

SD-HCAL technological prototype: services

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What we need

- HV supplies
- LV supplies
- HV cables
- LV cables
- Readout cables
- Gas distribution system
- Gas pipes
- Well-defined management of all cables + pipes
(see talk of François)



HV supplies (1)

- ❑ SY1527 controller crate
 - Up to 16 modules
- ❑ A1526 modules
 - 6 chan
 - 15kV, 100 μ A
- ❑ Rental from CERN pool under discussion (Ghent)



HV supplies (2)

- ❑ Back-up solution: Iseg DPS-Mini series
- ❑ 0-5 V \rightarrow 0-10 kV
- ❑ Low profile: could be mounted on cassette if B-field version can be developed
- ❑ Present baseline would be to mount in crate and bring HV cables to detector
- ❑ Control and monitoring being developed in-house



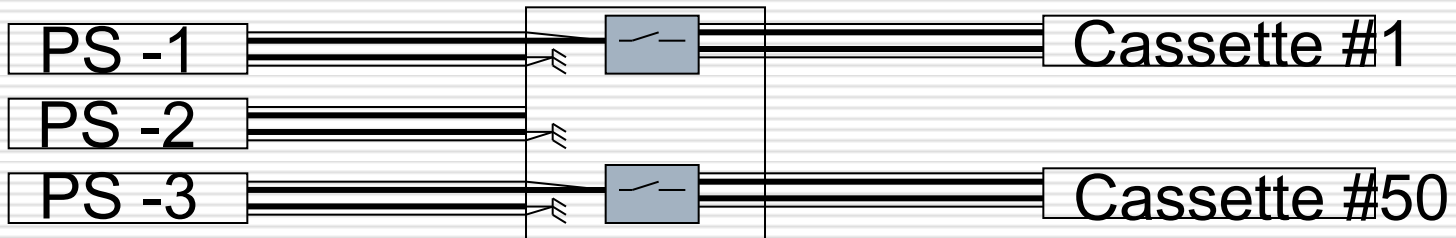
LV supplies

- ❑ Without power pulsing, cassette LV consumption = 6A
- ❑ 50 cassettes -> 300 A
- ❑ In-hand:
 - 3 x ZUP6-120 Lambda power supplies (120A each), 3U and 1/3 19"
 - 3 x Genesys 6-200 A Lambda power supplies (200A) each, 1U and 19"
- ❑ Each can be remotely controlled (RS-232, RS-485)
- ❑ Each has remote sensing capabilities



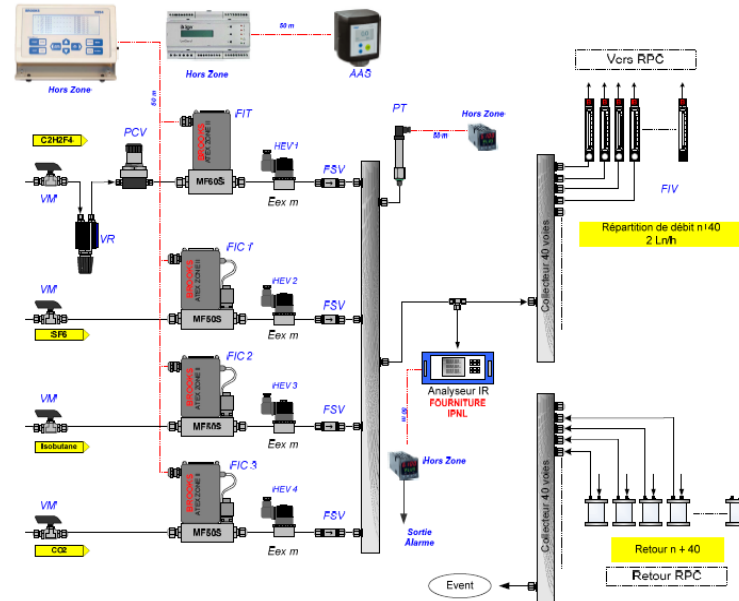
Cables

- All cables must be fire-retarding and halogen-free! (CERN rules)
- Cable length ~5m
- Not yet purchased / produced!
 - Ghent will organize for HV
 - Louvain will organize for LV
- One LV cable per cassette: splitter required on cassette (Louvain)
- LV distribution boxes with switching also desirable upstream (Louvain)



- Suitable HDMI read-out cable identified and will be purchased shortly (Vincent)

Gas distribution system



- Local French company
- 40+ independent channels
- Individual flow adjustment
- Ensures accurate mixing of gases
- Conforms to CERN safety rules (ATEX zone II)
- System is built

Gas pipes

- ❑ Limited space → plastic pipes (ø6) to patch-panel (short lengths)
- ❑ From PP to rack may be plastic or flexible SS

