

## POWER SUPPLY 1-PHASE, 5 V DC MINILINE SERIES

ML15.051 PULS PSU 15W 5-5.5VDC

- Output current 3 A and 5 A
- Up to 80% efficiency
- AC and dc input voltage
- Width of 22.5 mm
- 5 V, 12 V and 24 V DC options





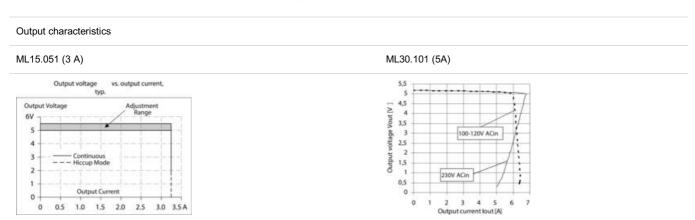
## PRODUCT DESCRIPTION

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



## **SPECIFICATIONS**

| Input voltage range  | Wide-range |
|----------------------|------------|
| Number of phases     | 1          |
| Input voltage AC     | 100-240 V  |
| Input voltage ac min | 85 V AC    |
| Input voltage ac max | 264 V AC   |

| rush current at 120 V ac typical  13 A  rush current at 230 V ac typical  26 A  ower Factor at 120 V AC, full load. Typical  0.51  ower Factor at 230 V AC, full load. Typical  0.44   | V DC  0 ±6 % A A DC |
|--|---------------------|
| rush current at 120 V ac typical  rush current at 230 V ac typical  26 A  ower Factor at 120 V AC, full load. Typical  ower Factor at 230 V AC, full load. Typical  ower Factor at 230 V AC, full load. Typical  ower Consumption At 120 V AC  ower Consumption At 230 V AC  ower Consumption At 230 V AC  over Consumption At 230 V AC  over Supply  AC-I  output voltage  output voltage min  output voltage max  output Current  ffect  ffect  ower Reduction Of 60 To 70 ° C  over Reduction Of 60 To 70 ° C  over Reduction Consumption Consumpti | 0 ±6 % A A DC       |
| rush current at 230 V ac typical  ower Factor at 120 V AC, full load. Typical  ower Factor at 230 V AC, full load. Typical  ower Factor at 230 V AC, full load. Typical  ower Consumption At 120 V AC  ower Consumption At 230 V AC  ower Consumption At 230 V AC  over Supply  AC-I  output voltage  output voltage min  output voltage max  output Current  ffect  ower Reduction Of 60 To 70 ° C  over Consumption At 230 V AC  over Reduction Of 60 To 70 ° C  | 0 ±6 % A A DC       |
| ower Factor at 120 V AC, full load. Typical  ower Factor at 230 V AC, full load. Typical  ower Factor at 230 V AC, full load. Typical  outply Frequency  ower Consumption At 120 V AC  ower Consumption At 230 V AC  over Supply  AC-I  output voltage  output voltage min  output voltage max  output Current  ffect  ower Reduction Of 60 To 70 ° C  ipple. max  ower power Supple of Consumption Act 230 V AC  over Reduction Of 60 To 70 ° C   | 0 ±6 % A A DC       |
| ower Factor at 230 V AC, full load. Typical  upply Frequency  ower Consumption At 120 V AC  ower Consumption At 230 V AC  over Supply  AC-I  utput voltage  utput voltage min  tutput voltage max  5.5 V  utput Current  ffect  ffect  fower Reduction Of 60 To 70 ° C  ipple. max  comperature Range Without Derating From  50-6  0.44  | 0 ±6 % A A DC       |
| power Consumption At 120 V AC  Dower Consumption At 230 V AC  Dower Supply  AC-I  Prope Power Supply  AC-I  AC-I  AC-I  Supple Power Supply  AC-I  AC- | 0 ±6 % A A DC       |
| ower Consumption At 120 V AC  ower Consumption At 230 V AC  over Supply  AC-I  utput voltage  utput voltage min  5 V I  utput voltage max  5.5 V  ower Reduction Of 60 To 70 ° C  ipple. max  comperature Range Without Derating From  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.28  0.17  0.4 V  0.6  0.7  0.7  0.7  0.7  0.7  0.7  0.7   | A A DC DC           |
| ower Consumption At 230 V AC  ype Power Supply  AC-I  utput voltage  tutput voltage min  5 V I  utput voltage max  5.5 V  utput Current  ffect  5 V I  ower Reduction Of 60 To 70 ° C  ipple. max  50 m  -10 °   | A DC DC             |
| utput voltage 5 V I  utput voltage min 5 V I  utput voltage max 5.5 V  utput Current 3 A  ffect 15 V  ower Reduction Of 60 To 70 ° C 0.4 V  ipple. max 50 m  emperature Range Without Derating From -10 °  | DC DC               |
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| utput voltage min 5 V I  utput voltage max 5.5 V  utput Current 3 A  ffect 15 V  ower Reduction Of 60 To 70 ° C 0.4 V  ipple. max 50 m  emperature Range Without Derating From -10 °   |                     |
| utput voltage max  5.5 \ utput Current  3 A  15 V  ower Reduction Of 60 To 70 ° C  ipple. max  50 m  -10 °   |                     |
| utput Current 3 A  ffect 15 V  ower Reduction Of 60 To 70 ° C 0.4 V  ipple. max 50 m  emperature Range Without Derating From -10 °   | / DC                |
| bower Reduction Of 60 To 70 ° C 0.4 \text{ipple. max} 50 m c -10 ° C   | / DC                |
| ipple. max  50 m  emperature Range Without Derating From  -10 s  | ,                   |
| ipple. max 50 m emperature Range Without Derating From -10 °   |                     |
| emperature Range Without Derating From -10°  |                     |
| · · · · · · · · · · · · · · · · · · ·  |                     |
| emperature Range Without Derating 10 60  |                     |
|  | <b>5</b>            |
| fficiency At 120 V AC, full load. Typical 76.8   | %                   |
| fficiency At 230 V AC, full load. Typical 77.2   | %                   |
| fetime at 120 V ac, full load and +40 ° C 7000   | 00 h                |
| fetime at 230 V ac, full load and +40 ° C 9300   | 00 h                |
| TBF (IEC 61709) 230 V AC, Maximum Load, 40 ° 2686  | 0000 h              |
| fidth 22.5   | mm                  |
| eight 75 m   | nm                  |
| epth 91 m  | nm                  |
| reight 0.13  |                     |
| lamp type Scre   | kg                  |

