



## AC/DC converter for railway applications



### Description:

The 300W ATG series is a range of cost-effective, medium power single output converters that comply fully with the latest rail specifications and norms for protection and EMC. Although simple in construction, the mounting arrangement ensures compliance with the vibration and shock requirements of EN50155.

### Special features include:

- Wide choice of output voltages
- High efficiency
- Fully compliant with rail standards, including EN50155, EN50121.3.2 & EN45545

Option	Detail	Code
Output status	Output fail relay	L
Current share	Droop current share plus series diode	S
Current share	Droop current share	S2

### Input specifications:

- 230Vac (161 to 253V) ac (Suffix Z)

Parameter	Detail
Input Protection	Surges and transients EN50155 (direct and indirect)
Inrush Current	Limited to typically 6 x nominal current (after 0.1ms)
Efficiency	90% typical
Hold-up time	1/2 Cycle to EN51055
Mains Frequency	47 to 65Hz

### Output specifications

Parameter	Detail
Maximum Output Power	300W (expect 12V output version 240W)
Output Versions	Single output only
Output Voltage	Can be specified from 12V to 110Vdc
Setting Tolerance	±1.0% at 50% load, 15°C to 25°C
Minimum Load	Zero
Line Regulation	±0.5%
Load Regulation	±0.5%
Temperature Coefficient	<0.02% / °C
Output Ripple	<1% Pk-Pk of Output Voltage
Output Noise	<75mV Pk-Pk superimposed (up to 20MHz)



Powering Business Worldwide

## Output specifications (Continued)

Parameter	Detail
Response Time	0.5ms to within 1% (for a 10% - 100% load change)
Current limit	Operates at approximately 110% of rated output power
Thermal Protection	Shuts down PSU if safe internal temperature is exceeded. Auto recovery.
Isolation	Input to Output 2.0kV ac (tested at 3.0kV dc)
	Input to Case 1.5kV ac (tested at 2.2kVdc)
	Output to Case 1.5kV ac (tested at 2.2kVdc)

## Environmental details

Parameter	Detail
Operating Temperature	-25°C to +70°C (no derating). Base plate is suitable for cold wall mounting and must not exceed 85°C for full power operation.
Storage Temperature	-55°C to +80°C
Cooling	Convection / Conduction
Relative Humidity	95% max.
Shock & Vibration	EN50155 (EN61373)
Environmental Protection	IP20

## Applicable norms

Parameter	Detail
EMC	EN50155, EN50121-3-2
Other	EN50155, EN45545

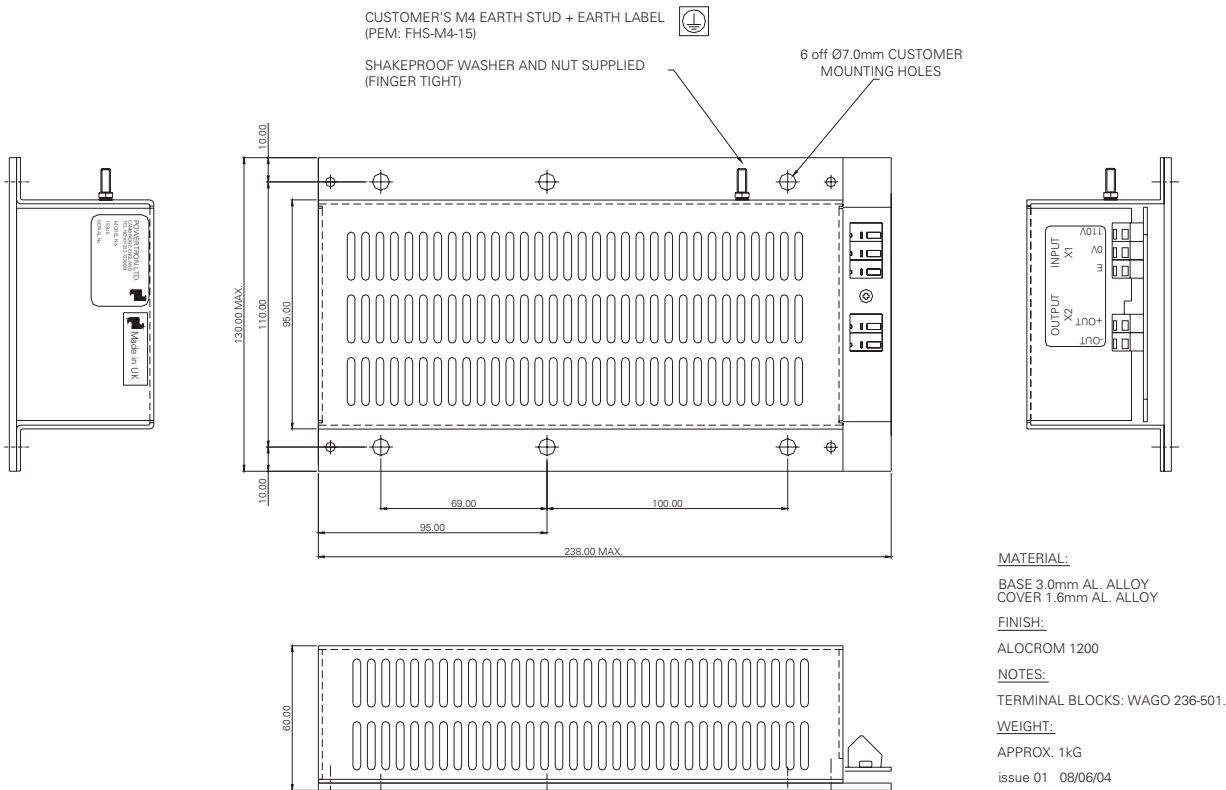
## Mechanical characteristics

Parameter	Detail
Construction	Simple aluminium chassis
Dimensions	Length = 238mm
	Width = 130mm
	Height = 60mm
Weight	<1.0kg
Connections	Wago 236-501 terminal blocks and an M4 earth stud.
Fixings	Six $\varnothing$ 7mm fixing holes on base plate.

## Options for ATG series

Option	Detail	Code
Extended temperature range	-40°C to +70°C	T
Mounting	DIN rail fixing	D

## Technical drawing



**Eaton**  
 EMEA Headquarters  
 Route de la Longeraie 7  
 1110 Morges, Switzerland  
 Eaton.eu

**Eaton Electrical Products Ltd**  
 Glebe Farm Technical Campus  
 Knapwell, Cambridge, CB23 4GG  
 United Kingdom  
 Tel: +44 (0)1954 267726  
 MartekUKsales@eaton.com

© 2018 Eaton  
 All Rights Reserved  
 Publication No. PAXXXXXXXXXX / CSSC-281  
 May 2018

Eaton is a registered trademark.  
 All other trademarks are property  
 of their respective owners.