**Energy Data Acquisition Terminal Series**

**General:**

The data acquisition terminals are classified as the Plug-in type (DF6201), and the wall-mounted type (CLL064-1c, CHL064-1j). They are capable of acquiring energy data and switching values of static meters and pulse energy meters and transmitting the data to the master station. These data acquisition terminals are suitable for energy acquisition for most consumers of various sizes from provincial distributors to substations, power plants, small/medium enterprises, mines, oil fields, and ports.

The data acquisition units produced by Dongfang Electronics use advanced technologies like a Hot-Spare CPU, multi-CPU parallel processing, Industry Field Bus (CAN), CF (Compact Flash) and real time operating systems.

**Features:**

- CPU redundancy.
- RTOS (real time operating system).
- Flexible storing capability; Meter reading intervals programmable from one minute to 45 days.
- Outgoing and incoming protocols totally open to customers, able to support any given protocols.
- Compatible with various channels, easy configuration, and of high adaptability.
- Data not lost in case of power interruption.
- Local/remote reading and maintenance.
- DC/AC double power supplies.
- Complete thunder-proof and EMC measures.

**Specifications**

- Input voltage: 380V ±20% ~ 50Hz ±10%V
- Power factor: 0.9 ±92%
- Output voltage: 220V, 110V
- Voltage accuracy: ±0.5%
- Current accuracy: ±0.5%
- Ripple coefficient: ±0.1%
- Current sharing imbalance: ±5%

**Small System**

- Charger capacity: 10A ±20A ±220V±220V±20A ±110V±110V±20A
- Application: single bus
- Connection type: single bus
- Battery: 24Ah ±100Ah

**Medium System**

- Charger capacity: 30A ±60A ±220V±220V±60A ±110V±110V±60A
- Application: substation, power plant
- Connection type: single bus, substation single bus
- Battery: 100Ah ±500Ah

**Large System**

- Charger capacity: 90A ±180A ±220V±220V±180A ±110V±110V±180A
- Application: power plant, water power plant, 600kV substation
- Connection type: single bus, substation single bus
- Battery: 500Ah ±2000Ah
Intelligent High-frequency Switching Power Supply System

DF0230-220/5
Rated output voltage: 220V
Rated output current: 5A

DF0231-220/10
Rated output voltage: 220V
Rated output current: 10A

DF0235-110/10
Rated output voltage: 110V
Rated output current: 10A

DF0236-110/20
Rated output voltage: 110V
Rated output current: 20A

DF0233-220/30
Rated Output Voltage: 220V
Rated Output Current: 30A

DF0237-110/40
Rated Output Voltage: 110V
Rated Output Current: 40A

DF0240 Series of Supervision Unit

A Motorola’s 32-bit SCM is used to ensure high performance and great data processing capabilities.

Several serial communication ports make it easy to connect with other intelligent equipment.

Four remote functions: Remote measurement, remote signal, remote control and remote regulation.

Battery Management: Automatic conversion among constant current charge, equalizing charge and floating charge.

Alarm: Sound and light alarm and remote alarm.

DUM series of intelligent high-frequency switching power supply system are multifunctional, high-powered and high reliable combined power supply systems designed for suiting the demand of communication in modern times. Each system possesses module combined structure, integrates rectifier modules, supervision unit, lightning protection device, distribution unit, charging unit and power supplying function in one system. The capacity of system can vary from 40A to 2500A upon user’s requirements. This series have been widely used in electric power industry, China Unicom, China Mobile, China Railcom, broadcasting and television industry, police communication and metallurgical industry.

All products including DUM186-48/20 power supply system, DUM201-48/50 power supply system, DUM201-48/50B power supply system, DUM201-48/50C power supply system and DUM185-48/100 power supply system have passed the Products Quality Inspection tested by Posts and Telecommunications Industry Products Quality Surveillance and Inspection Center (PTPIC), obtained Network Access License for Telecommunication Equipment awarded by Ministry of Information Industry (MII), PRC, and passed the technological production identification organized by MII.

