



Data Sheet

HMF5-G4-E1-K-L-APS



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Data Sheet HMF5-G4-E1-K-L-APS Series

Input Specification

Input voltage	85 to 264V AC. 120 to 350V DC .
Frequency	47 to 440Hz.
Inrush current	40A peak max.
Efficiency	70% - 80% @ full load.
Power factor	0.99 typical. Meets EN61000-3-2.
Turn-on time	<5 sec. (3.5 sec typ).
EMI-filter standard	CISPR 22, EN55022 "B".
Leakage current	2.0mA max @ 240VAC.
Radiated EMI	CISPR 22, EN55022 "B".
Holdup time	20ms minimum Full cycle ride thru (50Hz).
Harmonic distortion	Meets EN61000-3-2.
Isolation	Meets EN60950.
Input fuse (internal)	20A 600V fast acting.
Operating Temp	-20°C to 50°C (start @ 0°C) (derate each output linearly to 50% at 70°C)

Output Specification

Output 1 rating	48V (+/-0.1V) @ 12.5A
Output 2 rating	30V (-0, +0.2V) @ 11A
Overall regulation	0.4% or 20mV max.
Ripple RMS:	0.1% or 10mV max.
Ripple Pk-Pk: (Bandwidth ltd to 20 MHz).	1.0% or 50mV max.
Dynamic response	<2% or 100mV with 25% load step
Recovery time	To within 1% in < 300 sec.
Current limit current.	105-120% of rated output current.
Type:	constant or re-entrant.
Short circuit	Protected for continuous protection short circuit, current approx 40% of rated output (re-entrant).
Overvoltage	110-120% of rated voltage protection (Recycle input to reset)
Reverse voltage	100% of rated o/p volts.
Thermal protection	All outputs disabled when internal temp exceeds safe operating range.
Remote sense	Up to 0.5V total drop.
Minimum load	Not required.
Output Power	1000 watts max (198-264V input) 800 watts max (85- 132V input)
Approvals	CE
Weight	8.5Kg

Caution

1. Connect the power supply correctly. 115/230VAC line voltages can be lethal. To avoid shock, always use correct size and style input connections.
2. The earth wire must always be connected to the earthing point on the input connector to protect against shock hazard due to capacitive leakage.
3. Install power supply correctly. Use correct screw sizes for mounting. Screws must not penetrate the interior of the supply excessively to avoid shorting of internal components.
4. Operate the power supply safely. Power supplies generate heat; allow adequate ventilation at the front & rear for fan intake and exhaust and keep away from combustible materials and gases. Make sure liquid or metal fragments do not enter the supply, as this could constitute a fire hazard.
5. Maximum ambient temperature must not exceed 50°C at 1000W (800W wide input) and 70°C at 500W (400W wide input) loading.
6. This power supply is intended for use as a component part of other equipment. When installing, the relevant safety standards (e.g. IEC950/VDE0805; EN60950; CSA C22.2 no.950 & no. 234; UL1950) must be complied with.
7. Maintain power supply safely. Only qualified personnel should service or repair this unit. Beware of possible internal lethal voltages due to charged capacitors, even after AC power is disconnected.
8. The internal input power fuse F201 should only be replaced by a fuse of similar size and rating (20A, 600V), i.e. Bussman KTK-20 or Littlefuse KLK 20.
9. Components such as capacitors are positioned before the internal power supply fuse, therefore the unit must be protected by a fuse in the installation system.
10. In case of failure, this power supply should be returned to Advance Product Services Ltd to ensure compliance with safety requirements. Interference with the internals of this unit by any other persons may invalidate the warranty.

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Connection Information

Mains input:

Barrier type. Three off No. 6-32 UNC screws (0.4375" centres).

Output 1:

