



AAL®
Autometers Alliance Ltd

IGBT based **3X130KVA** **Auxiliary Converter**

to be used for Three Phase Locomotives

The product is developed for feeding auxiliary power to WAP5 / WAP7 / WAG9, WAG9H three phase locomotives for Indian Railways. It is in accordance with IEC 61287-1, IEC 60571, IEC 60310 and IEC 61373.

Salient Features

- A modular concept, in which, each module serves a specific power and control function
- Designed to give 3x130kVA with VVVF control
- Designed to sustain wide voltage and frequency variations of catenary
- Voltage (DC Link) indication (LED) for safety of maintenance staff
- Interface with safety interlocking system
- Digital Signal Processor (DSP) based electronics for controlling and monitoring
- Communication between converter and the vehicle control unit through MICAS-S2 and TCN61375
- Utilization of existing cooling systems no additional blower fan
- Easy to maintain and lower life cycle cost





Technical Specifications

A. Input

Features	Values
Minimum Voltage	760V, 50Hz±8%
Nominal Voltage	1000V, 50Hz±8%
Maximum Voltage	1240V, 50Hz±8%

B. Output

Features	Values
AC Output	
Output Power	3×130kVA
Voltage	415V±5% (L-L)
Frequency	Controlled with nominal as 50Hz±3%
Waveform	Sine wave
DC Output	
Voltage	DC111V±5%
Current	80A

Applications

The unit is put on board on three phase locomotive WAP7 / WAG9. This is used to provide stabilized 3 phase sine wave voltage for safe and reliable operation of auxiliary motors and load. This also feeds DC load and battery charging.

C. General

Features	Values
Operating ambient temperature	0 to +70°C
Cooling	Forced air cooling for control & power cubicle
Control Voltage	Nominal (77 to 137.5V dc)
Mounting	Onboard floor mounting
Weight Cubicle – 1	≈700Kg
Weight Cubicle – 2	≈1200Kg
Size of Cubicle – 1	1160x1020x1860 (LxDxH)
Size of Cubicle – 2	1520x1020x1860 (LxDxH)
Cubicle	IP52 for electronics and semiconductor



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