# **15W MBR SERIES**

### Rail Applications

#### Summary

The MBR series consists of low power (up to 15W) encapsulated converters, which incorporate full surge and transient protection to RIA12 and EN50155. They are available in single, dual and triple output versions, with nominal inputs from 24V up to 110V. Normally supplied with pins for PCB mounting, they are also available with flying leads for bulkhead mounting.



Special features include:

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- Rugged encapsulated construction
- Up to three outputs
- Wide input range

#### Input Specification

The following input voltage versions are available as standard:

110V (66.0 - 137.5V) dc (suffix A)

72V (43.2 - 90.0V) dc (suffix D)

52V (31.2 - 65.0V) dc (suffix C)

24V (16.8 - 33.6V) dc (suffix B)

Other ranges are available to order

Input Ripple : To RIA 13 and EN50155

Input Protection : Reverse polarity protection. Surges and transients to BRB/RIA 12 & EN50155

Inrush Current : Limited to typically 5 x nominal current (after 0.1ms)

Efficiency: 75% typical

#### Output Specification

Maximum Output Power : up to 15W

Output Versions : Single, Dual and Triple

Output Voltage : Can be specified from 5V to 30V Setting Tolerance :  $\pm 1.0\%$  at 50% load, 15 $^{\circ}$ C to 25 $^{\circ}$ C

Minimum Load : Typically zero for all outputs, although in some cases a minimum load of up to

5% on U1 for full performance

Line Regulation :  $\pm 0.2\%$  all outputs

Load Regulation :  $\pm 0.5\%$  all outputs

Temperature Coefficient : <0.02% / °C

Output Ripple : <1% Pk-Pk of Output Voltage

Output Noise : <50mV Pk-Pk superimposed (up to 20MHz)

Response Time : 1.0ms to within 2% (for a 20% - 90% load change)

Output Protection : All outputs protected against indirect transients to BRB/RIA 12

Output Current Limit : Operates at a minimum of 110% of nominal loading.

Primary Power Limit : Operates at approximately 120% of full power

Isolation : Input to Output 2.0kV ac

Input to Earth
Output to Earth
Output to Output
Output to Output
250V dc

#### **Mechanical Details**

Construction : Encapsulated Module

Dimensions : Depth = 84mm (105mm including flange)

Width = 72mm Height = 32mm

Weight: 300g

Connections : Solder pins for PCB mounting as standard. Specify Q7 for connections via

flying leads (halogen free cable)

Fixings : Two  $\varnothing$  5mm fixing holes on flanges

## Environmental

Operating Temperature : -25°C to +65°C (no derating)

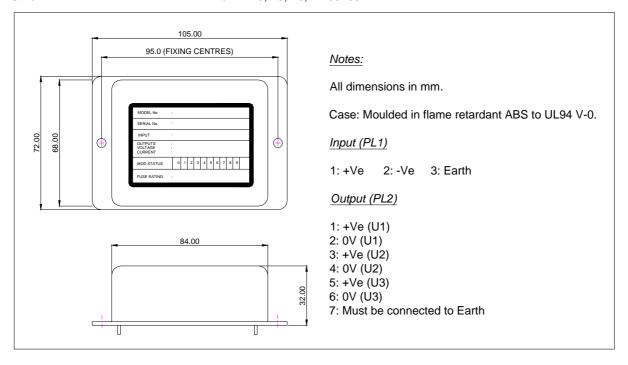
Storage Temperature : -40°C to +85°C Relative Humidity : 99% max.
Sealing : IP65

Vibration : RIA 13, RIA 20 Cat. 1

## **Applicable Norms**

EMC : BRB/RIA 12, 18; EN50155, EN50121-3-2

Other : BRB/RIA 13, 18, 20; EN50155



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