
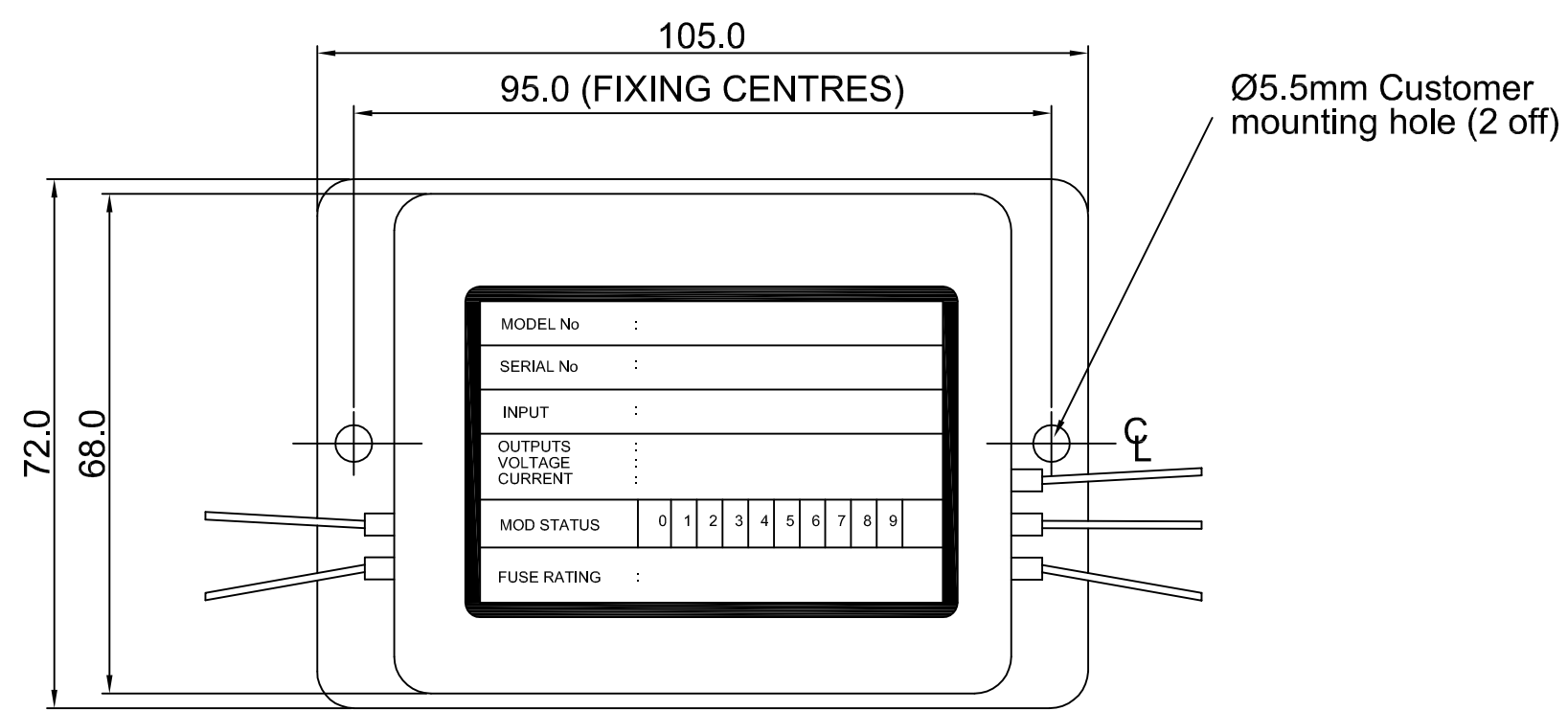


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1		2		3		4	
<div></div>							
01		CONVERTIDOR 24VDC/± 15VDC CONVERTITORE 24VDC/± 15VDC		1		MARKET POWER MBRH 1515-B/1Q7	
MARCA MARCA		DESCRIPCIÓN DESCRIZIONE		CANT. QUANT.		CÓDIGO O NORMA CÒDICE O NORMA	
						MATERIAL O REFERENCIA MATERIALE O REFERENZA	
						PESO PESO (Kg)	
						DIMENSIONES DIMENSIONES (mm)	
<div></div>							
LOCOMOTIVA E401				0.300		A4	
A Modificar cajetin		2016-07-26 96015		ISO 2768-cK		BEASAIN	
B ANADIR DATASHEETS		2016-09-27 96015		DIN ISO 13920-BF		OT	
						Y	
Ed.		Descrizione		Date		Nome	
X:X		Disegnato		16-10-2012		NOMBRE	
		Comprovato		16-10-2012		12199	
		Verificato		16-10-2012		14422	
		Date		Nome		CONVERTIDOR 24VDC/± 15VDC	
		es/it				CONVERTITORE 24VDC/± 15VDC	
CONSTRUCCIONES Y AUXILIAR DE FERROCARRILES, S.A. BEASAIN (GIPUZKOA)				B . 20 . 71 . 145		B	
						1 / 4	





Notes:

All dimensions in mm.

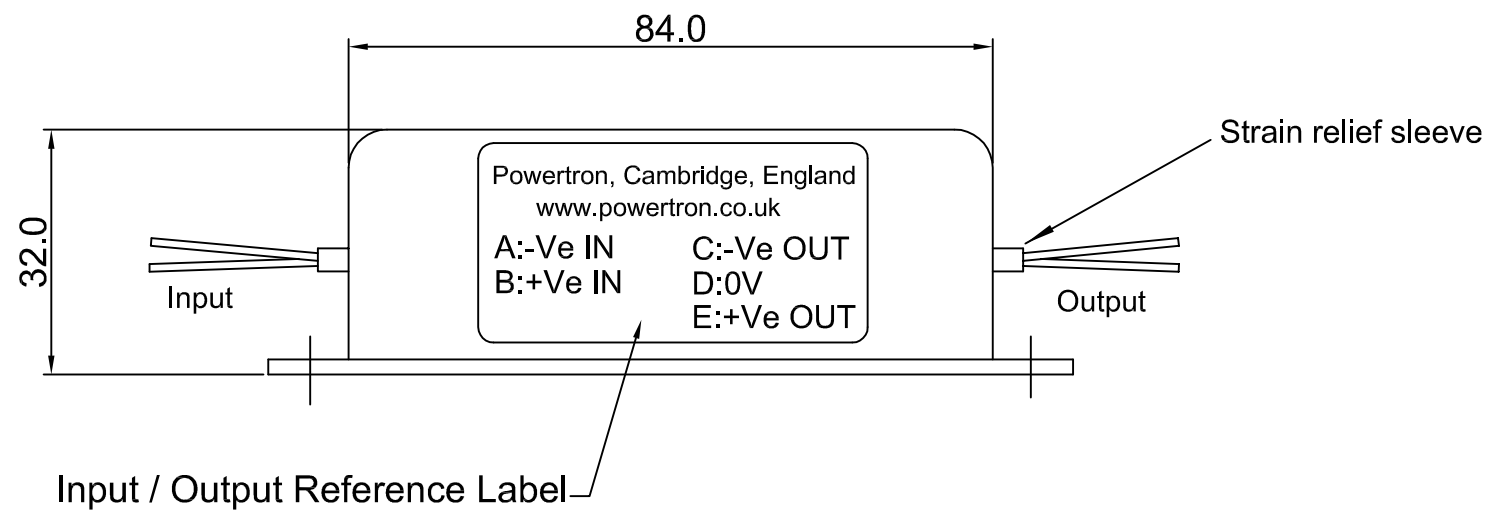
Case: Moulded in flame retardant ABS to UL94 V-0.

All leadouts are 0.6mm<sup>2</sup> (19/0.2mm) halogen free cable (Powertron p/n 361072)

Length from outside of the potted box is 350mm  $\pm$ 10mm unterminated.

Cable marker code (as per label)

- A: -Ve IN
- B: +Ve IN
- C: -Ve OUT
- D: 0V
- E: +Ve OUT



02	05.01.09	2114		
01	19.06.03	---	JSH	19.06.03
Iss	Date	ECN	Appvd	Date
Title		MBR DUAL OUTPUT (5 WIRE) Q7 OUTLINE		
Drawing Number	900-908	Sheet 1 of 1		



### > Description

The 25W MBRH is an enhanced version of the well established Powertron® 15W MBR series. The MBRH offers all the same electrical features as the MBR, and in the same enclosure, but at an increased output power rating of 25 Watts. One of the main benefits of both the MBR and MBRH over similar products is that they incorporate all of the components necessary for full EMC compliance and EN50155 class S2 interruptions (10ms hold-up time). It is not necessary for any additional filtering or capacitors to be added by the end user. Intended for rail applications, these encapsulated modules are fully compliant with both the latest European norms and the older BRB RIA standards.

