

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

ML15.121 PULS PSU 15W 12-15VDC

- 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

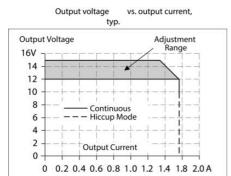


## **SPECIFICATIONS**

| 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   |

| 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                       | 13 A                                  |
| Inrush current at 230 V ac typical                       | 26 A                                  |
| Power Factor at 120 V AC, full load. Typical             | 0.51                                  |
| Power Factor at 230 V AC, full load. Typical             | 0.44                                  |
| Supply Frequency   | 50-60 ±6 %                            |
| Power Consumption At 120 V AC                            | 0.28 A                                |
| Power Consumption At 230 V AC                            | 0.17 A                                |
| Output voltage   | 12 V DC                               |
| Output voltage min                                       | 12 V DC                               |
| Output voltage max                                       | 15 V DC                               |
| Output Current   | 1.3 A                                 |
| Effect   | 15 W                                  |
| Power Reduction Of 60 To 70 ° C                          | 0.4 W/°C                              |
| Ripple. max  | 75 mV pp                              |
| Temperature Range Without Derating From                  | -10 °C                                |
| Temperature Range Without Derating To                    | 60 °C                                 |
|  |                                       |
| Efficiency At 120 V AC, full load. Typical               | 83 %                                  |
| Efficiency At 230 V AC, full load. Typical               | 82.5 %                                |
| Lifetime at 120 V ac, full load and +40 ° C              | 126000 h                              |
| Lifetime at 230 V ac, full load and +40 ° C              | 125000 h                              |
| MTBF (IEC 61709) 230 V AC, Maximum Load, 40 $^{\circ}$ C | 3811000 h                             |
|  |                                       |
| Width  | 22.5 mm                               |
| Height   | 75 mm                                 |
| Depth  | 91 mm                                 |
| Weight   | 0.13 kg                               |
| Clamp type   | Screw                                 |
|  |                                       |
| Series   | Miniline                              |
| Approvals  | ABS, CB, CE, CSA, GL, NEC Class 2, UL |
|  |                                       |

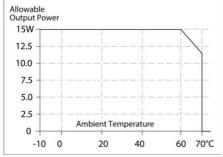
| Material Protection                           | ABS plastic |
|---|-------------|
| Hold-up time at 120 V AC, full load. Typical. | 46 ms       |
| Hold-up time at 230 V AC, full load. Typical. | 191 ms      |
| IP Class                                      | IP20        |
| Active Transient                              | Yes         |



Efficiency vs. output current at 12V, Fig. 8-1 typ. Efficiency 84% 83 82 81 80 a) 100Vac b) 120Vac c) 230Vac 79 78 77 76 0.6 0.8 1.0 1.2 1.4A 0.2 0.4

Fig. 8-2 Losses vs. output current at 12V, typ. Power Losses 4W a) 100Vac b) 120Vac c) 230Vac 3.5 3.0 2.5 2.0 1.5 1.0 0.5 Output Current 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 A 0

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



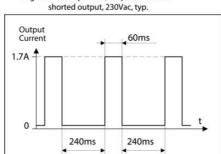


Fig. 6-2 Hiccup mode; output current at

Fig. 10-1 Front side



