LUNDAHL
– TRANSFORMERS –

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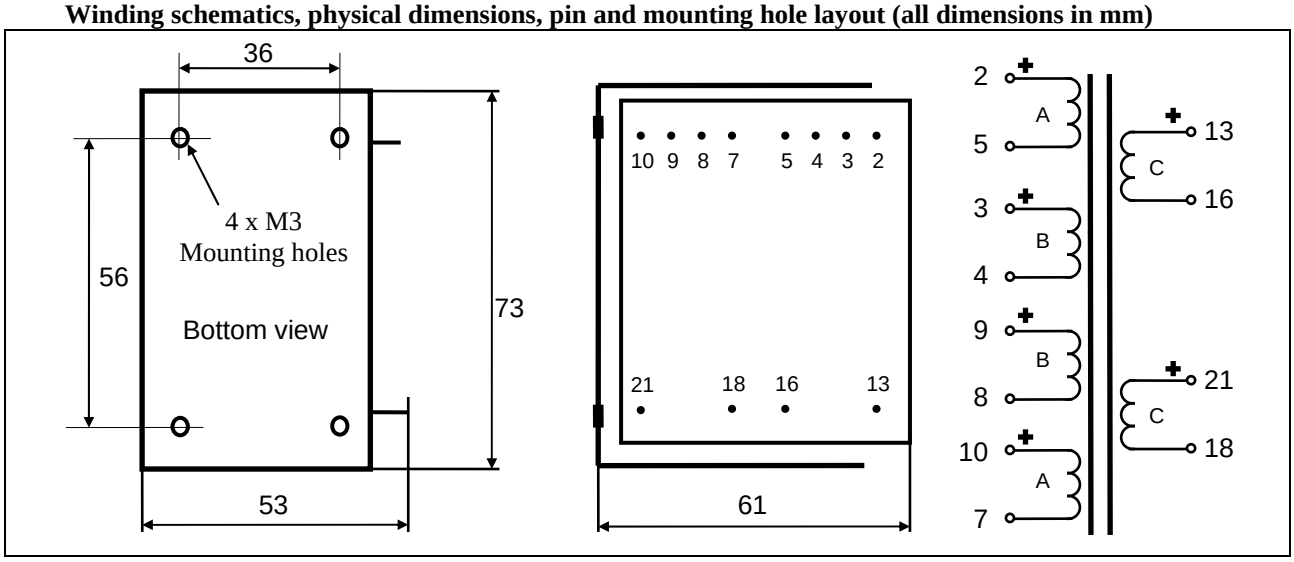
Tube Amplifier Interstage Transformer / Line Output Transformer
LL1692A

LL1692A is an interstage transformer for tube amplifiers, impedance-wise placed between LL1660 and LL1671. LL1692A is available with various core air gaps optimised for PP or SE drives.
The transformer is wound with a special low capacitance winding technique to achieve best high frequency performance. It has a special high flux, low distortion audio C-core of our own production.
The Push-Pull version is assembled with a small core air gap to allow for some DC current unbalance. For the S.E. versions of the LL1692A, the core air gap is chosen such that the denoted DC current (18mA for a LL1692A/18mA) generates a no signal core flux density of 0.9 Tesla when used with all primaries in series. This leaves a flux density swing of approx. 0.7 T for the signal.

Winding schematics, physical dimensions, pin and mounting hole layout (all dimensions in mm)



Weight	Turns ratio	Static resistance, winding A	Static resistance, winding B	Static resistance, winding C
0.75 Kg	1+1+1+1 : 1.75+1.75	220 Ω	175 Ω	345 Ω

Max. DC current through any single section: 70 mA
Isolation between primary and secondary windings / between windings and core: 4 kV / 2 kV

Type	**LL1692A PP**	**LL1692A PP**	**LL1692A/18mA**	**LL1692A/18mA**
Connection	Alt M PP to PP Interst. 1.75+1.75 : 2+2	Alt N PP Line output 1.75+1.75 : 1	Alt Q SE Line Output 3.5 : 1	Alt S SE to SE Interst. 4 : 3.5
Primary DC current for 0.9 Tesla	-	-	21 mA	18 mA
Primary Inductance	210H	210H	95H	125H
Freq. Response (+/-1dB) @ source impedance (*) Secondaries open	20 Hz – 45 kHz 10kΩ	20 Hz – 50 kHz 10kΩ	10 Hz – 55 kHz 2 kΩ	30Hz - 30 kHz 10 kΩ
Max output voltage @ 30 Hz	2 x 240V r.m.s.	120V r.m.s.	50 V r.m.s.	175 V r.m.s.

