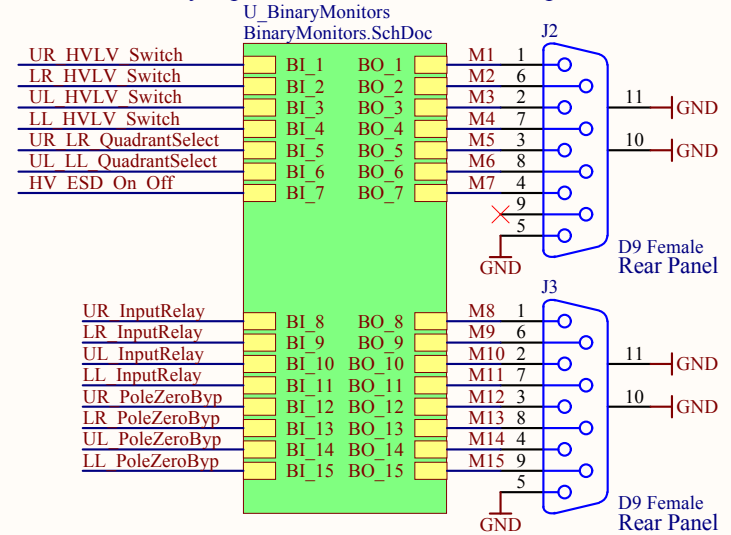
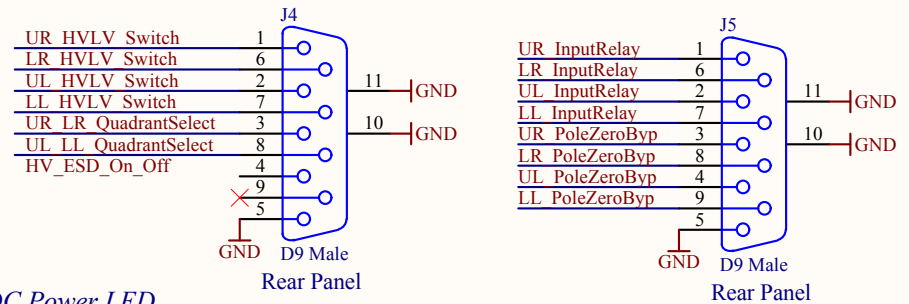


Binary Monitors to Binary Input Module
 Drives Binary Input Module when monitored parameter is HIGH

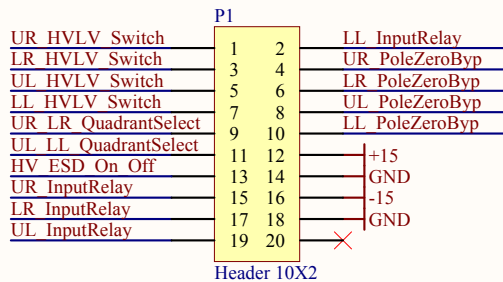


Binary Inputs from Binary Output Module

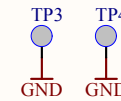
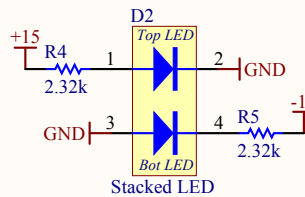


Binary IO to front board via ribbon

Controls



15VDC Power LED



180mA worst case calculated +15V current draw

Last Edited: 3/30/2015

Title LVLN Driver Back Board		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		LIGO	
Size: A	DCC Number: D1500128	Revision: V1	Engineer: R. Abbott	Date: 4/2/2015	Time: 12:43:31 PM
File: C:\Rich's Files\Mycadfiles\Suspensions\ETM LVLN Driver Back Board\LNLV Back_Top.SchDoc				Sheet 1 of 3	

