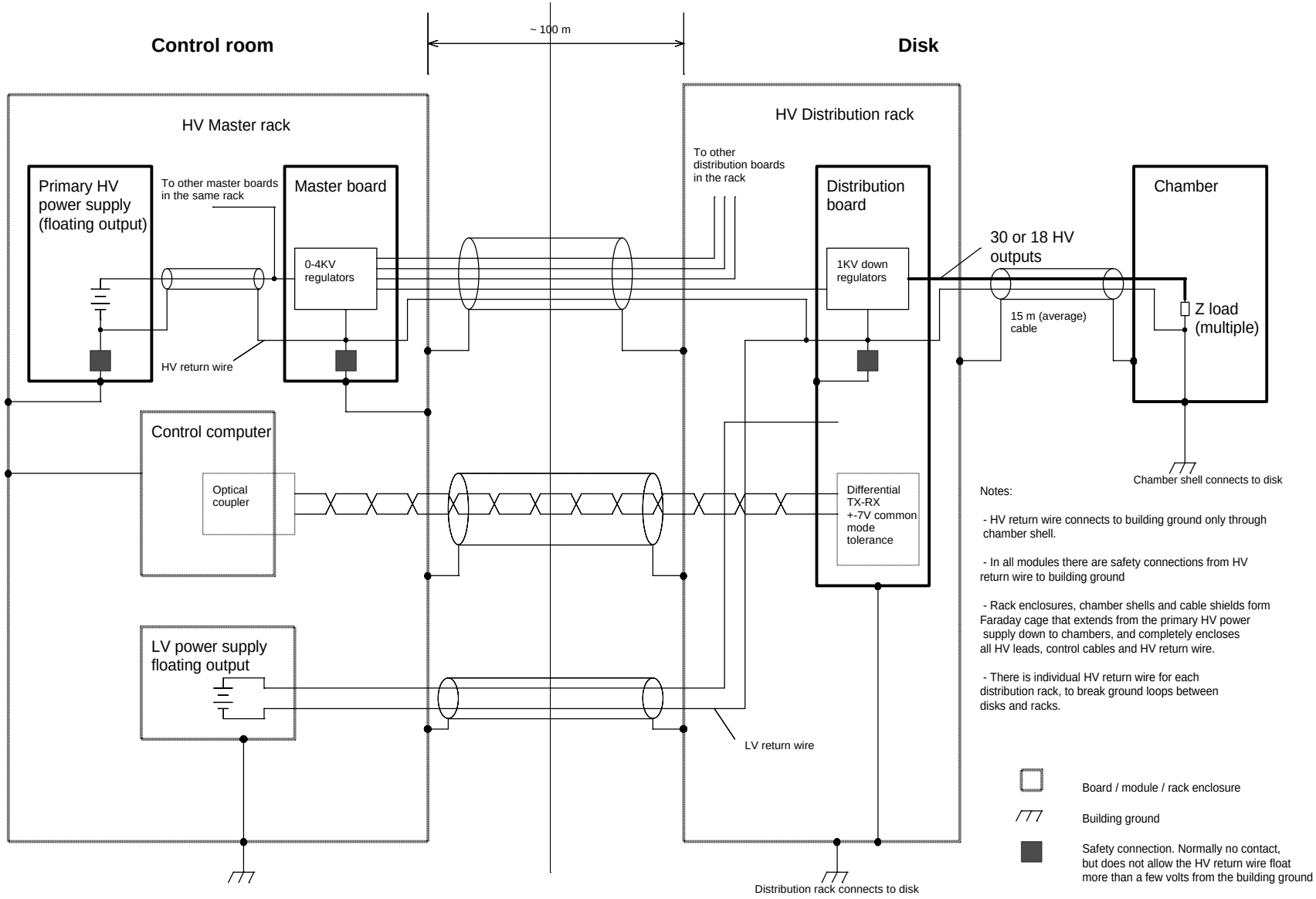
CMS ME CSC HV system grounding



Notes:

- HV return wire connects to building ground only through chamber shell.

- In all modules there are safety connections from HV return wire to building ground

- Rack enclosures, chamber shells and cable shields form Faraday cage that extends from the primary HV power supply down to chambers, and completely encloses all HV leads, control cables and HV return wire.

- There is individual HV return wire for each distribution rack, to break ground loops between disks and racks.

Board / module / rack enclosure

Building ground

Safety connection. Normally no contact, but does not allow the HV return wire float more than a few volts from the building ground