

## POWER SUPPLY 1-PHASE, MINILINE SERIES 2

ML60.121

PSU 100-240V ac I/P 12V dc 4.5A 54W 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.

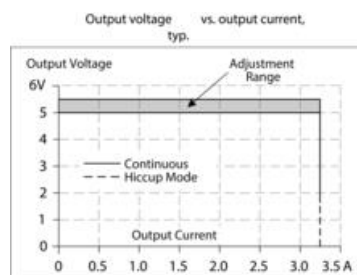
Very low quiescent current and high efficiency even at loads down to 60% makes the aggregates at a good energy and environmental choices.

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

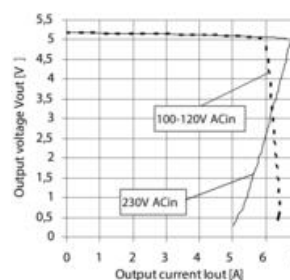
For good cooling free space of 40 mm above and 20 mm under the power supply is recommended. The sides 0 mm unless neighbouring products are a heat source, for example, a power supply unit. Leave then a 15 mm air gap

#### Output characteristics

ML15.051 (3 A)



ML30.101 (5A)



## TECHNICAL DATA

### INPUT DATA

Input voltage ac	100-240 V
Input voltage ac min	85 V AC
Input voltage ac max	264 V AC
Input voltage dc	110-300 V

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

**OUTPUT DATA**

Output voltage	12 V DC
Output voltage min	12 V DC
Output voltage max	15 V DC
Output current	4.5 A
Power	60 W

**EFFICIENCY / LIFETIME / MTBF**

Efficiency at 120 V ac, full load, typical	85.3 %
Efficiency at 230 V ac, full load, typical	87.2 %
Lifetime at 120 V ac, full load and +40 ° C	41000 h
Lifetime at 230 V ac, full load and +40 ° C	56000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	1690000 h

**DIMENSIONS**

Width	45 mm
Height	75 mm
Depth	91 mm
Weight	0.25 kg

**OTHER**

Approvals	ABS, CB, CE, CSA, GL, NEC Class 2, UL
Hold time at 120 V ac, typical full load	25 ms
Hold time at 230 V ac, typical full load	113 ms
IP class	IP20
Clamp type	Screw
Material protection	ABS plastic
Supply frequency	50-60 ±6 %

Ripple max	50 mV pp
Series	Miniline
Power consumption 120 V ac	0.91 A
Power consumption 230 V ac	0.54 A
Power drop from +60 °C to +70 °C	1.4 W/°C
Temperature min without derating	-10 °C
Temperature max without derating	60 °C
Active Transient	Yes

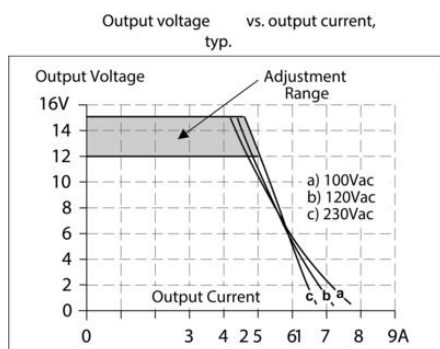


Fig. 8-1 Efficiency vs. output current at 12V, typ.

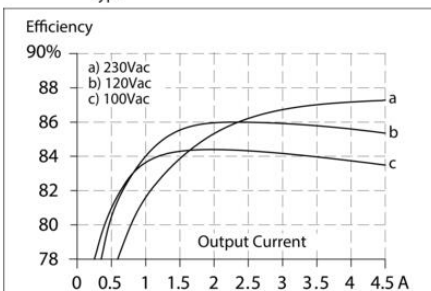


Fig. 8-2 Losses vs. output current at 12V, typ.

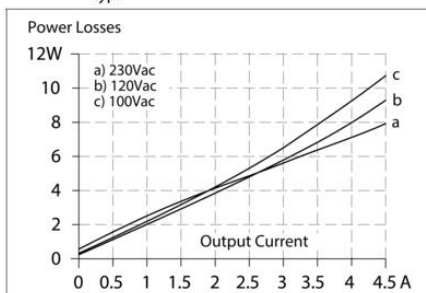


Fig. 14-1 Output power vs. ambient temp.

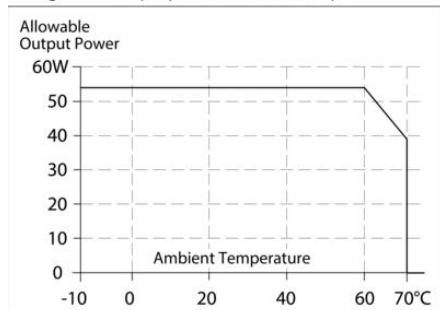


Fig. 10-1 Front side



Fig. 20-1 Front view