Type	**LL1692A/18mA**	**LL1692A/18mA**
Connection	Alt T SE to SE Interst. 2 : 3.5	Alt V SE to PP Interst. 1.75 : 2 + 2
Primary DC current for 0.9 Tesla	36 mA	41 mA
Primary Inductance	35H	24H
Freq. Response (+/-1dB) @ source impedance (*) Secondaries open	40 Hz - 30 kHz 3 kΩ	50 Hz - 30 kHz 3 kΩ
Max output voltage @ 30 Hz	175 V r.m.s.	190 V r.m.s.

Applications

(*) The source impedances used in the tables indicate a recommended upper limit, unless the specified LF frequency response can be compromised.
At lower source impedance, bass will improve but resonance peaking might occur. Peaking can be reduced using secondary load resistors or RC networks.

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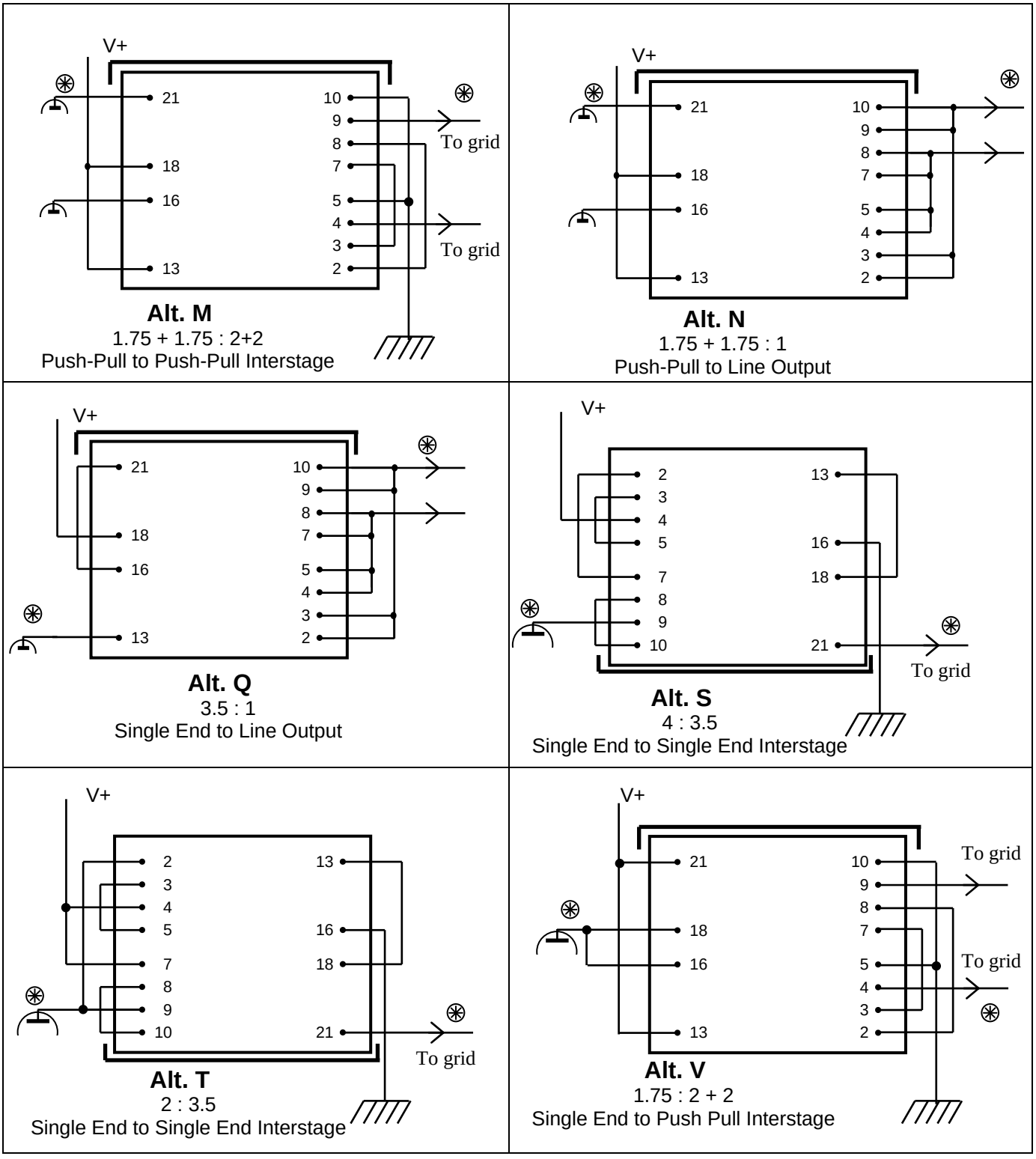
Tube Amplifier Interstage Transformer / Line Output Transformer
LL1692A
Connection Alternatives



⊛ Phase Indicator

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