

## POWER SUPPLY 1-PHASE, MINILINE SERIES 2

ML60.241  
 PSU 100-240V ac I/P 24V dc 2.5A 60W O/P

- Output current 0.63 A to 4.5 A
- Up to 90.4% efficiency
- AC and DC input voltage
- Width from 22.5mm
- 5 V, 12 V and 24 V DC options



### PRODUCT DESCRIPTION

3 A model included in Pulse series Mini Line 2 is the latest development series of small power supplies with very compact dimensions and low weight. The units have high efficiency, low EMC interference and good protection against mains transients. This makes them useful in almost all electrical environments and are a great addition to the earlier Mini Line series.

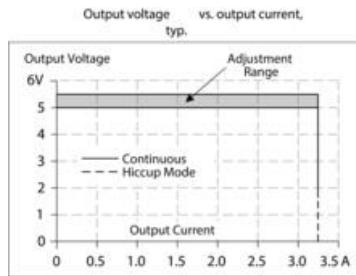
Very low quiescent current and high efficiency even at loads down to 60% makes the aggregates at a good energy and environmental choices.

5 A model is included in the earlier series Miniline having a very proven design and spring terminals for the best connection.

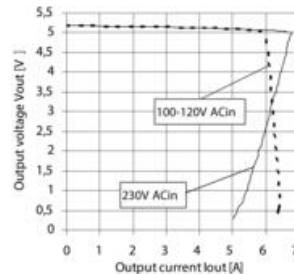
For good cooling free space of 40 mm above and 20 mm under the power supply is recommended. The sides 0 mm unless neighbouring products are a heat source, for example, a power supply unit. Leave then a 15 mm air gap

#### Output characteristics

ML15.051 (3 A)



ML30.101 (5A)



## TECHNICAL DATA

### INPUT DATA

<b>Input voltage ac</b>	100-240 V
<b>Input voltage ac min</b>	85 V AC
<b>Input voltage ac max</b>	264 V AC
<b>Input voltage dc</b>	110-300 V

<b>Input voltage dc min</b>	88 V DC
<b>Input voltage dc max</b>	375 V DC
<b>Inrush current at 120 V ac typical</b>	16 A
<b>Inrush current at 230 V ac typical</b>	32 A
<b>Input voltage range</b>	Wide-range
<b>Power factor at 120 V ac, full load. Typical</b>	0.58
<b>Power factor at 230 V ac, full load. Typical</b>	0.5
<b>Number of phases</b>	1

## OUTPUT DATA

<b>Output voltage</b>	24 V DC
<b>Output voltage min</b>	24 V DC
<b>Output voltage max</b>	28 V DC
<b>Output current</b>	2.5 A
<b>Power</b>	60 W

## EFFICIENCY / LIFETIME / MTBF

<b>Efficiency at 120 V ac, full load, typical</b>	87.8 %
<b>Efficiency at 230 V ac, full load, typical</b>	89.7 %
<b>Lifetime at 120 V ac, full load and +40 ° C</b>	93000 h
<b>Lifetime at 230 V ac, full load and +40 ° C</b>	128000 h
<b>MTBF (IEC 61709) 230 V ac, max load, 40 ° C</b>	1916000 h

## DIMENSIONS

<b>Width</b>	45 mm
<b>Height</b>	75 mm
<b>Depth</b>	91 mm
<b>Weight</b>	0.25 kg

## OTHER

<b>Approvals</b>	ABS, CB, CE, CSA, GL, NEC Class 2, UL
<b>Hold time at 120 V ac, typical full load</b>	24 ms
<b>Hold time at 230 V ac, typical full load</b>	107 ms
<b>IP class</b>	IP20
<b>Clamp type</b>	Screw on
<b>Material protection</b>	ABS plastic
<b>Supply frequency</b>	50-60 ±6 %

<b>Ripple max</b>	50 mV pp
<b>Series</b>	Miniline
<b>Power consumption 120 V ac</b>	0.98 A
<b>Power consumption 230 V ac</b>	0.58 A
<b>Power drop from +60 °C to + 70 °C</b>	1.5 W/°C
<b>Temperature min without derating</b>	-10 °C
<b>Temperature max without derating</b>	60 °C
<b>Type Power Supply</b>	AC-DC
<b>Active Transient</b>	Yes

Fig. 5-1 Output voltage vs. output current, typ.

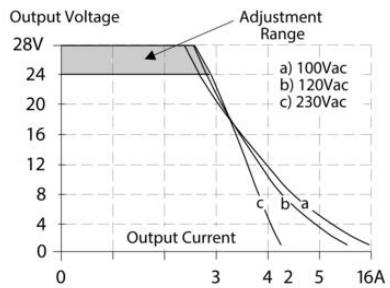


Fig. 8-1 Efficiency vs. output current at 24V, typ.

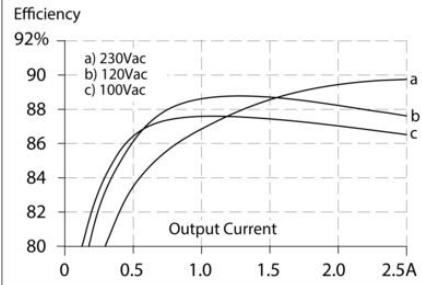


Fig. 8-2 Losses vs. output current at 24V, typ.

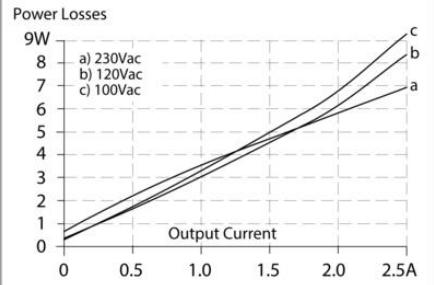


Fig. 14-1 Output power vs. ambient temp.

