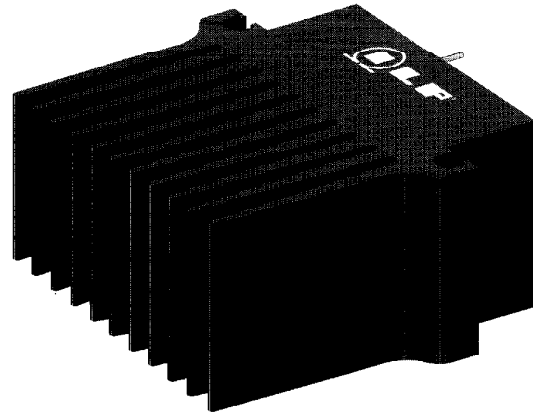


BIPOLAR POWER AMPLIFIERS

The **ILP HY Power Amplifier Modules** are a versatile range of building blocks for constructing high quality audio amplifiers with the minimum of additional components.

These modular hybrid amplifiers have been designed using Bipolar technology to provide high fidelity performance. Encapsulation to an integral heatsink together with internal safeguards to ensure full protection make them extremely rugged, both electrically and mechanically, and therefore suitable for all audio applications.

The modules require only five electrical connections, and should be mounted to allow a vertical flow of air through the fins. T slots in the heatsink facilitate mounting using the nuts and screws provided.



	HY30P	HY60	HY6060	HY124	HY128	HY244	HY248	HY364	HY368
Output Power Into 4 ohms (rms)	—	—	—	60w	—	120w	—	180w	—
Output Power Into 8 ohms (rms)	15w	30w	30+30w	—	60w	—	120w	—	180w
Power Supply Voltage (DC)	±18v	±25v	±25v	±25v	±35v	±35v	±45v	±42v	±55v
Loudspeaker Fuse Rating	1.0A	1.5A	1.5A per Channel	2.5A	2.0A	3.15A	2.5A	3.15A	2.5A

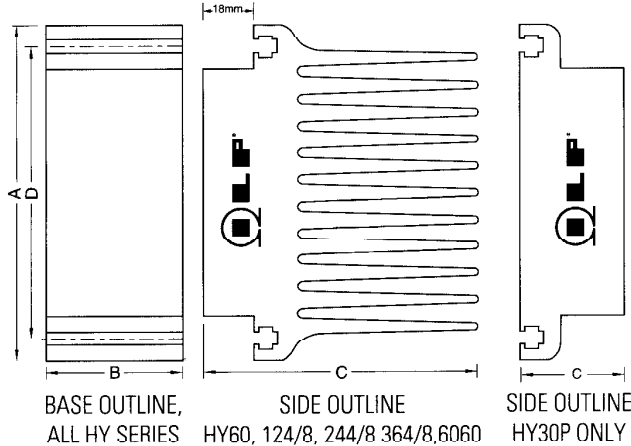
TYPICAL SPECIFICATION (All amplifiers)

Parameter	Value
Frequency Response (-3dB)	15Hz - 50kHz
Total Harmonic Distortion @ 1kHz modules up to 30 watts	< 0.015%
Total Harmonic Distortion @ 1kHz modules 60 watts and above	< 0.01%
Signal to Noise Ratio (DIN AUDIO)	100dB
Slew Rate	15V/μS.
Rise Time	5μS
Input Sensitivity	500mV rms
Input Impedance	100Kohms
Load Impedance HY124/244/364 All others	4 - ∞ ohms 8 - ∞ ohms
Damping Factor (8ohms @100 Hz)	> 400

INSTALLATION NOTES

- For normal usage and conditions the amplifier needs no supplementary heatsink; it must be mounted to allow a vertical flow of air through the fins.
- The amplifier must be powered from a true splitline (symmetrical) supply and under no circumstances should any attempt be made to use a single line.
- No input capacitor is required. An internal 100V working capacitor is fitted.
- For loudspeaker protection it is recommended that a quickblow fuse is mounted between the output and the speaker. The fuse ratings in the table have been calculated to ensure fast rupture in the event of DC being presented to the speaker. It is advised not to use higher rated fuses.
- Star earthing techniques should be employed to prevent hum loops. i.e. all 0 volt connections, including speaker return leads should be made at the power supply.
- Connecting leads between power supply smoothing capacitors and the module should be less than 300mm long. Longer leads may cause instability and module failure.

