



Electronics Installation Status

DUNE 2x2 Installation Meeting

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Topics

- Electronics Rack Build Updates
- MINOS AC Distribution
- Impedance Monitor System
- FIRUS Interface

- HV Filter – Light VGA
 - HV Drift system
 - pORC document has been drafted and undergoing a few minor edits.
 - Interlock strategy discussed and a draft implementation design has been provided.
 - Rack requires an emergency power off button, mounted on a panel. To be placed on front of rack in filter pot area. Requires ~3 “ rear clearance, 3U space.
 - Position to be verified with containment vessel placement.
 - Adding a thermal switch to exterior of filter pot.
 - Light VGA
 - New VME crates expected delivery Feb. 24
 - 208V/3-phase/30A Switch Box and PDU installed with crates.
- Light ADC
 - TTI frame assembly and PS installation
- PS
 - In the process of preparing to test the prototype installation at LArTF on Module 0.
 - Identify parameter settings and set up Configuration pages.
 - Configuration file backup and Scope feature to be investigated.
 - Package prototype Interlock circuit in 1-2U chassis with cable connectorization.
- Purity Monitor
 - Rack Readiness document generated.
 - Once mechanical/cable plant issues are addressed, will submit an addendum to the previous pORC for review.
 - Looking for Flash Lamp enclosure.

MINOS AC Distribution

Steps	Name	Description	Date Due	Notes		
1	Micheli	DOW	12.12.22			
2	Team	Submit DOW to TM	12.14.22			
3	Team	Review SOW	1.5.23	return to TM 1.9.23		
4	Team	SOW comments Submittal to Dave	1.9.23			
5	Team	Revised SOW Review	1.17.23			
6	Featherston	Dave Submits Scope to FESS	1.23.23			
7	Featherston	Dave receives FDR from FESS	2.9.23			
8	Team	Investigate elimination of EPP Conduit	2.16.23			
9	Featherston	Revise SOW	2.21.23			
10	Team	Approve Revised SOW	2.21.23			
11	Micheli	Update DOW and Engineering Designs	2.23.23			
11	Featherston	Schedules Walkdown with Leyden, Request Quote	2.24.23			
8	Featherston	Dave receives Quote from Leyden	3.10.23			
9	Featherston	Submit SOW, FDR, and Req to an admin	3.13.23	Who is the admin	Req #	Approvers
10	Admin	Req Approvals obtained	3.14.23			
10	Hohbein	Assigns Buyer	3.15.23			
11	Buyer	Releases for bid	3.17.23			
12	Team/TM	Prepare HA's/IMPACT	3.20.23			
13	Buyer	Returns bids and review	4.3.23			
14	Buyer	Award PO	4.5.23			
15	Contractor	Start work	4.10.23			
16	Contractor	Work Finished	5.12.23			

Impedance Monitor System

- Monitor chassis and SI/CT enclosure tested and ready for installation.
 - Need to find location for chassis, beacon, and speakers.
 - Determine cable lengths, place order.
 - Install: Z-mon (Rachel), SI/CT (electricians)



- The rack protection systems installed in all of our racks have a 'status' voltage and dry contact outputs for remote monitoring purposes.
- We will use the FIRUS system, already installed in MINOS, to notify the Communications Center and the Fire Department if smoke is detected.
- We also need to submit a FIRUS Message Request form.
- Per our Fire Tech contact, Joseph Flores:
 - Contact work central (3434) to connect to FIRUS.
 - FIRUS requires an open contact relay, close on alarm, with 3K, 1% resistor.
 - Contact operating voltage +/-12V/1mA.
 - FIRUS mini-trunk 1, Node 7, Slot 2: 16 channels, Slot 3: 16 channels.
- We will follow FESHM 6013: best practices for Form C relay wiring.

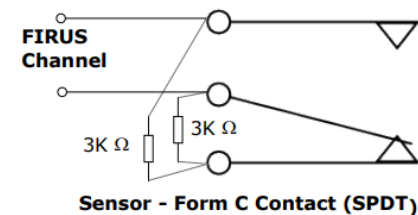
9.0 Appendix A CONTACT WIRING

NOTE: These are the most common methods to be used. However; different circumstances may require a different configuration from these shown.

1. Standard wiring of ONE SENSOR (dedicated circuit) for:
IDENTICAL Primary/Backup messages,
Has "OPEN" and "GRND" Faults

This method is the MOST reliable for receipt of an alarm.
It shall be used when the sensor has a Form C (SPDT) contact.

CONDITION:
NORMAL: 3K ohms (supervised circuit)
ALARM: 0 ohms (shorted on alarm)
BKP: 6K ohms (when NO contacts failed to close)
OPEN: > 6K ohms (broken wire or High Resistance connection)
GND: when one conductor is shorted to ground



Summary

- Electronics Rack Builds
 - Awaiting arrival of the VME crates for PDU and crate installation.
 - HV Drift Interlock design and DC power testing are in progress.
- MINOS AC
 - The SOW has been updated to reflect a cost savings modification.
 - We are currently awaiting the date and time of the 2nd walk-through with the task manager and Leyden in preparations for receiving the estimated cost.
 - Once the estimate cost is known, the Requisition, SOW, and FDR can be submitted to the purchasing department.
- Impedance Monitor and SI/CT
 - System is ready for installation.
- FIRUS
 - Design requirements have been obtained.
 - Need to decide if we want independent monitoring or bank monitoring.