



## Data Sheet

# MiniLine ML30.100 with DC 24-28V / 30W

- Mounted and connected within seconds, no tools required
- World-wide approvals (UL, EN, CSA, CB Scheme) for industry and office/home
- Tiny: WxHxD = 45 x 75 x 91mm
- NEC Class 2 Power Supply and Hazardous Location Class I Div. 2
- Output voltage adjustable to DC 28V
- 100-240V Wide Range Input (AC 85...264V permitted)
- PULS Overload Design (no switch off at overload but up to 1.5 times nominal current)

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# ◆ Technical Data ML30.100

## ◆ Input

Input voltage	AC100-240V (Wide Range), 50...60Hz Admiss. limits: AC 85...264V (DC 85...375V)
Input current	<0.6A (@ AC 100V, 30W P <sub>out</sub> ) <0.35A (@ AC 196V, 30W P <sub>out</sub> )
External Fusing	Not required, unit provides internal fuse (T3AH, not accessible)
Transient immunity	Transient resistance acc. to VDE 0160 / W2 (750V / 1.3ms), over entire load range
Hold-up time (see diagram below)	>190ms bei AC 230V, 24V / 1.3A >107ms @ AC 196V, 24V / 1.3A >19ms @ AC 100V, 24V / 1.3A

## ◆ Efficiency, Reliability

Efficiency	typ. 87.5% (AC 230V, 24V / 1.3A) (see also diagram below)
Losses	typ. 4.5W (AC 230V, 24V / 1.3A)
MTBF (Reliability)	ca. 650.000h acc. to Siemensnorm SN 29500 (24V/1.3A, AC 230V, T <sub>amb</sub> = +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<sub>amb</sub> = +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

- B x H x T 45mm x 75mm x 91mm (+ DIN Rail)  
Depth incl. terminals: 98mm (+ DIN Rail)
- Weight 230g

Mounting orientation  (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 (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 0.3-2.5mm<sup>2</sup> (28-12 AWG)
- solid cable 0.3-4mm<sup>2</sup> (28-12 AWG)  
Ferrules admissible
- Wire strip length 6mm recommended

## ◆ Output

Output voltage	DC 24-28V, adj. by front panel potentiometer • preset 24.5V ±0.5%
Voltage regulation	stat. 0.5% V <sub>out</sub> ; dyn. ±2% V <sub>out</sub> overall
Ripple/Noise	<50mV <sub>pp</sub> (20MHz bandw., 50 Ω-measur.)
Overvoltage prot. (OVP)	<40V
Output noise suppression	EMI values below EN 61000-6-3, even when using long (>2m), unshielded output cables
Rated continuous loading	up to 1.3A (convection cooling) depending on built-in orientation, V <sub>in</sub> and T <sub>amb</sub> ; for details see derating diagram below
Overload behaviour	<b>PULS Overload Design:</b> No switch-off at overload/short-circuit, instead: up to 1.5 · I <sub>rated</sub> . 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	Yes
Power back immunity	35V
Operation indicator	Green LED (DC ON)

## ◆ Environmental Data, EMC, Safety

Ambient temperature range (measured 25mm below unit)

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

Humidity max. 95% (without condensation)

Safe low voltage: SELV (EN60950, VDE0100/T.410), PELV (EN50178)  
Prot. class/degree: Class I (EN60950) / IP20 (EN60529)

The PSUs comply with all major **safety approvals**

UL 508 LISTED: E198865,

IEC 60950-1 CB Scheme,

UL 60950-1: E137006 US and Canada,

CSA Class I Div 2: 5318-01 (Canada), 5318-81 (USA),

DNV: TAA00002JT

NEC CLASS 2

Corrosive Gases: IEC 60068-2-60 Method 4

Corrosive Gases - G3: ISA-71.04 G3

CE: EU Declaration of Conformity (EU DoC): 2014/35/EU (LVD), 2014/30/

EU (EMC), 2011/65/EU (RoHS),

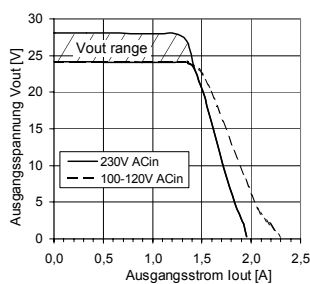
WEEE Directive (2012/19/EU), WEEE-Reg.-Nr. DE 55837529

Design details – for your advantage:

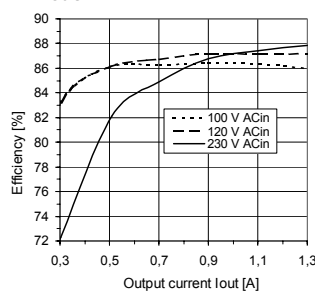
- All terminals are easy to reach as mounted on the front panel.
- Input and output are strictly apart from each other (input below, output above) and so cannot be mixed up
- **Mounting and connection do not require any screwdriver**  
→ Easy, quick, durable and reliable installation

## ◆ Diagrams

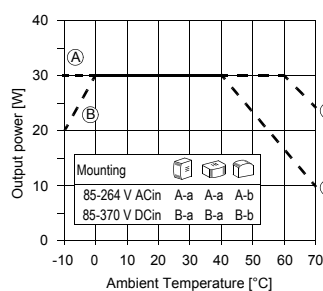
**Output characteristic V<sub>out</sub>/I<sub>out</sub> (min.)**



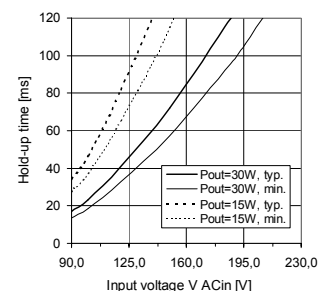
**Efficiency (@ V<sub>out</sub> = 24V, typ.)**



**Derating of output power**



**Hold-up time with ACin (@ V<sub>out</sub> = 24V, typ. + min.)**



Product information (ML30e100 / 240206), Rev.: 06. Februar 2024. 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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