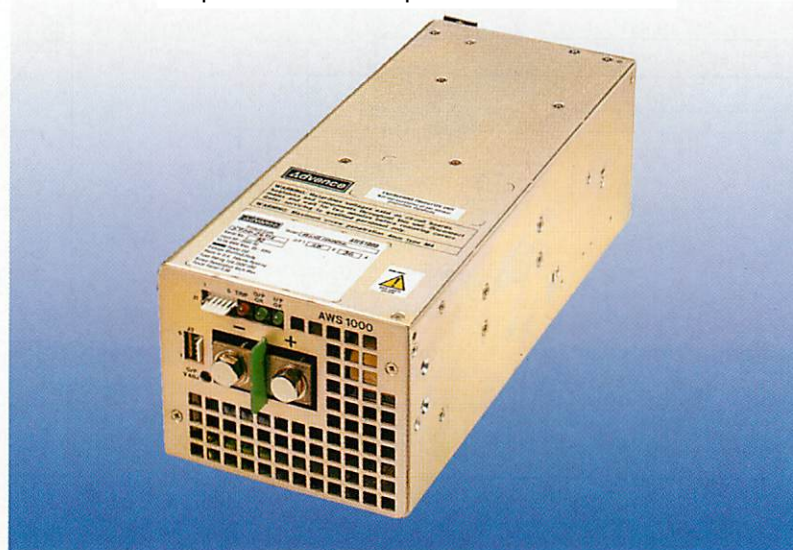


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LR58666



UL1950

NRTL/C

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SINGLE OUTPUT AC-DC

SUMMARY SPECIFICATION

Model Number	Input Voltage	Nominal Voltage	Adjustment Range	Maximum Output Current	Cooling	Dimensions
AWS1000F	88 – 264V a.c. 132 – 370V d.c.	3.3V	2.8 – 3.8V	200A ⁽¹⁾	Internal Fan	127 x 101 x 279.4 mm 5.0 x 3.98 x 11.0 in.
AWS1000G		5V	4.0 – 5.5V	200A ⁽¹⁾	Internal Fan	
AWS1000J		12V	10 – 16V	100A @ 10V 62A @ 16V ⁽¹⁾	Internal Fan	
AWS1000L		24V	21 – 30V	45A @ 21V 33A @ 30V ⁽¹⁾	Internal Fan	
AWS1000N		48V	42 – 60V	24A @ 42V 17A @ 60V ⁽¹⁾	Internal Fan	

(1) Output current is dependant upon input voltage. See Output Specification for details.

INPUT SPECIFICATION

Voltage Range	88 – 264V a.c. or 132 – 370V d.c.
Frequency	47 – 65Hz.
Supply Type	Single phase TN-S systems (as defined in IEC364).
Power Factor Correction	All models are fitted with an input current corrector.
Efficiency	Typically 72% to 85% (dependant on output voltage) when loaded to maximum rated output power at 110V and 240V input.

Power

1000W maximum over the input voltage range 176 – 264V a.c., 750W maximum over the input range 88 – 176V a.c. Maximum power ratings are applicable up to 50°C. From 50°C to 70°C, derate by 2.5%/°C. For operation over the full input voltage range, specify option 'U'. The current limit will then be set for 750W operation.

Load Regulation

0.5% V_{NOM} maximum for an output current variation of 10% to 100% I_{MAX} .

Line Regulation

0.5% V_{NOM} maximum for an input variation over the operating range of the unit with the output loaded to provide 750W output power.

OUTPUT SPECIFICATION

Voltage	Nominal output voltages and adjustment ranges are shown in the summary specification. Outputs are factory set to within 1% of the specified nominal.
Current	Maximum continuous current ratings (I_{MAX}) are shown in the summary specification. Maximum current is limited by power rating of 1000W, see Power. Below 176V input, these figures derate to 75% I_{MAX} . All maximum current ratings are applicable up to 50°C. From 50°C to 70°C derate by 2.5%/°C.

Ripple and Noise

With the output loaded to I_{MAX} , the differential output noise over the frequency range 10Hz – 20MHz does not exceed 1% pk-pk of the nominal output voltage or 50mV, whichever is the greater.

PROTECTION

Hold Up	All units have sufficient energy storage to ride through a missing half cycle when supplying 750W output power at any input. Hold up is >18ms when loaded to 750W output power and at 88V input and is also >18ms at 1000W output power and 176V input.
Input Overvoltage	Units meet the requirements of IEC801-5 level 4.
Output Current Limit	All units have self resetting current limit circuitry. Option C: Unit is shut down when in current limit. Reset by interruption of input power. Option U: Current limit point set for 750W operation (wide range input).
Output Overvoltage	Provided as standard on all outputs. Unit shutdown voltage tracks output voltage setting and will occur at 110% to 120% of the set output voltage.
Thermal Protection	The unit shuts down when the internal temperature exceeds maximum safe levels. Recovery is automatic upon cooling. Latching trip option available (option T).
Series Output Diode	Available on 12, 24 and 48V units when option D is specified. A diode is fitted internally in series with the positive output.