MECHANICAL DETAILS AND DIMENSIONS



BASE OUTLINE, ALL HY SERIES
 SIDE OUTLINE HY60, 124/8, 244/8, 364/8, 6060
 SIDE OUTLINE HY30P ONLY

	HY30P	HY60	HY6060	HY124/8	HY244/8	HY364/8
A	80	76	120	120	120	120
B	40	40	40	40	50	100
C	26	68	78	78	78	78
D	68	66	107	107	107	107
Panel Cut out	N/A	57x41	97x41	97x51	97x51	97x101
Weight	145g	240g	420g	410g	520g	1030g

All dimensions are nominal and in mm, unless stated.

FIXING

The T slots in the heatsink extrusion allow easy mounting. Nuts and bolts are supplied. HY60 – Size M3; All others – Size M4

POWER SUPPLY REQUIREMENTS

ILP manufacture a range of power supply units for the HY series of amplifiers. They consist of a printed circuit board containing the rectifiers and smoothing components and a high quality toroidal transformer.

	HY30P	HY60	HY6060	HY124	HY128	HY244	HY248	HY364	HY368
DC Board for 1 amplifier	DC21	DC41	DC41	DC41	DC47	DC51	DC54	DC73	DC74
DC Board for 2 amplifiers	DC21	DC41	—	DC52	DC51	DC71	DC72	Two DC73	Two DC74
Transformer for 1 amplifier	2x013	4x027	4x027	4x027	4x016	5x016	5x018	7x018	7x026
Transformer for 2 amplifiers	2x013	4x027	—	5x015	5x016	7x016	7x018	Two 7x018	Two 7x026

* Note: DC Board includes rectifiers and smoothing capacitors, mounted on a circuit board. Example: Complete Power Supply Unit for operating 2 x HY124 on 240V a.c. is: 1 x DC52 and 1 x 53015.
 For x in transformer part number use: 3 for 120 or 240 volt operation
 1 for 220 volt operation

Call Sales Office for other supply voltages.

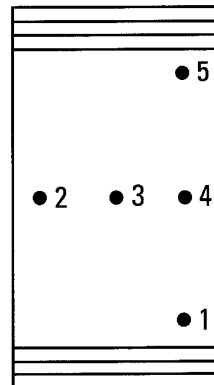
For full details of Power Supply Units including connection and installation see ILPs Power Supply Data Sheet.

CONNECTION DETAILS

(not to scale)

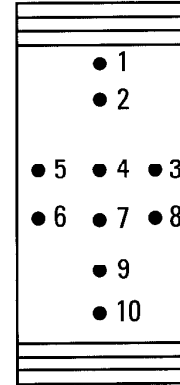
HY30P, 6U, 12X, 24X, 36X

HY6060



PIN

1. Positive Supply
2. Output
3. Input
4. 0 volt
5. Negative supply



PIN

1. Output
2. Input
3. Negative supply
4. 0 volt
5. Positive supply
6. Negative supply
7. 0 volt
8. Positive supply
9. Input
10. Output

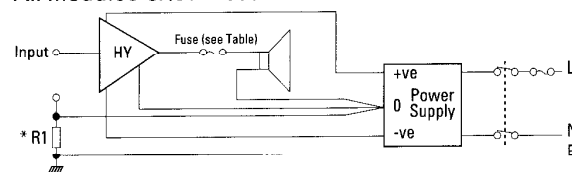
Base View

Left Channel

Right Channel

APPLICATION CIRCUIT

All modules & 1/2 HY 6060



* In order to prevent earthloop problems when a pre-amplifier is connected we recommend the fitting of a resistor (R1) in the position shown. The value of R1 should be between 82 and 270Ω, 1/2 watt power rating.



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DISTRIBUTED BY:-

Every effort has been made to ensure the accuracy of the details in this data sheet. However, in the interests of product improvement, ILP reserve the right to change any part of this specification without notice. ILP cannot be held responsible for any damage to other equipment that may occur during the use of these modules.