

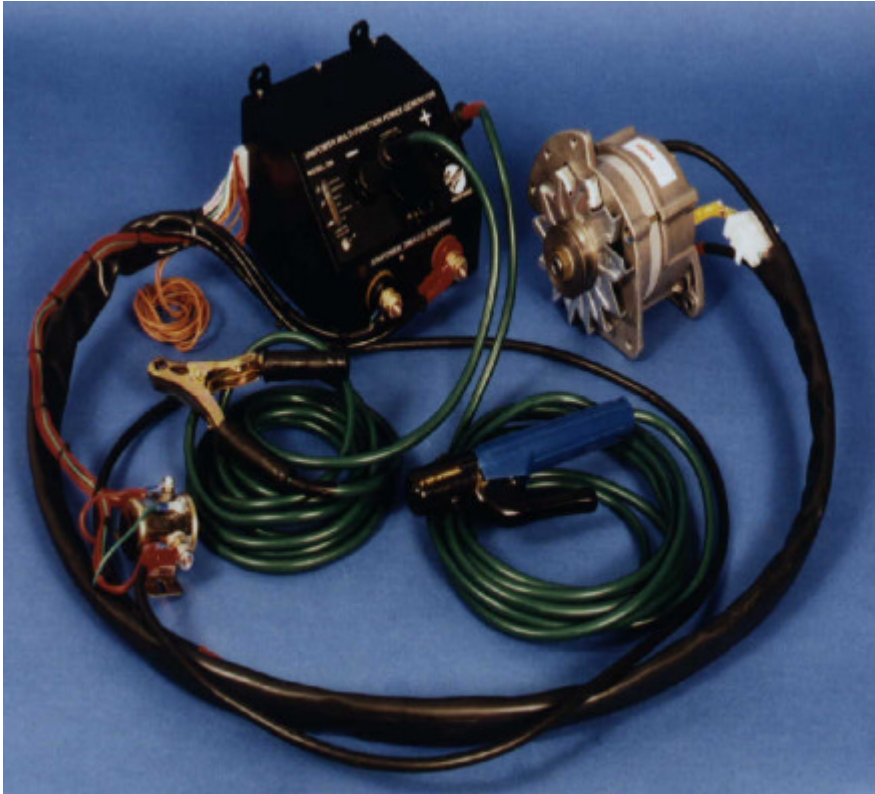


Product Specification

Model : 299 Multifunction



UNIPOWER - 299 ACQ - MULTIFUNCTION UNIT



| | |
|---|---|
| Control module : (Microprocessor Controlled) | |
| Operating voltage | : 12V or 24V (Specify) |
| Size | : 240x200x155mm |
| Weight | : 4 Kg |
| Loom | : <i>1.5 Meter , Newpreen & Silicone cable</i> |
| Temp range | : 0 to 40 C |
| Output Voltage | : 230V +- 10% 50 Hz |
| Power factor | : 0.6 Lagging to 1 |
| Duty Cycle | : 100 % on welding. 100% for up to 1 minutes on 230V, then temperature de-rate, continuous out of plug 2kW-2.5kW (Depends on ambient temperature). |
| Control | : DC link, with PWM |
| Waveform : | Modified SINEWAVE |
| Charging | : 14.1V +- 5% |
| 12V boost | : 16V +- 5% |
| 24V boost | : 30V +- 5% |
| Weld striking | : 50V DC +- 5% |
| Alternator: | |
| Type (1) | : Bosch 55A (Standard) |
| Type (2) | : Bosch 90A (Turbo) |
| Configuration | : Single leg or 2 leg |
| Size (1) | : 190x210x155 mm |
| Weight (1) | : 5 Kg |
| Size (2) | : 165x205x150mm |
| Weight (2) | : 5.5 Kg |
| Alternator speed | : 2000 to 11000 RPM |
| Suggested operating | : 6000RPM- 8000RPM |
| Rating | : as per graph |

| MODEL | SINGLE PHASE OUTPUT VOLTAGE (230V AC @ 50 Hz) | BATTERY CHARGING (14.1V DC) | 12V BOOST (16V DC) | 24V BOOST (30V DC) | WELD (OCV 50V DC) |
|-------------------|---|-----------------------------|--------------------|--------------------|-------------------|
| 299 ACQ-12V - T | UP TO 3 KW | UP TO 170A | UP TO 170A | UP TO 130A DC | UP TO 225A DC |
| 299 ACQ - 12V - S | UP TO 2.5 KW | UP TO 140A | UP TO 100A | UP TO 100 A DC | UP TO 185 A DC |