AUXILIARY FUNCTIONS

Remote Sense	Available on all units.
Parallel Operation	Any unit may be paralleled with any other unit of the same voltage rating. Current sharing can be achieved between independent units set to the same output voltage.
Series Operation	Units may be connected in series to provide output voltages up to 250V max.
Inhibit (Non-latching)	The output power may be inhibited by a logic low signal. Option B for logic high inhibit.
Power Fail Signal	An open collector output signal provides warning of impending output failure due to loss of input. Logic high for power O.K.
DC OK	An open collector output provides a high signal indicating that the output voltage is above 90% of nominal. LED indicator also provided.
Fan fail / Overtemperature Warning	Provides a logic low signal in the event of fan failure or overtemperature.
Indicators	Input OK – On when input current corrector is running and power supply is capable of supplying output power. Trip Shutdown – On when power supply is tripped out by output overvoltage or, if trip option specified, by overtemperature, fan failure or over current trip. DC OK – On when output voltage exceeds 90% of nominal.

ISOLATION

Primary to Secondary	Reinforced insulation to 3kV a.c. r.m.s. for one minute. Complete units are tested to 1.5kV a.c. between input and output with all output terminals connected together and connected to earth.
Output to Earth	500V a.c.

ELECTROMAGNETIC COMPATIBILITY

Exported Noise	All units meet the requirements of EN55022 curve B; FCC Rules Part 15 Subpart J Class B; EN50081-1; EN6100-3-2; EN60555-2.
Susceptibility	Units meet the requirements of EN50082-1; IEC801-2, -3, -4, -5 level 4; EN61000-4-2; EN61000-4-5.

MECHANICAL SPECIFICATION

Mechanical Format	All units are supplied enclosed with integral fan as standard.
Mounting Orientation	Units may be mounted in any orientation without derating.
Ventilation and Cooling	Units are cooled by an integral fan and require free air flow in the area of the fan at the rear of the power supply and over the ventilated front face of the power supply. Normal airflow direction is from the input terminal end to the output terminal end.

ENVIRONMENTAL CONDITIONS

Ambient Temperature	0°C to 70°C operating. See current and power ratings in output specification for any deratings required.
Operating Humidity	0 – 95% R.H. non-condensing.

INTERNATIONAL SAFETY STANDARDS

The AWS1000 Range of units has been designed and tested to meet the following safety specifications and a programme of test submissions to the relevant approvals bodies is under way. Up to date detailed information is available on request from your local sales office or agent.

CE marked to the Low Voltage Directive

EN60950; UL1950; CSA 22.2 No. 234

ORDERING INFORMATION

The order code consists of up to 4 fields:

1. Series	AWS										
2. Range	1000										
3. Output	See summary specification										
4. Options (as required)	<table> <tr> <td>B</td><td>Logic high inhibit</td></tr> <tr> <td>C</td><td>Latching shutdown on current limit</td></tr> <tr> <td>D</td><td>Series output diode</td></tr> <tr> <td>T</td><td>Latching shutdown on overtemperature</td></tr> <tr> <td>U</td><td>Current limit set for 750W output power</td></tr> </table>	B	Logic high inhibit	C	Latching shutdown on current limit	D	Series output diode	T	Latching shutdown on overtemperature	U	Current limit set for 750W output power
B	Logic high inhibit										
C	Latching shutdown on current limit										
D	Series output diode										
T	Latching shutdown on overtemperature										
U	Current limit set for 750W output power										

OUTLINE DRAWING

All dimensions are nominal and are in mm (inches).

External Dimensions All dimensions are nominal and are in mm (inches).
127 (5.0) x 101 (3.98) x 279.4 (11.0).

Mass 4.3kg (9.5lb).

Fixings 8 x M4 ISO standard threaded inserts are provided and are marked "A" on the outline drawing. 8 x 8-32 UNC threaded inserts are provided and are marked "B" on the outline drawing.

Connectors The following connectors are fitted to the power supply:
Input 3 way Beau 72 Series barrier terminal strip using 6-32 x 1/4" screws.

Output 2 x M8 ISO standard slotted hex head bolts.

Output Sense and Current Share 3 way Du Pont Berg type 76382-403. Mating half is Du Pont type 65240-03 fitted with crimp type 76357-401.

Auxiliary Functions Standard Functions - J1
6 way Du Pont Berg type 76382-406. Mating half is Du Pont Berg type 65240-006 fitted with crimps type 76357-401

Optional Functions - J2

12 way Molex type 03-06-1121 fitted with female crimps type 02-06-2103. Mating half is Molex housing type 03-06-2122 fitted with male crimps type 03-06-2103.