System composition and characteristics

- Adopts active or passive power factor correction technique, possessing high power factor.
- Advanced power conversion technique.
- Perfect battery management and temperature compensation functions prolong battery’s life.
- Hot-Plug technique makes it convenient to replace.
- Advanced current-sharing techniques guarantee good current-sharing.
- User-friendly man-machine interface, easy to learn and use.
- RS232 interface and Modem interface, realizing local and remote centralized supervision.
- A variety of flexible alarm modes, such as audible and visible alarm, pager alarm, telephone alarm and dry contact alarm.
- Offers kinds of communication modes and protocols.
- Remote signal, remote measurement, remote control and remote regulation functions match the demands of unattended system.
- Professional EMC design, with strong anti-electromagnetic interference capability.
High Frequency Switching Power Supply

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High-frequency Switching Charging Module

Charging Module with Single-phase Input

<table>
<thead>
<tr>
<th>Model</th>
<th>Rated output voltage</th>
<th>Rated output current</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF0230-220/5</td>
<td>220V</td>
<td>5A</td>
</tr>
<tr>
<td>DF0231-220/10</td>
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</tr>
<tr>
<td>DF0235-110/10</td>
<td>110V</td>
<td>10A</td>
</tr>
<tr>
<td>DF0236-110/20</td>
<td>110V</td>
<td>20A</td>
</tr>
</tbody>
</table>

Charging Module for Three-phase Input

<table>
<thead>
<tr>
<th>Model</th>
<th>Rated output voltage</th>
<th>Rated output current</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF0233-220/30</td>
<td>220V</td>
<td>30A</td>
</tr>
<tr>
<td>DF0237-110/40</td>
<td>110V</td>
<td>40A</td>
</tr>
</tbody>
</table>

DF0240 Series of Supervision Unit

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- Alarm: Sound and light alarm and remote alarm.
High Frequency Switching Power Supply

S&C System for Power Equipment and Environment

Overview

In order to facilitate our clients of communication industry to realize unmanned automatic control of communication stations so as to perform effective and timely maintenance and management, Dongfang referring to the relational standards and technical specifications, developed a new generation monitoring system DF0400 Supervisory Control System for Power Equipment and Environment.

System Hierarchy

- SC (Supervisory Center) performs centralized monitoring over all the SSs and SUs.
- SS(Supervisory Station) performs centralized monitoring over all the SUs it charged so as to realize remote maintenance and operation.
- SU(Supervisory Unit) is a group of equipments to be monitored in a base station.
- SM(Supervisory Module) is responsible for gathering real time data and directly controlling the monitored equipment.
- In addition, DF0400 can exchange data with the superior monitoring center and local network management center.

System Architecture

Communication Devices

JSQ-31NT Series Digital Dispatching Communication System

The system is designed in accordance with the standard of CCITT, the dispatching switch standard of national Power Company and the digital switch standard of the Ministry of Information Industry.

System Functions

- Accounts Calling
- Fully flexible number
- Multiple routes
- Multiple billing modes
- Tandem Trunk
- Voice Dialing-In
- Direct-call users
- Having the functions of administrative switch
- Conference calling
- Multiple dispatching consoles
- Automatically choosing of route
- Fully transferring trunk number
- Voice mail box
- Checking busy-tone
- Instruction system function

System Components

- JSQ-31NT Series Digital Switch
- Maintenance Console and Accounting Console
- DF7800 and DF7801 Intelligent Dispatching Consoles
- CD-20 Touching Dispatching Console

System Features

- Completely separate and modularized configuration and side by side backup of the main control system
- The capacity is ranged from 8 to 3000 and can be configured flexibly
- Multiple interface modes, such as User interface, Long line user interface, Two-wire E/M, Four-wire E/M interface, Electric power carrier wave interface, Digital ISDN-R interface (30B+D), Two-wire circumcircuitry trunk interface, Communications supervising interface, Four-wire long distance trunk interface, 2M PCM interface