



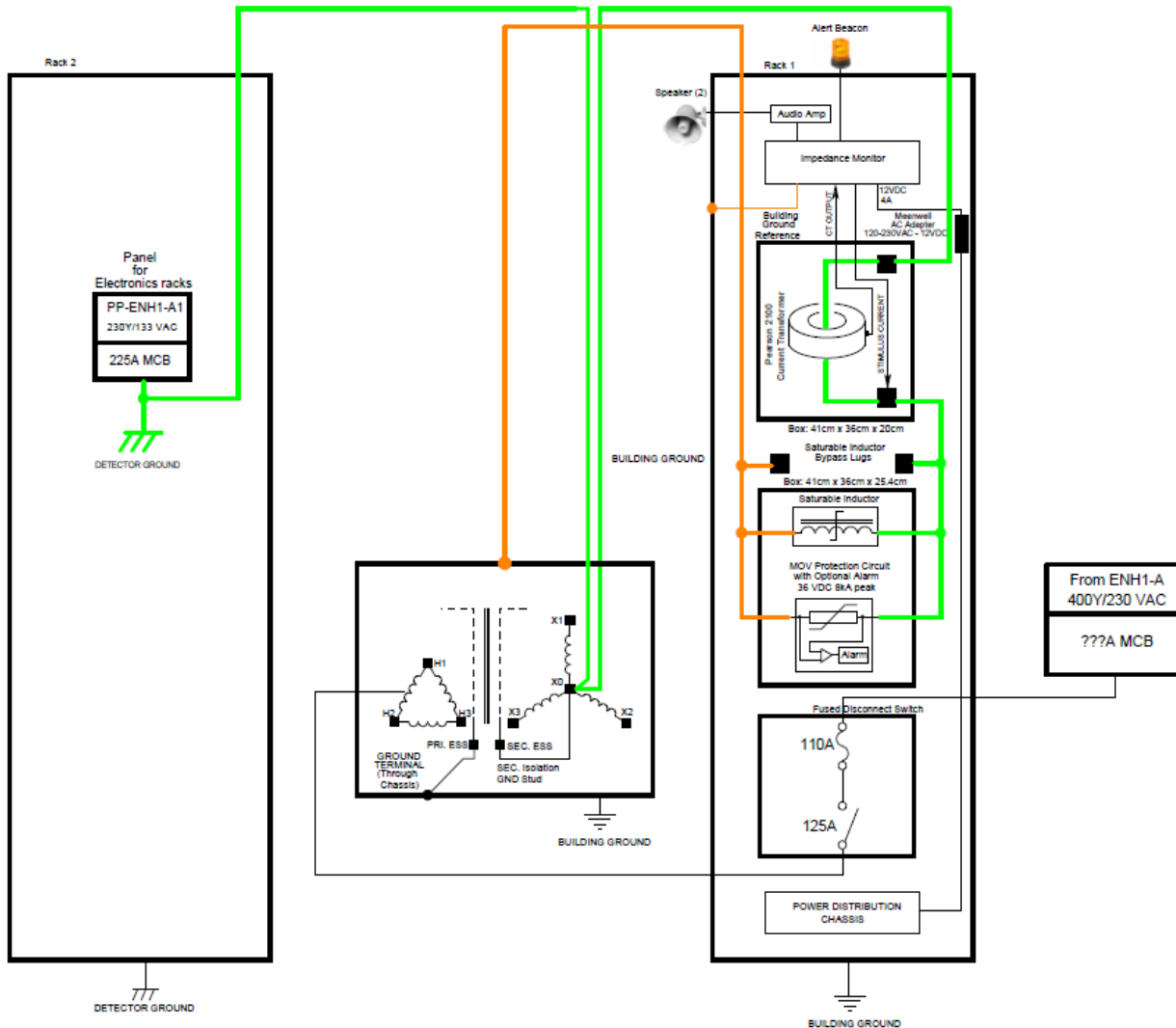
'Isolated' AC Distribution and DC Power

Linda Bagby, Teresa Shaw

ProtoDUNE-SP Installation Workshop

19-21 April 2017

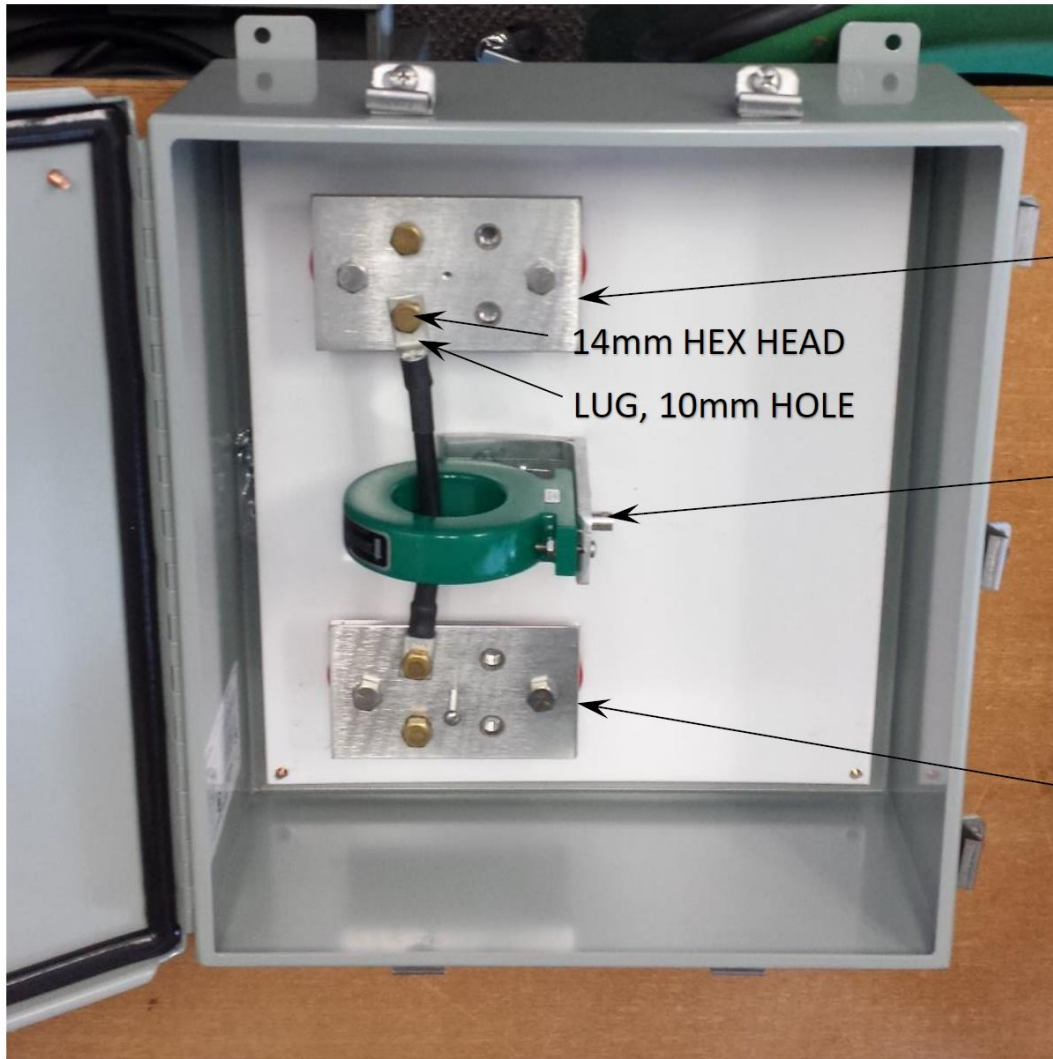
'Isolated' AC Distribution



- Double Shielded Transformer
- Amplifier
- Impedance Monitor
- Saturable Inductor Module
 - Metal Oxide Varistor
 - Alarm Status
- Primary Fuse
- Bldg AC Dist.
- Secondary PP

Current Transformer Bypass Box

Mike Utes



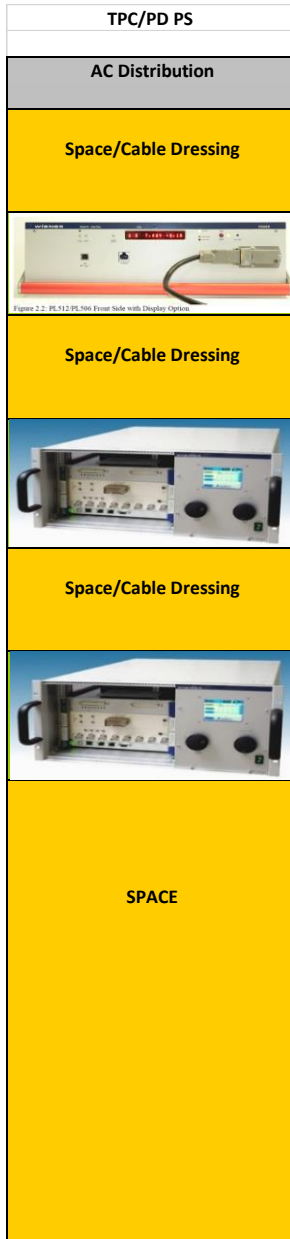
FLAG CONNECTION TO
DETECTOR GROUND

14mm HEX HEAD
LUG, 10mm HOLE

PEARSON 2100
CURRENT TRANSFORMER

FLAG CONNECTION TO
SATURABLE INDUCTOR

DC Power



PL506: TPC
30-60V/13.5A

MPOD: WB/FC, ED
2kV/4mA, 3kV/3mA

MPOD: PD
0-30V/2.5A, 0-60V/1A

2 identical racks
1 for 'Jura' APA (3 feedthroughs)
1 for 'Lake' APA (3 feedthroughs)

Delivery Dates and Plans

Double Shielded Transformer + Modules	June 1
PL506 (48V)	June 13
MPOD Wire Bias/Field Cage/e Diverter	July 14
Photon Detection	Gary Drake

Terri and Linda will be at CERN June 5-9 .

Tasks:

Measure noise inside the cryostat and cold box.

'Isolated' AC Distribution installation.

Cable trays, cables, and rack support.

AC Distribution and DC Power Documents

- ProtoDUNE Grounding Points
<http://docs.dunescience.org:8080/cgi-bin/ShowDocument?docid=879>
- ProtoDUNE TPC DC Power Engineering Note
<http://docs.dunescience.org:8080/cgi-bin/ShowDocument?docid=1959>
- ProtoDUNE TPC Wire Bias/Field Cage/Electron Diverter Engineering Note
<http://docs.dunescience.org:8080/cgi-bin/ShowDocument?docid=1244>
- ProtoDUNE AC Distribution
(EDMS 1750108)
<http://docs.dunescience.org:8080/cgi-bin/ShowDocument?docid=2093>
- ProtoDUNE Ground Current Impedance Monitor:
<http://docs.dunescience.org:8080/cgi-bin/ShowDocument?docid=1805>
- ProtoDUNE Saturable Inductor/MOV Module
<http://docs.dunescience.org:8080/cgi-bin/ShowDocument?docid=2080>