PMC
Rectifiers & Testers

PMC Ltd
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Multiple Circuit Charge/Discharge Rectifier
Type CDR 400-8

Technical data

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Main technical features:

1. Working conditions:
   - Ambient Temperature: 10-40 °C,
   - Rel.humidity, non condensing: 90%RH;
2. Power supply: 3 x 380V / 50Hz (or 60Hz);
3. Power consumption: up to 200 KVA
4. Number of independet charge/discharge channels: 8; All circuits are galvanically isolated.
5. Ability to work in parallel mode;
6. Output current in charge and discharge mode for single channel: 0 - 50A;
7. Max. output current in parallel mode : up to 400A (depending on number of channels working in parallel);
8. Output voltage: 36 - 420V;
9. Accuracy of current : ±1% Full Scale. Resolution: 0.1 A;
10. Accuracy of voltage : ± 0.2% Full Scale. Resolution: 0.1V;
11. ADC : 12 bit;
12. Circuit voltage measurement for each channel;
13. Temperature measurement for each channel;
14. Work modes:
    - Charge,
    - Discharge,
    - CC (constant current),
    - CV (constant voltage),
    - CP (constant power);
15. Microprocessor control;
16. Interface forconnection to a centralized management system – RS485;
17. PLC for each channel, which provides:
    - Temporary storage of process's data in case of a lost connection to a PC and immediately sending it to the PC when connection is restored ;

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- Visualization of main process's parameters-current, voltage, amperhours etc.;
- Auto restart after restoring of broken power supply;
- Data acquisition rate – 100 ms;

18. Electronic commutation when switching charge and discharge modes;

19. Mechanical construction :
    - All essential circuit components such as fuses, pulse control boards, SCR's, and contactors are mounted on pannels. This can be easily serviced in case of a component failure.
    - Cabinet dimensions (W x D x H) [mm] : 1200 x 800 x 2000;
    - The total weight is estimated about 1600 kg;
20. Components used:
    - Power transformers and chokes – AQ group AB;
    - Thyristors modules – Semikron or IR;
    - Fuses, contactors and relies – Schneider electric and ABB.
21. Operator safety:
    - All outputs are galvanic isolated;
    - A main circuit breaker protects personnel when performing maintenance on the rectifier cabinet;
    - Each circuit is protected by a 3-pole breaker and contactor to isolate the circuit from the high voltage of the main transformer and the string of batteries.

Test management and data logging software : Battery Test Manager (BTM 2.0) :

- Creation and editing of programs,
- Grouping circuits for parallel work,
- Uploading, starting, stopping and interrupting of programs,
- Visualization of current state on main window,
- Storing sample measurement data for all processes in a database,

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- Visualization of stored data from database, drawing charts etc.,
- Printing report data,
- Export to Excel