

Paper211-RESEARCH ON INTEGRATED JOINT SUPERVISION AND SUPERVISION AND CONTROL SYSTEM OF SHARED INTEGRATED SUBSTATION

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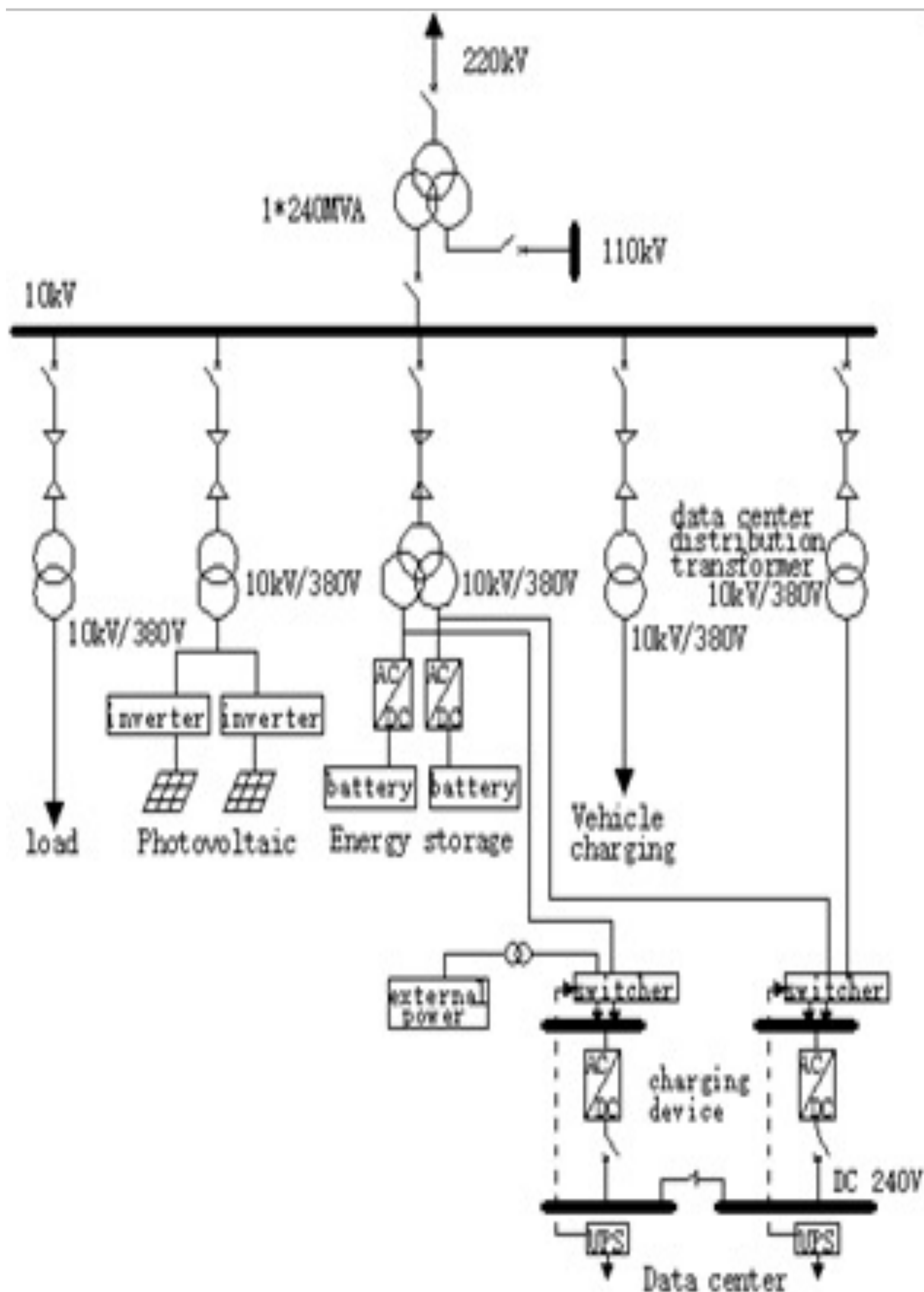
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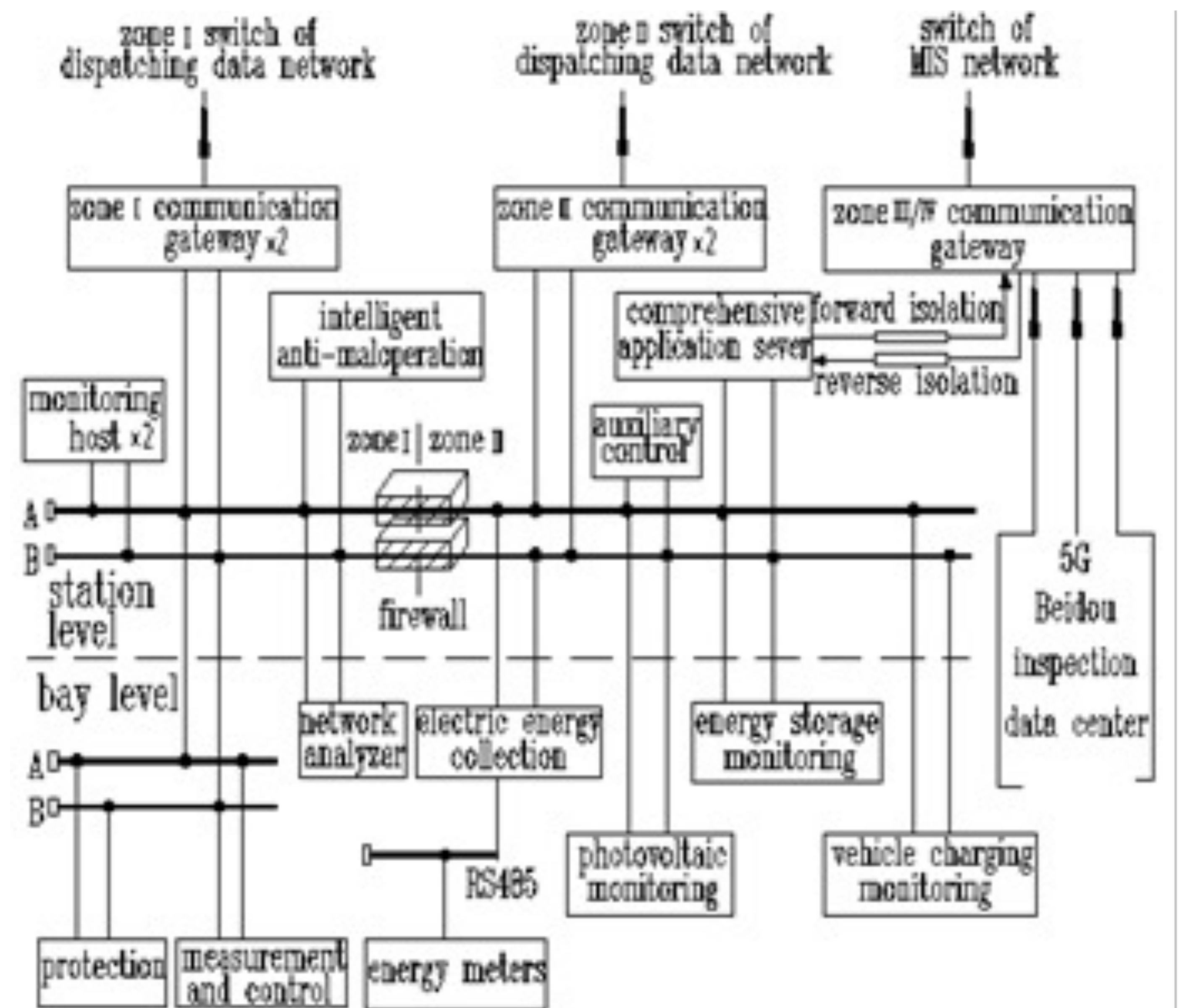
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Shared Integrated Substation

- substation is the main body
- energy storage power station
- photovoltaic power station
- electric vehicle charging station
- data center etc.



System structure



Supervision and control system of substation are the basis and hub of the system.

Division principle of security zone

- security zone I includes various protection, real-time measurement and control devices.
- security zone II contains non-real time control systems including the subsystems' monitoring systems.
- security zone III/IV contains power quality online monitoring, video and safety defense, data center module etc.

Network and communication

- Ethernet network
- DL/T860 protocol

Design principle

- function requirements
- following relevant specifications of national standards or power industry standard
- hierarchical partition structure
- extensible
- standard interface and protocol
- modular design
- plug and play.

Conclusion

As the basis and hub of the shared integrated substation, the supervision and control system of the smart substation connects all kinds of modularization subsystems. The above subsystems are modular design and can be configured according to actual application scenarios by using standard interface and protocol. According to different application scenarios, subsystem modules can be plug and play.