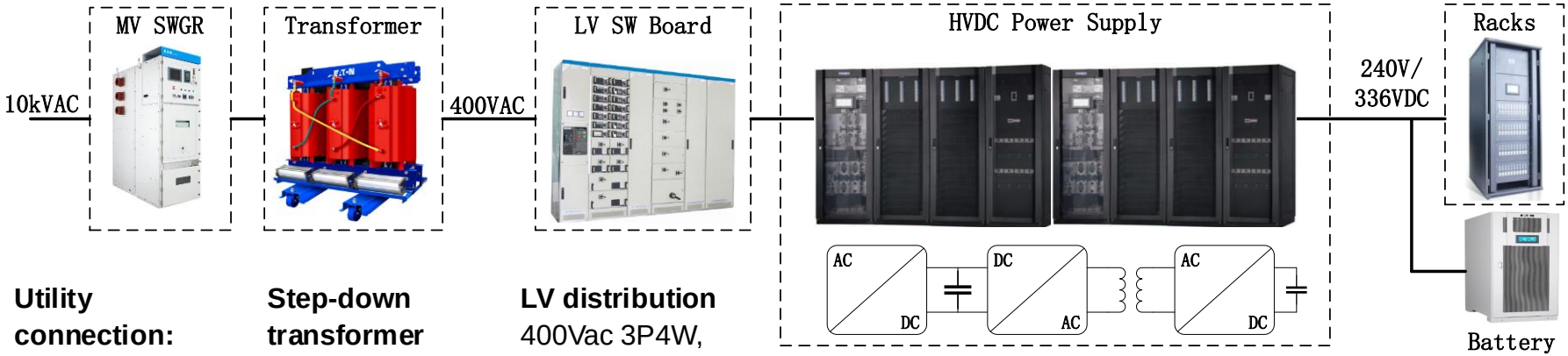
Architecture for DC Data Centers - 1

Conventional Topology



Utility connection:
10kVac 3P3W
(No neutral)

Step-down transformer
2.5MVA
10kV/400V

LV distribution
400Vac 3P4W,
with neutral
grounded

Rectifier:

- 240Vdc or 336Vdc output, with battery connected to output DC bus directly.
- PFC + LLC topology and floating DC+/- buses to eliminate single point grounding failure

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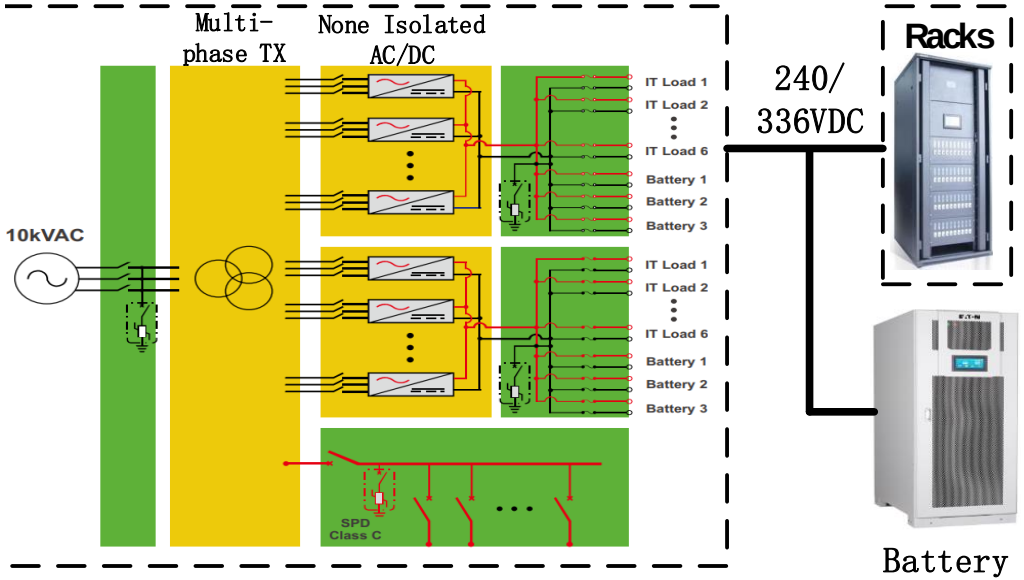
Architecture for DC Data Centers - 2



- **Utility connection:** 3P3W no neutral
- **Special MV transformer:** 10kVac 3P3W input, multi-winding 2-phase 400Vac outputs
  - 400Vac is 3P3W, with neutral floated
- **Rectifier:** Diode rectifier + buck topology
  - 240Vdc or 336Vdc output, with battery connected to output DC bus directly
  - Floating DC+/- buses to eliminate single point grounding failure

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