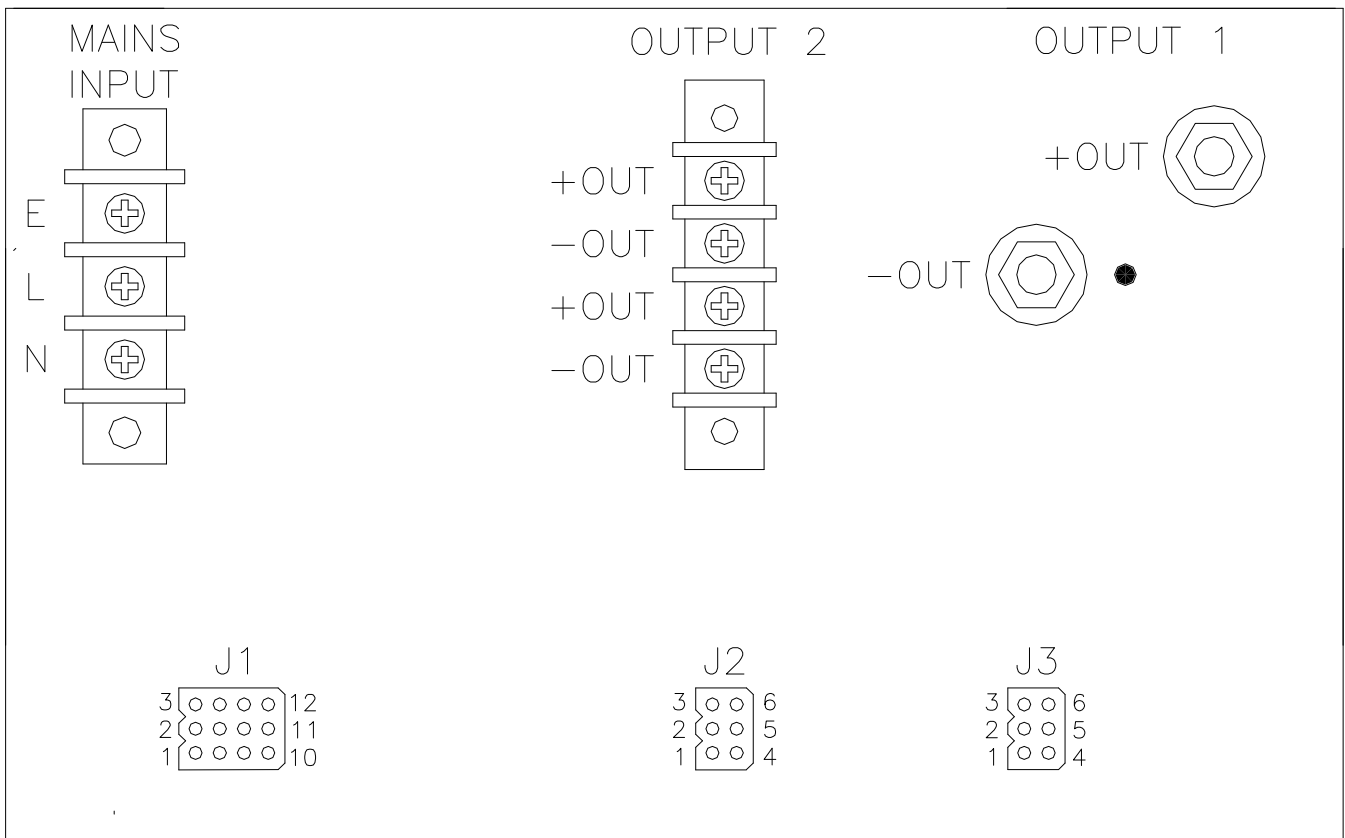
M6 output studs

Output 2:

6-23 UNC screws (0.375" centres)

J1 Input Control Connector -

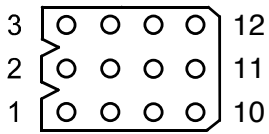
12 way, mates with Molex 03-06-2122 housing (Molex 02-06-2103 pins required). J2 Output 2 control connector - 6 way, mates with Molex 03-06-2061 housing (Molex 02-06-2103 pins required). J3 Output 1 control connector - 6 way, mates with Molex 03-06-2061 housing (Molex 02-06-2103 pins required).



Front panel connections

Signals Information

Input Control Connector



J1 Control Connector

Pin No.	Function
5	Power Fail
7	5V @ 100mA
10	Signal Ground
11	Inhibit

Power fail (output): Logic high for input power good, logic low for input power fail

Inhibit (input): Open circuit or logic high to run, logic low to inhibit

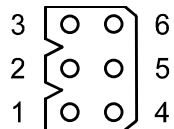
Mating Housing

Molex 03-06-2122

Pins

Molex 02-06-2103

Output Control Connector



J2, J3 Control Connector

Pin No.	Function
1	Positive Sense
3	Output Good
4	Sense and Logic Ground
6	Inhibit

Output good (output): Logic high when output OK, logic low when output not OK

Inhibit (input): Open circuit or logic high to run, logic low to inhibit

Mating Housing

Molex 03-06-2061

Pins

Molex 02-06-2103

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Electrical Isolation & Insulation

The COB Series power supply has passed the Safety Approval type test (EN60950 reinforced insulation and SELV outputs) with the following voltages:

Input to Output	4243V DC	(Y capacitors removed)
Input to Chassis	2636V DC	(Y capacitors removed)

