

# PRYSM 12V/1.5A AC ADAPTER DATA SHEET

## Main Features

Power Rating	18W
Mains Input	AC single phase
Output	12V-1.5A

## Module Specifications

### 3.1 AC INPUT

3.1.1 Input rated range	90 Vac-270 Vac
3.1.2 Input frequency	50/60 Hz
3.1.3 Input current	<600mA RMS @ 90 Vac
3.1.4 Efficiency	>80% Under maximum load @ 230 Vac @ room ambient 25°C
3.1.5 Inrush current	<30A Peak @ 230 Vac cold start at 25°C
3.1.6 No load power	<300mW Max @ 230 Vac input

### 3.2 DC OUTPUT

3.2.1 Output voltage	12.0 Vdc
3.2.2 Output current	1.5 A
3.2.3 Line regulation	<±1 %
3.2.4 Load regulation	<±4 %
3.2.5 Ripple	<120mV
3.2.6 Noise	<240mV (measured with 0.1µF ceramic disc & 10µF electrolytic capacitor across output)
3.2.7 Output over current	>2.5A-3.0A Max
3.2.8 Hold up time	>50m Sec @ 230 Vac input & Full Load
3.2.9 Turn-on delay	<2 Sec Max @ 230 Vac input & Full Load
3.2.10 Rise time	<30m Sec Max @ Full Load
3.2.11 Fall time	<20m Sec Max @ Full Load



## TOP FEATURES



AUTO RESTART



OVERHEATING  
PROTECTION



SHORT CIRCUIT  
PROTECTION

### 3.3 PROTECTION

- 3.3.1 Output overload / short circuit protection During overload & short circuit, it enters auto restart mode. Auto restart alternately enables and disables the switching of the power MOSFET until the fault condition is removed thereby protecting the equipment
- 3.3.2 Over temperature protection In case of overheating, the power MOSFET disables and remains disabled until it cools down. Hence the product is protected

### 3.4 ENVIRONMENT

- 3.4.1 Temperature Operation Ambient 0°C to +50°C  
Storage -40°C to +70°C ambient
- 3.4.2 Humidity 93% RH at 40°C

### 3.5 PRODUCT SAFETY

- 3.5.1 Dielectric voltage withstand test (hi-pot) 3.0K Vac RMS, 50Hz for 1 min
- 3.5.2 Insulation resistance When tested with a 500 Vdc Megger, I.R should be >100Mohms between shorted input shorted output terminal

### 3.6 RELIABILITY & QUALITY

- 3.6.1 Dielectric voltage withstand test (hi-pot) 3.0K Vac RMS, 50Hz for 1 min
- 3.6.2 Insulation resistance All semiconductors' junction temperatures do not exceed the manufacturer's maximum thermal rating, hence assuring reliability

### 3.7 EMI/EMC

- 3.7.1 Conducted emission Designed to meet EN55022-class B
- 3.7.2 Surge immunity As per test standard IEC61000-4-5 test level 3: +/-2KV in differential mode
- 3.7.3 Electrical fast transient As per test standard IEC61000-4-4 test level 3:2KV

### 3.8 TERMINATIONS

- 3.8.1 AC input AC input through 2-pin integrated Indian BIS Standard Plug
- 3.8.2 DC output DC twin parallel cable 16 strands/0.152 mm wire of 1.2 m length

### 3.9 ELECTRICAL SAFETY

- 3.9.1 Protection from electric shock and energy hazards As per the below test standard
- 3.9.2 SELV circuits As per the below test standard
- 3.9.3 Limited power sources As per the below test standard
- 3.9.4 Measurement of clearance and creepage distances As per the below test standard

### 3.10 FIRE SAFETY

- 3.10.1 Resistance to fire As per the below test standard

#### Test Standard

IS 13252(Part 1):2010+A1:2013+A2:2015/  
IEC 60950-1:2005 +A1:2009 +A2:2013

### 3.11 ENCLOSURE

3.11.1 Material	PC-ABS
3.11.2 Dimensions	76x47x29 mm
3.11.3 Enclosure colour	Black
3.11.4 AC pin material	Brass with tin plated

### 3.12 WEIGHT

71.5 gm with cable (appx)





**PRYSM<sup>®</sup>**  
Technology for all



**VELANKANI**

[www.prysmelectronics.com](http://www.prysmelectronics.com)

**Contact Us:**

Velankani Electronics Pvt. Ltd.

43, Electronics City, Phase-1, Hosur Road, Bangalore- 560100, India

Tel: +91 80 4668 5847

Email: [insidesales@velankanigroup.com](mailto:insidesales@velankanigroup.com)