



15 W MBR SERIES

DC/DC CONVERTER

Description

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:

- Fully protected to rail norms
- Rugged encapsulated construction
- Up to three outputs
- Wide input range

Input Specifications

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)
36V	(21.0 - 50.4V)	dc	(suffix F)
24V	(16.8 - 33.6V)	dc	(suffix B)

Other ranges are available to order

Product reference	All references
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 Specifications

Product reference	All references
Maximum Output Power	up to 15W
Output Versions	Single, Dual and Triple
Output Voltage	Can be specified from 5V to 30V
Setting Tolerance	±1.0% at 50% load, 15°C to 25°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	±0.2% all outputs
Load Regulation	±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 1.0kV ac Output to Earth 1.0kV ac Output to Output 250V dc



Environmental Details

Product reference	All references
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

Item	Reference
EMC	BRB/RIA 12, 18; EN50155, EN50121-3-2
Other	BRB/RIA 13, 18, 20; EN50155

Mechanical Characteristics

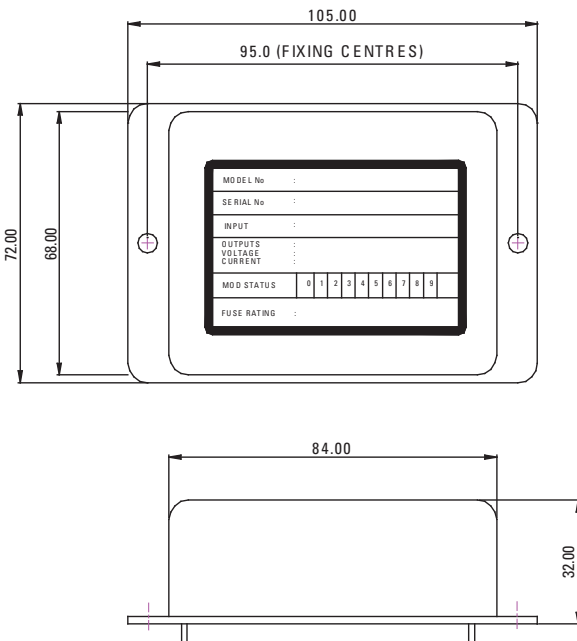
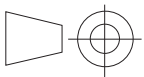
Product reference	All references
Construction	Encapsulated Module
Dimensions	Depth = 84mm (105mm including flange) Width = 72mm Height = 32mm
Weight	300g
Connections	Solder pins for PCB mounting as standard. Specify Q7 for connections via flying leads (halogen free cable)
Fixings	Two Ø5mm fixing holes on flanges

Technical Drawing

NOTES

1. All dimensions in mm
2. Specifications subject to change without notification

3.



Case: Moulded in flame retardant ABS to UL94 V-0.

Input (PL1)

1: +Ve 2: -Ve 3: Earth

Output (PL2)

- 1: +Ve (U1)
- 2: 0V (U1)
- 3: +Ve (U2)
- 4: 0V (U2)
- 5: +Ve (U3)
- 6: 0V (U3)
- 7: Must be connected to Earth