When assembled in production each unit is tested to the following voltage:

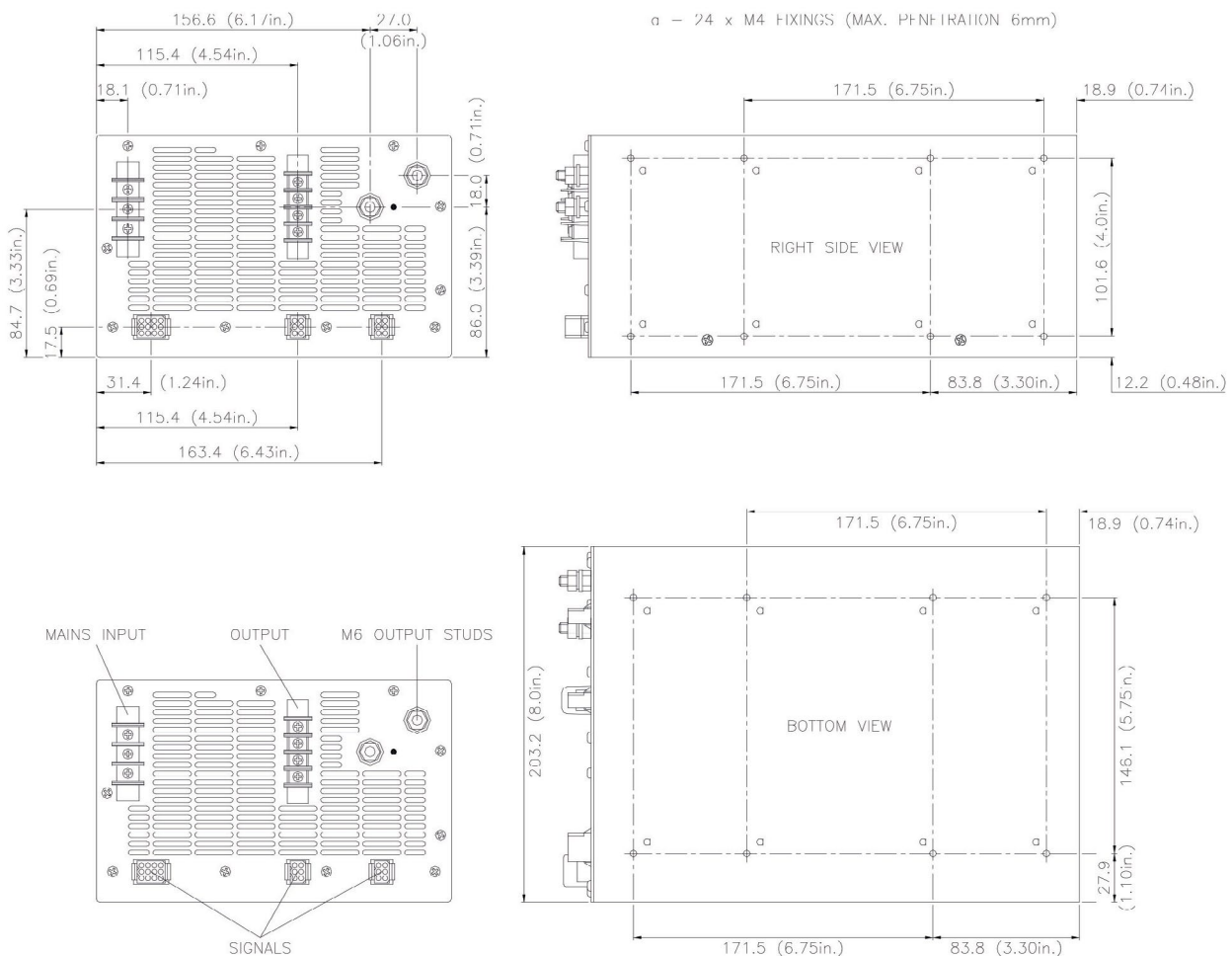
Input (L & N shorted together) to Output/Chassis (O/P shorted to chassis) 2121V DC for 3 seconds

There are surface mount capacitors between output common and chassis earth so no high voltages should be applied

between the output terminals and chassis earth. The following are checked with a meter:

Output to Output	Isolation with ohm meter >1MΩ
Output to Chassis	Isolation with ohm meter >1MΩ

Mechanical Layout



Notes:

1. Chassis material: Powder coated Zintec steel.
2. All dimensions are in millimetres (inches) and are typical.
3. Customer mounting: M4 fixings. Maximum penetration 6mm.