### Measurement Function

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Single-phase</th>
<th>Single-phase 3-wire</th>
<th>Three-phase</th>
<th>Multi-phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>DP015S</td>
<td>DP030S</td>
<td>DP045S</td>
<td>DP120S</td>
<td>DP120D</td>
</tr>
<tr>
<td>DP030S</td>
<td>DP045S</td>
<td>DP045T</td>
<td>DP045M</td>
<td>DP090S</td>
</tr>
<tr>
<td>DP045S</td>
<td>DP045T</td>
<td>DP045M</td>
<td>DP090M</td>
<td>DP090M</td>
</tr>
<tr>
<td>DP060S</td>
<td>DP060S</td>
<td>DP060S</td>
<td>DP060S</td>
<td>DP060S</td>
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<tr>
<td>DP075S</td>
<td>DP075S</td>
<td>DP075S</td>
<td>DP075S</td>
<td>DP075S</td>
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<tr>
<td>DP090S</td>
<td>DP090S</td>
<td>DP090S</td>
<td>DP090S</td>
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<tr>
<td>DP105S</td>
<td>DP105S</td>
<td>DP105S</td>
<td>DP105S</td>
<td>DP105S</td>
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<tr>
<td>DP120S</td>
<td>DP120S</td>
<td>DP120S</td>
<td>DP120S</td>
<td>DP120S</td>
</tr>
</tbody>
</table>

### Display

- **Basic Mode**: Displays almost all measurement values and setting (except harmonic current value).
- **Simple Mode**: Displays three measurement values (except harmonic current value) enlarged.

### Parameters

- **RMS Value (rms)**
  - Full scale: 20A/10A, 40A/20A, 80A/40A, 120A/60A, 160A/80A
  - Resolution: 0.01A

- **DC Average (avg)**
  - Full scale: 20A/10A, 40A/20A, 80A/40A, 120A/60A, 160A/80A
  - Resolution: 0.01A

- **Peak Value (pk)**
  - Resolution: 0.01A

- **Max/min Individual Display**
  - Hold the absolute value of maximum current and the absolute value of minimum current with polarity.

### Effective W (24)

- Full scale: 1800W, 3600W, 7200W, 10800W, 12600W
  - Resolution: 0.01W

### Apparent (VA) (24)

- Full scale: 2250VA, 4500VA, 6750VA, 11250VA, 13500VA
  - Resolution: 0.1VA

### Reactive \( \varphi \) (OP)

- Full scale: Up to 400th order
  - Resolution: 0.01V

### Load Power Factor (DF)

- Range: Range
  - Resolution: 0.01

### Synchronizing Frequency

- Range: 30Hz to 525.0Hz
  - Resolution: 0.1Hz

### Harmonic Emissions Display

- Normal Mode
  - Full scale (%): 100%
  - Resolution: 0.01A or 0.1%

- Multi-phase
  - Full scale (%): 100%
  - Resolution: 0.01A or 0.1%

### CO2 Emissions Display

- Displays three measurement values for all phases with polyphase model and polyphase output of multi-phase type.
- For each phase with polyphase model and polyphase output of multi-phase type.
- Can display all phases with polyphase model and polyphase output of multi-phase type.

### Limit Operations

-Selectable whether to automatic recovery (output will be continue, this is defer setting.) or output turn off when the limit state has continued for the designated time (designation range 1 s to 10 s, resolution 1 s)

- Setting Range (Peak)
  - Positive: (± 50 % to 420 % of maximum output current for each output voltage ranges.)
  - Negative: (± 40 % to 50 % of maximum output current for each output voltage ranges.)

- Setting Range (RMS)
  - Resolution: 0.1A

### Sequence Function (OP)

- Number of Memories: 6 (volatile )
- Number of steps: 205 max. (for 1 sequence)
- Operation within step: Constant: keep, linear sweep
- Parameters:
  - Output range, mode of AC or DC, ACV (phase voltage), frequency, waveform, DGV, start phase, stop phase, phase angle, step Term., jump count (1 to 9999 or 1), jum-to, step coad (2 bit), branch 1, branch 2, trigger output.
- Sequence Control:
  - Start, stop, hold, resume, branch 1, branch 2
- Others:
  - 1) Sequence function works with AC-INT, AC+DC-INT and DC-INT.
  - 2) AC voltage, frequency, waveform, start phase and step phase cannot be set with DC-INT.
  - 3) Phase angle setting is only for the polyphase model and polyphase output of the multi-phase model.
  - 4) Also, the start phase and step phase are set for L1 phase.