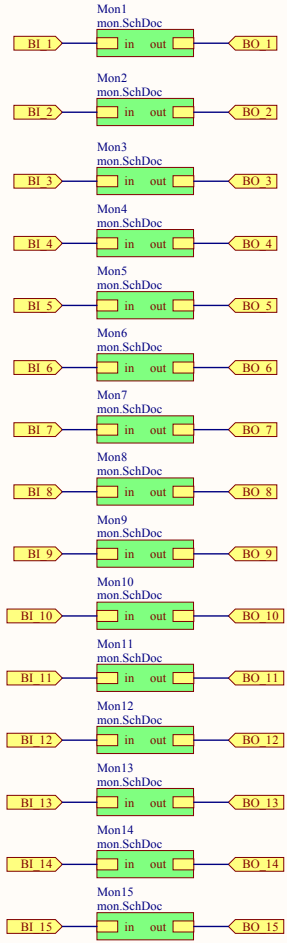
Checked All

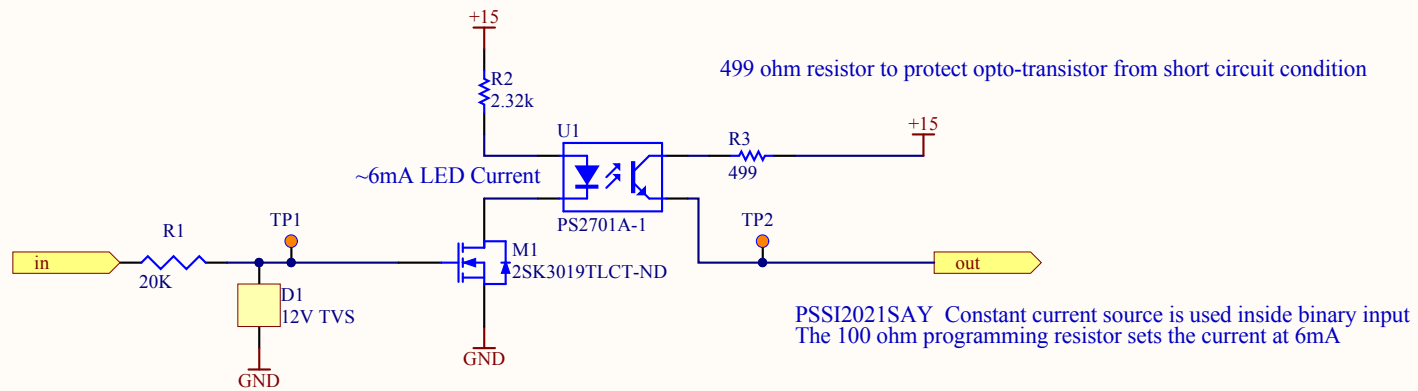
Last Edited: 3/26/2015

Title Binary Monitors		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		LIGO	
Size: B	DCC Number: D1500128	Revision: V1	Engineer: R. Abbott	Date: 4/2/2015	Time: 12:43:31 PM

File: C:\Rich's Files\Mycafiles\Suspensions\TM LVLN Driver Back Board\BinaryMonitors.SchDoc