TEST CONDITIONS :

- Ambient temperature 25 C
- Alternator and CM temperature 25 C
- Alternator driven with V belt 13mm. Alternator RPM controlled with a 22kW variable speed induction motor.
- Battery voltage kept constant for tests 12V = 14.1V and 24V = 28.2V
- Maximum alternator speed = 11000 RPM
- CM - mounted upright for ventilation.
- Loom length = 1.5M.
- Test done on Pure resistive load
- High voltage tests done on a 220V output voltage (Allowed volt drop to 205 V ac 10%)
- 12V Boost voltage test at 16V (allow drop to 15.5 V DC)
- 24V BOOST voltage test at 30V (allow drop to 27 V DC)
- Weld current test at 23V DC (Could vary from 19V to 29V)

It remains the right of the manufacturer to modify specifications without prior notice. Please visit website at WWW.Unipower.co.za or email to powerle@iafrica.com for an updated spec sheet.



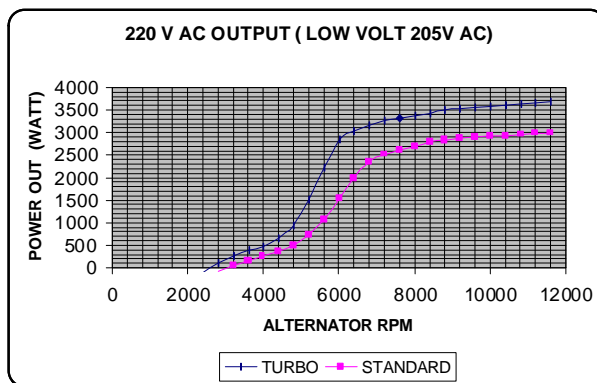
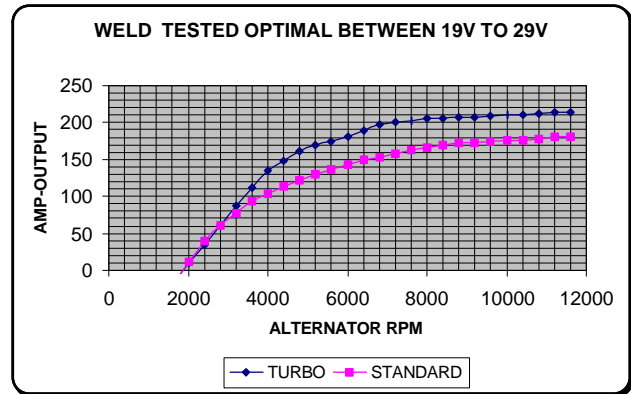
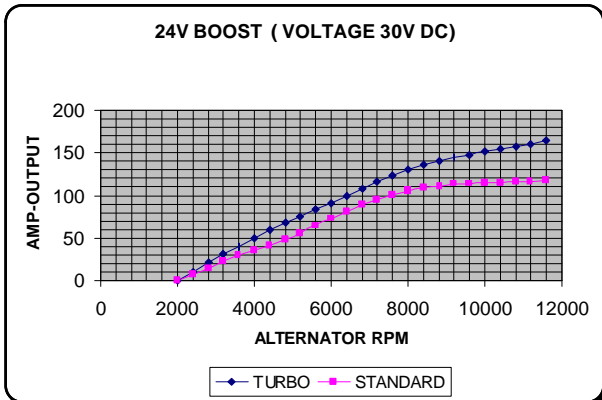
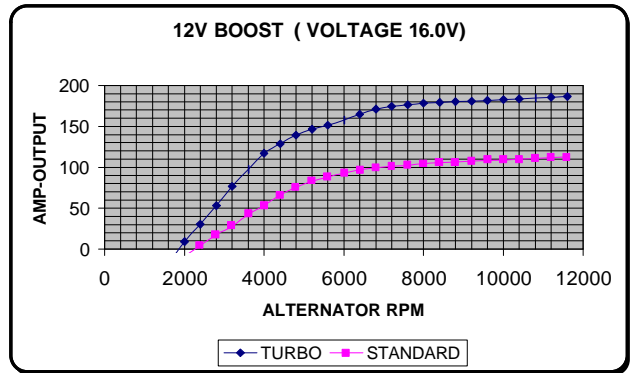
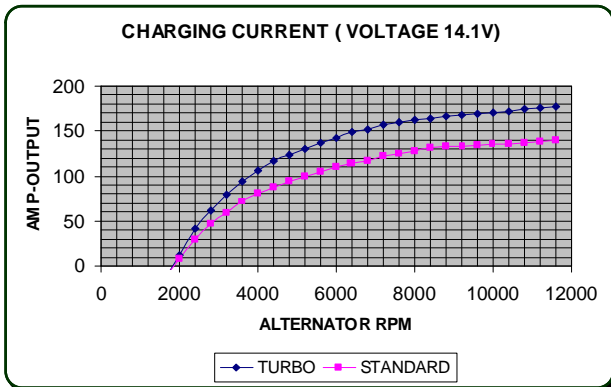
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ALTERNATOR WINDING TYPES :

