



REVISIONS				
REV.	REVISIONS	DATE	DATE	APPROVED

FOR PREVIOUS REVISION HISTORY SEE EECAD DEPARTMENT OR DOCUMENT CONTROL GROUP

LV Bias Probe  
 RED A=18V  
 Black B= Com  
 Orange C= 24V insert command  
 Green D= Outer limit Com  
 Blue E= Outer limit N.O. (closes when on outer limit)

**TB1 terminals connect to J4 9-pin Dsub on Glassman Pressure Switch Relay Chassis**

- 1- GROUND
- 2- COMMON (RETURN FOR ALL PROGRAMMING) (BLACK WIRE)
- 3- MODIFIED HV ENABLE-SEE DWG "GLASSMAN MOD2016" (BLUE WIRE)
- 4- V MON (0-10V IS 0-450KV) (BROWN WIRE)
- 5- V PROG (0-10V FOR 0-450KV) (RED WIRE)
- 6- LOCAL V CONTROL (LOCAL DIAL OUTPUT)
- 7- I MON (0-10V IS 0-3mA) (ORANGE WIRE)
- 8- I PROG (0-10V FOR 0-3mA) (YELLOW WIRE)
- 9- LOCAL I CONTROL (LOCAL DIAL OUTPUT)
- 10- +10V (SENT DIRECTLY TO XVME 244 DIGITAL INPUT CARD FOR "READY" SIGNAL bit 2.
- 11- HV ENABLE (TIED TO TB1-10, BECAUSE THIS WAS NOT A PROPER ENABLE SIGNAL FOR OUR USE)
- 12- HV STATUS (WHITE WIRE)

GLASSMAN TANK PRESSURE SWITCH CABLE (J5 connection) Panel mount G0B12-88PNE

A: Black  
 B: Brown  
 C: Red  
 D: Orange  
 E: Yellow  
 F: Green  
 G: Blue  
 H: White

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GLASSMAN TANK PRESSURE SWITCH CONNECTION BOX

A: Black QPSH-AP-42 (output 1)  
 B: Brown QPSH-AP-42 (+24V)  
 C: Orange QPSH-AP-42 (Analog Out)  
 D: Blue QPSH-AP-42 (Common)  
 E: White QPSH-AP-42 (output 2)  
 F: Violet Ashcroft COMMON  
 G: Yellow Ashcroft N.O. (shorts to common at pressure)  
 H: Green Ashcroft N.C.

J4 connection from pressure switch relay chassis to Glassman remote TB1 Panel mount 9 pin female D-sub connector

X2 connection	TB1 connection
1: Black	2
2: Brown	4
3: Red	5
4: Orange	7
5: Yellow	8
6: Green	
7: Blue	3
8: White	12

24VDC INPUT (J1)  
 Burndy G0B10-4SNE  
 A=+24VDC  
 B= GND

GLASSMAN PRESSURE SWITCH RELAY CHASSIS IN RACK ITF27  
 See Schematic "Glassman interlock relay chassis 2018"  
[https://wiki.jlab.org/ciswiki/images/3/37/Glassman\\_interlock\\_relay\\_chassis\\_2018.pdf](https://wiki.jlab.org/ciswiki/images/3/37/Glassman_interlock_relay_chassis_2018.pdf)

BNC out Glassman Voltage monitor X2  
 BNC out Glassman Current monitor X3

J2 PSS connection (AMP PT02E-12-8S)

A: Black 24V  
 B: Brown K6 drive  
 C: Red 24V  
 D: Orange K7 drive  
 E: Yellow K6 NC  
 F: Green K6 NC  
 G: Blue K7 NC  
 H: White K7 NC

J6 Hardware interlocks connection (Souriau UTSO-12E8S)

A: Black 24V  
 B: Brown Dipole magnet relay  
 C: Red 24V  
 D: Orange Global intlk relay  
 E: Yellow 24V  
 F: Green LV Bias relay  
 G:  
 H:

Future Interlocks not presently in use March 2019

J3 connection to EPICS cards 15pin female Dsub on panel

1 Black	EPICS digital output. HV Enable
2 Brown	EPICS digital input. HV status
3 Red	EPICS digital input. SF6 Interlock OK
4 Red-Black	EPICS digital input. Dipole Interlock OK
5 Pink	EPICS digital input. Global Interlock OK
6 Orange	EPICS digital input. LV Bias Probe retracted
7 yellow	EPICS digital input. PSS system A OK
8 Dark green	EPICS digital input. PSS system B OK
9 light green	EPICS digital input. Glassman ready
10 Dark blue	EPICS ADC input. SF6 pressure
11 light blue	EPICS DAC output. Vprogram
12 Violet	EPICS DAC output. Iprogram
13 Grey	No connect
14 White	EPICS DAC common
15 Grey-Black	EPICS DIO common

Cross-Connect WAGO block ITF21-1 on front of rack ITF21

81	To XVME244 digital ouput channel 1	IGLK100DIOFLRDB.B0
82	To XVME244 digital input channel 1	IGLK100DIOFLRDB.B0
83	To XVME244 digital input channel 2	IGLK100DIOFLRDB.B1
84	To XVME244 digital input channel 17	IGLK100DIOFHRDB.B0
85	To XVME244 digital input channel 18	IGLK100DIOFHRDB.B1
86	To XVME244 digital input channel 19	IGLK100DIOFHRDB.B2
87	To XVME244 digital input channel 20	IGLK100DIOFHRDB.B3
88	To XVME244 digital input channel 21	IGLK100DIOFHRDB.B4
89	To XVME244 digital input channel 3	IGLK100DIOFLRDB.B2
90	To XVME566 ADC card channell 1	IGLK100TANKPSI
91	To C1068 DAC channel 1	IGLK100HVSET
92	To C1068 DAC channel 2	IGLK100HVSET
93		
94	To C1068 DAC card breakout common	
95	To XVME244 card breakout common	

DESIGN	HANSKNECHT	DATE	2/13/19
CREATED		DATE	
APP/ORGANIZATION		DATE	
APPROVED		DATE	
DESIGNER	J HANSKNECHT	DATE	NONE

Thomas Jefferson National Accelerator Facility  
 Office of Accelerator Support  
 TITLE: UITF GLASSMAN 450KV CONTROL WIRING SCHEMATIC