Special features include:

- Single and dual output versions
- Rugged encapsulated construction
- Requires no external filter components or capacitors for hold-up
- Equally suitable for PCB or bulkhead mounting (choice of cables connections or PCB pins)

### > Input Specifications

The following input voltages 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)
230V	(185.0 - 265V)	ac	(Suffix Z) Consult Sales office for versions

Parameter	Detail
Input Ripple	To RIA 13 and EN50155
Input Protection	Reverse polarity protection. Surges and transients to RIA 12 & EN50155
Inrush Current	Limited to typically 5 x nominal current ( <i>after 0.1ms</i> )
Efficiency	80% typical
Hold up time	10ms to EN50155 Class S2

### > Output Specifications

Parameter	Detail
Maximum Output Power	25W. (20W for 5Vdc output version)
Output Versions	Single and Dual
Output Voltage	Can be specified from 5V to 48V
Setting Tolerance	±1.0% at 50% load, 15°C to 25°C
Minimum Load	Typically zero for both outputs, although in some cases a minimum load of up to 5% on U1 for full performance.
Line Regulation	±0.2%
Load Regulation	±0.5% - (flying cable version may be ±1%)
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	Outputs protected against indirect transients to RIA 12
Current limit	Operates at approximately 120% of full power. Auto recovery.
Isolation (tested at dc equivalent voltage)	Input to Output      1.0kV ac Output to Output    500V ac



## > Environmental Details

Parameter	Detail
Operating Temperature	-25°C to +65°C (no derating)
Storage Temperature	-40°C to +85°C
Cooling	Convection
Relative Humidity	99% max.
Shock & Vibration	EN 50155 (EN 61373), RIA 20
Environmental Protection	IP65



## > Applicable Norms

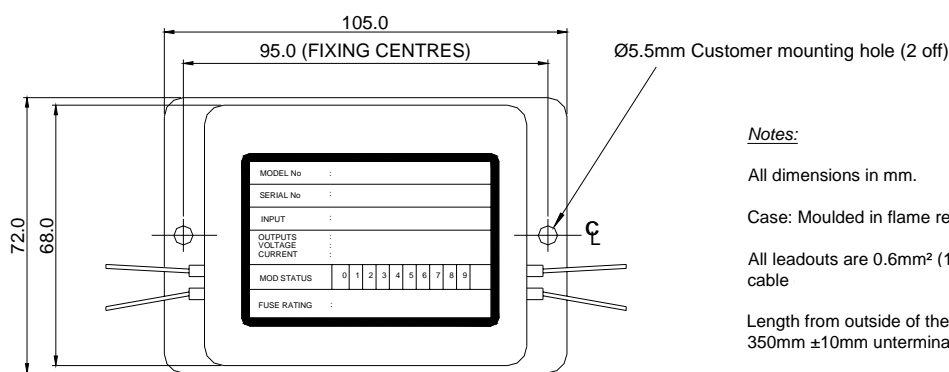
Parameter	Detail
EMC	RIA 12, 18; EN50155 (2007), EN50121-3-2 (2006)
Other	RIA 13, 18, 20; EN50155 (2007)



## > Mechanical Characteristics

Option	Detail	Code
Connections	Input / output cables 350mm	Q7
Connections	Input / output cables 500mm	Q8
Connections	Input cables 1000mm Output cables 300mm	Q12
Din rail mounting plate	Drawing 900-931	D

Parameter	Detail
Construction	Encapsulated Module
Dimensions	Length = 84 mm (mounting flange increases length to 105 mm) Width = 72 mm Height = 32 mm
Weight	300g
Connections	Solder pins for PCB mounting as standard Option for input / output cables (halogen free cable)
Fixings	Two Ø 5mm clear holes mounting flange



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