Power Solutions

# Ensuring Seamless Growth

## UPS (400-900 KVA)

On-Line UPS (400KVA to 900KVA)


# On-Line UPS

The PPH 33 Series 400KVA-900KVA Industrial Backup Power Online UPS equipped with advanced features, including a switch mode power supply and a power backup system. Specifically crafted for industrial applications, the PPH 33 Series UPS serves as both an industrial UPS power supply and a UPS with transformer, ensuring optimal performance and protection for critical equipment. This Series UPS can work in parallel and expand its power capacity. This series UPS is high reliable and have good impact resistance, it can supply safe and reliable protection for load.

## POWER PACKED FEATURES:

- Advanced operation mode
- DSP controlled, double CPU controlled
- Built-in manual maintenance bypass switch
- Output isolation transformer
- Allowing for 3 phase 100% unbalanced load
- Isolated air duct design
- Employing phase-locked loop technology alongside electronic static bypass switch
- Wide input voltage range
- High output power factor
- Strong environmental adaptability
- Advanced Battery Management System
- Optimized battery performance
- Parallel configuration up to 8 units per redundancy (N+1)
- Compatible with generator
- Strong shock resistance ability
- High MTBF (>2,00,000 h)
- Low MTTR (<0.5 h)
- Full protection against over-discharge, Overcharge, overload.
- 12 Pulse rectifier (optional)
- High reliability: True On-Line static bypass technology, to provide strong overload and fault protection device. Internal manual maintenance bypass, further improve the reliability of continuous operation of the load.

# On-Line UPS

## APPLICATIONS & USERS:

- Large/Medium Data Centers/Offices
- Telecommunication Systems
- Medical Equipment
- Air Traffic Control Systems
- Satellite Systems
- Industrial Process Equipment/Machines and Automation
- General Laboratory Equipment
- Studio, Printing and Media Equipment

## Strong Points

- The Best protection for your load
- Robust & resilient design.
- VI mode compatible.
- User friendly
- High availability and cost-effective equipment

## Intelligent Management

- Automated self-aging testing
- Surge/overload/short circuit/overheat protection
- Graphical touch screen display multiple languages
- Support RS232/RS485, SNMP
- Parameters and status display in real-time on the PC