- a) TURBO ALTERNATOR
- b) STANDARD ALTERNATOR



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| | | |
|--|--|---|
| <p>Control Technique : High voltage, DC controlled via Thyristors , Fixed control to 265V DC (+- 5%) . Inverter Crystal controlled to 50 Hz.</p> <p>Note : Waveform is modified Sinewave</p> | <p>Plug Ratings : 16 Amp for 230V , Schuckor type</p> <p>Earth Leakage : No earth leakage protection as standard (Optional)</p> <p>Displays : (vertical Y axis) Green Led - ON Amber Led(1) - 12V boost Amber Led (2) - 24V boost Amber Led (3) - <i>Weld mode and 230 available</i> Red Led - Unit overload</p> | <p>Welding : Type , DC welding, 50V DC OCV Rating : up to 225A (Turbo) up to 185 A (Standard)</p> <p>Welding Suitable for :</p> |
| <p>Note : 230V is referenced to earth, DO NOT EARTH NEUTRAL</p> | | <p>a) Manual metal arc up to 4mm b) Gas metal Arc, (MIG accessories required to be converted to constant voltage output). c) Flux cored arc welding, (accessories required), self shielded wire up to 1.6mm d) Submerged Arc welding, (units can be connected in Parallel) e) Carbon-arc air Cutting or Gouging up to 4mm</p> |
| <p>Fan belt requirements : For continuous high load applications Alternator must be installed with 13mm V fan belt. OR 6 GROOVE PULLEY</p> <p>Overload ratings : Plug current up to 23A , for up to 30 seconds. (To assist starting up compressors).</p> <p>Electrode holder rating : 300A</p> <p>Cable connection for welding: 25mm, bayonet type connection</p> | <p>Horizontal (X axis) Current limiting ...In steps of 20% approximation from 140A upwards. Calibration is not different between Turbo and std thus ratios not fixed</p> <p>Temperature Power de-rating : CM & Alternator : approx. 25W/C</p> <p>Welding cable supplied 4.5 Meter 16mm (Std) 4.5 Meter 25mm (Turbo)</p> <p>Operating ambient Temp : CM : 0 to 40 C Alternator : - 30 to 90 C</p> | <p>Protection :</p> <ul style="list-style-type: none"> ▪ Overload ▪ Short circuit, between Live and Neutral ▪ CM overheat ▪ Power exceeding Alternator low RPM protection ▪ In-line fuse to alternator for alternator overload ▪ Battery overcharge ▪ Solenoid Short or failure, protection ▪ Main wire, bad connection detection <p>Note : Continuous 230 output can be increased by adding an optional fan if required.</p> |