Pyramid Dsp Series
On-Line “Double Conversion” Technology, DSP Controlled IGBT Rectifier UPS
3 phase in / 1phase out 10 to 40kVA

- IGBT Rectifier
- Real Digital Signal Processor (DSP) controlled transformerless design
- Input Power Factor Correction (PFC) ( >0.99 )
- Low Total Harmonic Distortion Level ( THDi ≤ 4% )
- High Efficiency ( up to 94% )
- Wide Input Voltage Range
- Generator Compatible Operation
- Evolution and redundancy guaranteed by on site Modular Parallel Systems
- Intelligent battery management system extends the lifetime of batteries
- Static and Manual Bypass
- Optional Galvanic isolation transformer
- Communication with computers and network systems with SNMP availability
- Expandable battery blocks
- Low installation and operating costs
- Different voltage applications with refer to country mains characteristic ;
- EPO (Emergency Power Off)

Accessories

Communication
- Remote Monitoring Panel & 25m Cable For Remote Panel
- UPSMAN (Management Software)
- Multiserver Shutdown Licence
- Internal SNMP kit :
  - Internal Slot Card SNMP CSI413SC or CY504, slot box, cable
- External Adapter
  - SNMP Adapter Net Agent Mini DYS22
  - SNMP Adapter CSI418L
  - SNMP Adapter with Modbus CSI41LM

Other
- Split by-pass
- Parallel Kit
- Drawer Type Internal Battery Shelves 10 - 30kVA
- Special Battery Connection Cable for Drawer Type Shelves

Battery Cabinets
UPS looking battery Cabinets (different battery configuration available)
- V14, V15, V24, V33, V34
- Eco Cabinets (different battery configurations available)
- BC00, BC10, BC20, BC30, BC40, BC50, BC60

TESID Innovation and Creativity Reward 2005
### Pyramid DSP Series Technical Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PDSP31010</th>
<th>PDSP31015</th>
<th>PDSP31020</th>
<th>PDSP31030</th>
<th>PDSP31040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output power ( kVA )</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Nominal Active Power ( kW )</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>24</td>
<td>32</td>
</tr>
</tbody>
</table>

#### INPUT
- **Number of phases**: 3Ph+N+PE
- **Nominal Voltage**: 380V/400V/415V
- **Voltage range (%100 load)**: (-15)% (+27)%
- **Voltage range (%64 load)**: (-45)% (+27)%
- **Voltage range (%42 load)**: (-64)% (+27)%
- **Nominal Frequency ( Hz )**: 50 or 60
- **Frequency range for online operation**: ±10%
- **Input Current THD**: ≤4% (*)(**)  
- **Input Power Factor**: 0.99

#### OUTPUT
- **Power factor**: 0.8
- **Number of phases**: 1Ph+N+PE
- **Voltage ( 1ph, Phase to Phase )**: 220V / 230V / 240V
- **Static Voltage Regulation at %100 Linear Load ( online&battery mode )**: <1%
- **Voltage THD at rated linear load**: <3%
- **Crest factor**: 3.1
- **Frequency (Hz)**: 50 or 60
- **Free Running Frequency (Hz)**: ± 0.01%
- **Overload**: 125% for 10 minutes  
  150% for 1 minute
- **Efficiency**: up to 94% (**)

#### BATTERY
- **Type**: Maintenance-free lead acid batteries
- **Quantity (pcs )**: 62 ( 2*31 )  
  **Battery Protection**: Deep Discharge Protection with Auto Cut off
  **Battery Test**: Standard ( Automatic and Manual )

#### DISPLAY
- **LED Display**: Line, Bypass, Battery, Inverter, Load, Fault Indications
- **LCD Display**: Load%, Input & Output Frequency, Voltage & Current, Bypass voltage, Battery Voltage & Current, Temperature, Alarms

#### STATIC BYPASS
- **Number of phases**: 3Ph+N+PE
- **Voltage Range for bypass operation**: ± 10%
- **Frequency Range for bypass operation (Hz)**: ± 6% ( Configurable )

#### COMMUNICATION
- **Interface (Communication Ports )**: RS232&485
- **Dry Contact Signals ( optional )**: AC failure, Battery under voltage, bypass operation, output failure
- **Others**: EPO, Generator interface

#### ENVIRONMENT
- **Storage Temperature Range (°C )**: -25 to +55 ( 15 to 40 recomended for longer battery life time )
- **Operating Temperature Range (°C )**: 0 to 40 ( 20 to 25 recommended for longer battery life time )
- **Relative Humidity Range**: 0-95% ( non-condensing )
- **Maximum Altitude without derating**: 1000 meters
- **Protection Level**: IP20

#### PHYSICAL SPECIFICATIONS
- **Dimensions width (cm)**: 40 x 78 x 107
- **Weight (kg)**: 100
- **Weight (kg)**: 114
- **Weight (kg)**: 116
- **Weight (kg)**: 122
- **Weight (kg)**: 180

#### STANDARDS
- **Standards**: EN 62040-1-1 (safety), EN 62040-2 (EMC), EN 62040-3 (VFI-SS-111)

(*) for source having THDv < 2 % @ nominal load
(**) varies depending on ups power