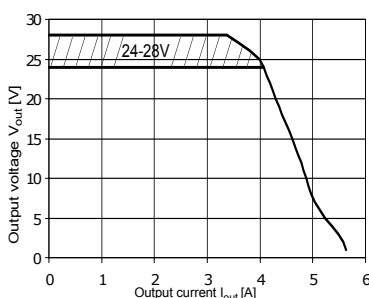
The PSU complies with all major **safety approvals** for EU (EN 60 950, EN 60204-1, EN 50178), USA (UL 60950, E137006, UL508 LISTED, E198865), Canada (CAN/CSA-C22.2 No 60950 [CUR], CAN/CSA-C22.2 No. 14 [CUL]), Limited Power Source NEC Class 2 and Hazardous Location Class I Div. 2 according to UL1604.

Design details – for your advantage:

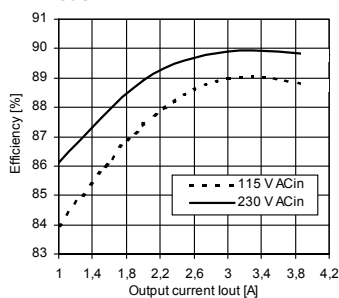
- All terminals are easy to reach as mounted on the front panel.
- Input and output are strictly apart from each other (input below, output above) and so cannot be mixed up.
- **Mounting and connection do not require any screwdriver**
→ Easy, quick, durable and reliable installation.

◆ Diagrams

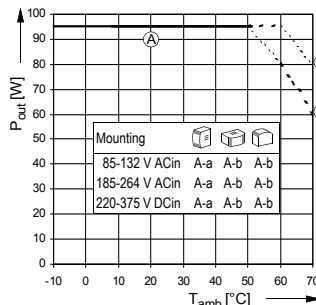
Output characteristic V_{out}/I_{out}



Efficiency (@ V_{out} = 24.5V, typ.)



Derating of output power



Hold-up time with ACin (at V_{out} = 24.5V, typ. + min.)