Sheet 2 of 3





Last Edited: 3/30/2015

Title
Binary Monitor Detail

LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology



Size: A

DCC Number: D1500128

Revision: V1

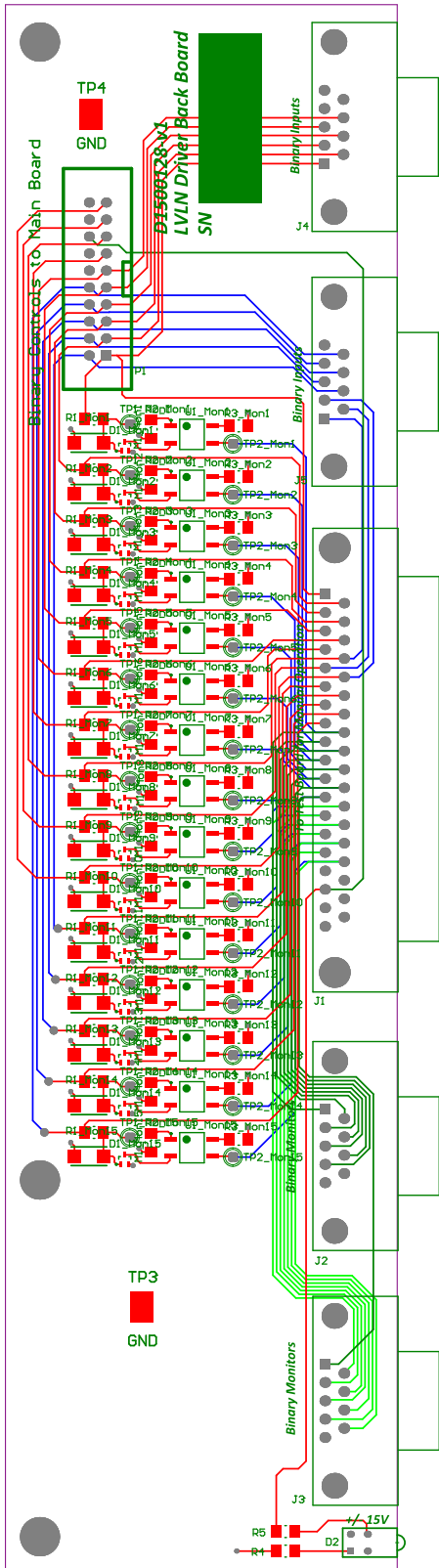
Engineer: R. Abbott

Date: 4/2/2015

Time: 12:43:31 PM

File: C:\Rich's Files\Mycadfiles\Suspensions\ETM LVLN Driver Back Board\mon.SchDoc

Sheet 3 of 3



LIGO Bill of Materials

Source Data From: LNLVBack_v1.PrjPCB
Board Designed By: R. Abbott
Board D-number: D1500128
Board Revision: V1
Variant: None

Creation Date: 4/2/2015 12:43:34 PM
Print Date: 02-Apr-15 12:43:36 PM

Designator	Comment	Description	Digikey Part Number	Manufacturer Name Error:Manufacturers Part Number	Quantity
D1_Mon1, D1_Mon2, D1_Mon3, D1_Mon4, D1_Mon5, D1_Mon6, D1_Mon7, D1_Mon8, D1_Mon9, D1_Mon10, D1_Mon11, D1_Mon12, D1_Mon13, D1_Mon14, D1_Mon15	12V TVS	12V Bi-directional Transient Voltage Suppressor	SMAJ12CALFCT-ND		15
D2	Stacked LED	Dual Green LED	67-1321-ND		1
J1	37 Pin D-Sub	37 Pin D-Sub	6E17C037SAJ120-ND		1
J2, J3	D9 Female	Receptacle Assembly, 9 Position, Right Angle	6E17C-009S-AJ-120-ND		2
J4, J5	D9 Male	Receptacle Assembly, 9 Position, Right Angle	6E17C-009P-AJ-121-ND		2
M1_Mon1, M1_Mon2, M1_Mon3, M1_Mon4, M1_Mon5, M1_Mon6, M1_Mon7, M1_Mon8, M1_Mon9, M1_Mon10, M1_Mon11, M1_Mon12, M1_Mon13, M1_Mon14, M1_Mon15	NMOS	ROHM N-Channel MOSFET	2SK3019TLCT-ND		15
P1	Header 10X2	Header, 10-Pin, Dual row	1175-1612-ND		1
R1_Mon1, R1_Mon2, R1_Mon3, R1_Mon4, R1_Mon5, R1_Mon6, R1_Mon7, R1_Mon8, R1_Mon9, R1_Mon10, R1_Mon11, R1_Mon12, R1_Mon13, R1_Mon14, R1_Mon15	20K	Resistor	P20.0KFCT-ND		15
R2_Mon1, R2_Mon2, R2_Mon3, R2_Mon4, R2_Mon5, R2_Mon6, R2_Mon7, R2_Mon8, R2_Mon9, R2_Mon10, R2_Mon11, R2_Mon12, R2_Mon13, R2_Mon14, R2_Mon15, R4, R5	2.32k	Resistor	RNCP1206FTD2K32CT-ND		17
R3_Mon1, R3_Mon2, R3_Mon3, R3_Mon4, R3_Mon5, R3_Mon6, R3_Mon7, R3_Mon8, R3_Mon9, R3_Mon10, R3_Mon11, R3_Mon12, R3_Mon13, R3_Mon14, R3_Mon15	499	Resistor, surface mount	RG32P499BCT-ND		15
TP3, TP4	TESTPT	PCB Testpoint	5016KCT-ND		2
U1_Mon1, U1_Mon2, U1_Mon3, U1_Mon4, U1_Mon5, U1_Mon6, U1_Mon7, U1_Mon8, U1_Mon9, U1_Mon10, U1_Mon11, U1_Mon12, U1_Mon13, U1_Mon14, U1_Mon15	PS2701A-1	High Isolation Voltage SOP Photocoupler	PS2701A-1-P-A-ND		15
					101