| Series  | Miniline                              |
|---|---------------------------------------|
| Approvals                                     | ABS, CB, CE, CSA, GL, NEC Class 2, UL |
| Material Protection                           | ABS plastic                           |
| Hold-up time at 120 V AC, full load. Typical. | 45 ms                                 |
| Hold-up time at 230 V AC, full load. Typical. | 186 ms                                |
| IP Class                                      | IP20                                  |

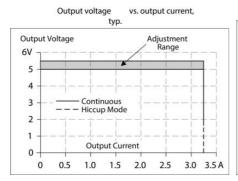


Fig. 8-1 Efficiency vs. output current at 5V, Efficiency 78% 77 76 75 74 a) 100Vac b) 120Vac c) 230Vac 73 72 71 **Output Current** 70 0.5 1.0 1.5 2.0 2.5 3.0A

Fig. 8-2 Losses vs. output current at 5V, typ.

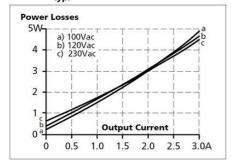


Fig. 6-2 Hiccup mode; output current at shorted output, 230Vac, typ.

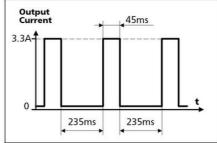


Fig. 10-1 Front side