### AC Line Simulation (OP)

- Number of Memories: 6 (initial, normal 1, transition 1, abnormality, transition 2, normal 2)
- Number of steps: 205 max. (for 1 sequence)
- Operation within step: Constant: keep, linear sweep
- Parameters:
  - Output range, AC voltage, frequency, waveform, start phase and step phase (only sine wave), phase angle, step Term., jump count (1 to 9999 or 1), jum-to, step coad (2 bit), branch 1, branch 2, trigger output.
- Simulation Control:
  - Start, stop
- Others:
  - L1 AC line simulation function, only AC and sine wave, fixed for AC+DC-INT.

### Control Software

- Remote Control
- Status Monitor
- Logging
- Operating Environment
  - CPU: 300 MHz min. (1 GHz min. recommended)
  - Memory: 512 MB min. (512 MB min. recommended)
  - Disk drive: CD-ROM drive
  - Interface: USB1.1 or higher
### Another Functions

<table>
<thead>
<tr>
<th>Setting Limitation</th>
<th>Voltage (RMS)</th>
<th>Phase voltage, line to line voltage (single-phase 3-wire, three-phase 4-wire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td></td>
<td>Upper limit or lower limit.</td>
</tr>
<tr>
<td>Remote Sensing</td>
<td></td>
<td>Voltage detection point is output terminal or sensing input terminal. (switchable)</td>
</tr>
<tr>
<td>AGC</td>
<td></td>
<td>Function for continuously performing automatic correction so that the detection point RMS value may become equal to the voltage setting value. Response time less than 100 ms (typ.) (At DC/50 Hz/60 Hz, rated output voltage).</td>
</tr>
<tr>
<td>Auto Cal.</td>
<td></td>
<td>When AUTO CAL key was pushed, the output voltage is automatically corrected so that the detection point RMS value may become equal to the voltage setting value.</td>
</tr>
<tr>
<td>Clipped sine wave</td>
<td>Number of memories</td>
<td>Number of memories: 3 (nonvolatile)</td>
</tr>
<tr>
<td></td>
<td>CF</td>
<td>Variable range: 1.10 to 1.41; setting resolution: 0.01; RMS value correction: yes</td>
</tr>
<tr>
<td></td>
<td>Clipping rate</td>
<td>Variable range 40.0% to 100.0%; setting resolution: 0.1%; RMS value correction: no</td>
</tr>
<tr>
<td>Arbitrary wave</td>
<td>Number of memories</td>
<td>16 (nonvolatile)</td>
</tr>
<tr>
<td></td>
<td>Waveform length</td>
<td>4096 words</td>
</tr>
<tr>
<td></td>
<td>Waveform data</td>
<td>16-bit binary (two’s complement)</td>
</tr>
<tr>
<td>External signal input</td>
<td>External sync input</td>
<td>Sync signal source switching: external sync signal (EXT) or power supply input (LINE)</td>
</tr>
<tr>
<td></td>
<td>VCA input</td>
<td>Gain setting range: 0.0 to 220.0 times/0.0 to 440.0 times; Setting resolution: 0.1</td>
</tr>
<tr>
<td>Memory Function</td>
<td>Number of memories</td>
<td>Basic settings: 30; sequences: 5; AC line simulations: 5; clipped sine waves: 3; arbitrary waves: 16</td>
</tr>
<tr>
<td>Protections</td>
<td></td>
<td>Protective operation for output abnormality (output overvoltage, output overcurrent, etc.), power unit abnormality, and internal control abnormality (internal communication abnormality, etc.)</td>
</tr>
<tr>
<td>External control I/O</td>
<td></td>
<td>Enables control of the system using external signals (or no-voltage contacts) and state output.</td>
</tr>
<tr>
<td>USB Memory</td>
<td></td>
<td>Usable memory: conforms to USB 1.1 or USB 2.0. Connector: USB-A (front panel)</td>
</tr>
<tr>
<td>Output relay control</td>
<td></td>
<td>Selects either ON/OFF using output relay, or high-impedance without using output relay.</td>
</tr>
<tr>
<td>Output waveform monitor</td>
<td></td>
<td>Monitors waveform of output voltage or output current. (switchable)</td>
</tr>
<tr>
<td>LCD Display</td>
<td></td>
<td>5.7 inch, contrast 0 to 99, blue or white base color.</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>Beep sound, keylock, output setting when power is on trigger output setting, time unit setting, reset function.</td>
</tr>
</tbody>
</table>