

Attention: HPAK schema pin order on some of the connectors is reversed compared to standard kicad libs.

J620: to J328 on A1  
Example: Molex 09-48-1094/09-48-3095 or Molex 26-60-3090

J620  
Molex 09-48-1094 pr 09-48-3095  
J328-2 (+) OUT\_A+  
J328-3 (-) OUT\_A-  
J328-6 (S+) SENSE\_A+  
J328-7 (S-) SENSE\_A-  
J328-9 (Shield) PWR\_FLAG

F602 Bussmann SS-5H-1.25A-APH  
F601 Bussmann SS-5H-1.25A-APH  
should be 1.16A, but haven't found them.

R601 220 0.5W  
R602 220 0.5W

Local Sense

Remote Sense Normal

Remote Sense Reverse

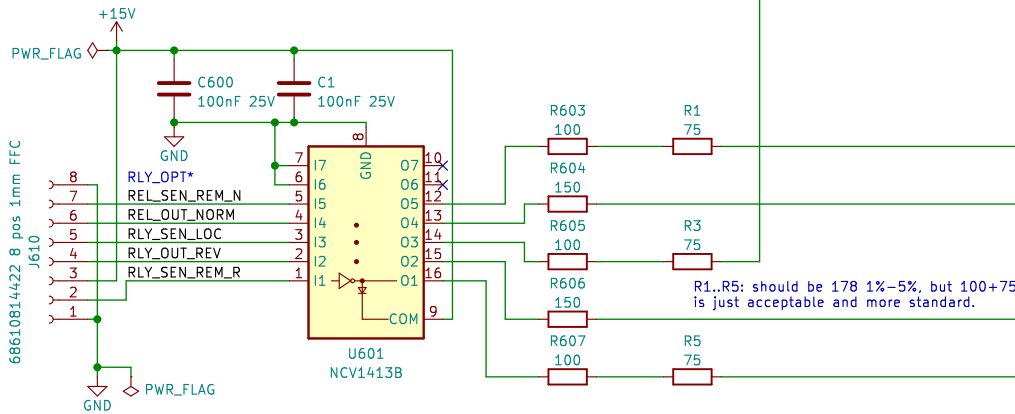
Output Normal

Output Reverse

OUT\_P+  
OUT\_P-  
SENSE\_P+  
SENSE\_P-  
To front panel binding posts

Apart from some port interchange on U601 and the splitting up of the 178 Ohm resistors in 2, the schema is kept identical to the original board.

Relay data:  
V23105-A5303-A201: Op.Vmin=8.4V, Coil R=720 Ohm, Op.Curr=17mA  
ST2-DC12V-F: Op.Vmin=9.6V, Coil R=600 Ohm, Op.Curr=20mA



Cable on J610 goes to A2 J210.  
This layout is for a type A (same side) cable and bottom contact connector. As a result, the numbers on A2 are reversed, and I respect the numbering from the original schema/board.

Cable: 8 pos 1 mm pitch 180-200mm long, 0.3mm thick FFC cable, like Molex 15267-0237  
Connector: WE 68610814422 (0.27-0.34mm thick, HPAK cables are 0.33mm, 15267-0237 is 0.3mm)  
Footprint reference is not the correct one, but landing pattern is close enough.

Use NCV1413 and not ULN2003, because the first can support higher collector current.

Option 760, adapted for full feed through to front binding posts

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File: HP6632B\_relay\_board.kicad\_sch

**Title: Relay board for HPAK 66xxB series PSUs (A6)**

Size: A4  
KiCad E.D.A. kicad 7.0.6-0

Date:

Rev:

Id: 1/1