## PPH 33 SERIES (400-900 KVA)

TECHNICAL SPECIFICATIONS

| 1. RATING (kVA/kW) | 400 KVA | 500 KVA | 600 KVA | 700 KVA | 800 KVA | 900 KVA |
|---|---|---|---|---|---|---|
| Model | PPH-400 | PPH-500 | PPH-600 | PPH-700 | PPH-800 | PPH-900 |
| General | (i) UPSs are free from workmanship defects, sharp edges, nicks, scratches, burs etc. All fasteners fixed properly. The equipment shall be complete with all parts and all parts shall be functional.<br>(ii) UPS enclosure's degree of protection shall be IP20/IP21 as per appendix C of IS 13947 (part 1)/1993 (reaffirmed 2004)<br>(iii) True Online Double conversion VFI -SS-111 technology, with advanced PWM using IGBT technology. High Frequency UPS with SPD/TVSS module complies with IEC/EN 62040-3,Class-1 | | | | | |
| 2. INPUT | | | | | | |
| Rated Voltage | 380V/400V /415V (3Ph+N+PE) | | | | | |
| Voltage Range | + 20%, -30% (Configurable) | | | | | |
| Frequency Range | 50/60 Hz ±10% | | | | | |
| Power Factor | ≥0.9/0.99 | | | | | |
| THDi | ≤3% on full load | | | | | |
| Rectifier delay start | 0-60 Sec | | | | | |
| 3. OUTPUT | | | | | | |
| Inverter Components | IGBT | | | | | |
| Voltage Range | 380/400/415 VAC ±1% 3 Phase + Neutral + Ground | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Voltage Tolerance Static | Static ± 1, Dynamic ± 3 | | | | | |
| Output Voltage stability by load Variation | No load to full load | | | | | |
| Frequency | 50/60 Hz ± 0.1% | | | | | |
| Synchronized with bypass mains(%) | ± 2(1-5 selectable) | | | | | |
| Synchronized with internal clock(%) | ± 0.1 | | | | | |
| Nominal Active Power(kW) | 400 | 500 | 600 | 700 | 800 | 900 |
| Total Harmonic Distortion | Linear Load <3% , Non-Linear Load <5% | | | | | |
| Maximum overshoot and Under shoot of output rated voltage | 4% | | | | | |
| Overload capacity | 105~10% for Continuous, 110 ~125% for 10 min., 125~150% for 60 Sec. | | | | | |
| Crest Factor | 3:1 | | | | | |
| Efficiency | Online Mode Up to 96% & ECO mode Up to 99.3% | | | | | |
| Waveform | True Sine Wave | | | | | |
| 4. BATTERY | | | | | | |
| Type | SMF/VRLA/Li-Ion,Ni-Cd | | | | | |
| Battery DC Voltage | 384 to 600 VDC (Selectable) Or any DC voltage as per requirement | | | | | |
| Battery recharge time | 6 to 8 Hours (after complete discharge to 90% charge) and charge rating: Battery recharge time to 90% charge after 100% DoD | | | | | |
| 5. BYPASS | | | | | | |
| Rated Voltage | 380/400/415 VAC | | | | | |
| Bypass Voltage Tolerance | +10%, | | | | | |
| 6. ENVIRONMENT | | | | | | |
| Operating Temperature, Humidity | 0 – 40°C, 0 – 95° C % Non – condensing | | | | | |
| Noise | <70 dB (1 m away from the Unit) | <70 dB (1 m away from the Unit) | <71 dB (1 m away from the Unit) | | | |
| Altitude | 1500 m no derating,1500 to 3000 m derate power by 1 % per each 100 m increase | | | | | |
| 7. GENERAL | | | | | | |
| Protection | • Over load at UPS output terminal<br>• Short circuit Current for 200 ms(Up to 2.0In)<br>• Over and under voltage.<br>• Manual and bypass facilities<br>• Battery Low voltage<br>• Over temperature<br>• Fan failure | | | | | |
| Alarms & Indications | • Charger On/ Mains presence.<br>• Battery charging and discharging<br>• Output Over Load with Audible Alarm<br>• Low Battery Voltage with Audible Alarm.<br>• Audible alarm for mains failure, battery low pre- alarm, battery low trip and Over temperature. | | | | | |
| Meters | • AC Input/ Output voltage<br>• AC Input/ Output current<br>• Input/ Output Power<br>• Input/ Output Power Factor<br>• Battery voltage<br>• Battery charging & discharging current<br>• Input/ Output frequency<br>• Alarm history<br>• Faults Alarm | | | | | |
| Degree of protection | IP20/IP21 | | | | | |
| 8. PANEL DISPLAY | | | | | | |
| LED/LCD | Display Input/ Output voltage, Frequency, Power, Power Factor, Battery voltage, Current, battery Status, Load Percentage, UPS status, History record, Set parameters. (Graphical touch screen LCD Display) | | | | | |
| 9. COMMUNICATION | | | | | | |
| Interface | Dry contact RS 232, Modbus/TCP,RS485, SNMP | | | | | |
| Options | Harmonic filter, SNMP adapter, LBS cable, Battery Temperature Sensor, Battery Ground Fault Detection, Bypass current sharing inductor. | | | | | |
| 10. Certifications | | | | | | |
| ISO | ISO 9001:2015, ISO 14001:2015, ISO 27001, ISO 50001 | | | | | |
| Health & Safety | OHSAS 45001, RoHS Compliant | | | | | |
| Standards | IEC 62040-1, IEC 62040-2 & IEC 62040-3: 2011 and CE Compliant | | | | | |

*In the interest of continuous product improvement, all specification is subject to change without


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