

POWER - PLUS

ONL 33 Series

The best 3 phase double conversion UPS

As we are situated in an era where technology and information are combined into one element, a reliable and high quality power source is essential. By this rule of thumb, Power-Plus developed ONL-33 series UPS that is proven to be the industry's most reliable and stable power protection equipment, yet controlled by DSP (Digital Signal Processor) to protect your valuable equipment last ever.



- UPS controlled by Digital Signal Processor (DSP)
- Sine wave Pulse Width Modulation (SPWM)
- High Resolution 320 x 240 dots graphs LCD Display
- Automatic Battery Management and charging system
- Wide input Voltage range 176V-264V
- Pure sine wave output less than 3% THD
- UPS status display on LED flowchart
- Smart RS-232 or RS-485 communication port
- Accept two AC source input (option)
- SNMP management capability (option)
- Intranet/Internet management function capability (option)
- 20kHz high frequency inverter
- Versatile modular design
- Expandable battery run time
- Generator compatible
- IGBT inverter design
- Multi-function LCD display
- Cold start function (DC power on)
- Battery test on AC mode
- Accepted 100% Unbalanced load
- Remote control panel (option)
- IBM AS-400 interface communication port (option)

Input:

- Protected by filters that stops input surge and noise
- Recovery delay to prevent inrush current at sudden recovery
- Should high voltage (over 20%), the input power is isolated to protection rectifier system
- Phase order failure protection
- Utility failure / High voltage protection

Charging:

- Apply 3 phase 6 pulse full control rectifier, the merit of allowing wider controllable voltage
- Auto termination of SCR when over DC Voltage occurs
- DC delay start up
- User's configurable charging current from control panel from 3A to 30A
- World's leading battery test without shutting down the AC power
- User configurable regulated battery test function
- User configurable automatic floating charge function as well as manual setup.

User Interface (KEYS):

- ON: Start up the inverter
- OFF: Stop the inverter
- Left: Shift LEFT of cursor
- Right: Shift RIGHT of cursor
- Up: Increase the value of parameter and change page
- Down: Decrease the value of parameter and change page
- Esc: Return to last menu page
- ENTER: Used for confirmation

Multi Functional Display panel information:

- Normal display: Can display output voltage, current and load level
- Menu:
 - o Data Display
 - o Event Stories
 - o System Set

UPS status display on LED flowchart:

- Input ON: Utility Power LED
- Manual Bypass ON: Manual Bypass switch at ON position
- Rectifier ON: Rectifier unit is energized
- Inverter ON: inverter is operating
- Bypass ON: System output on bypass
- Output ON: Output switch at ON position
- Charge ON: Batteries are being charged when the mains is ok.
- Discharge ON: The load is being supplied from the batteries.
- Fault ON: Any system failure case.

Warning sounds:

- Key sound
- Malfunctioning warning
- Event warning
- Emergency event warning
- Voice warning (optional)

Communication Interface:

Can select between RS-232 or RS-485 port with computer, Power-Plus provide multiple platform for different users.

Remote Controlling (Optional):

Communicate with Computer through communication port, and send identical information to administrator's computer screen as displayed on the front panel. UPS setting can be selected whether to activate this function or not.

SNMP protocol (Optional):

This additional card installed with the UPS is equipped with RJ-45 network port to link with the network. As this is constantly connected, the administrator will be able to realize the most updated status of the UPS anytime, anywhere in the world, as long as there is internet access.

Relay Card (Optional):

This card provides complete IBM AS-400 external functions, with maximum connector current reached 10A, signals including: AC LINE, UPS ON, BYPASS / INVERTER, NORMAL / FAULT, AC FAIL / BACKUP, BATT LOW, ALARM, SHUT DOWN or BATT LOW SHUT DOWN, EPO (Emergency Power Off)

Dual AC input (Optional):

Can be correspondent with AC from different power source, such as mains power and generator power source, etc.

Specification

Model Name	ONL-10K33	ONL-15K33	ONL-22.5K33	ONL-30K33	ONL-45K33	ONL-60K33	ONL-80K33	ONL-100K33	ONL-120K33
Capacity	10kVA	15kVA	22.5kVA	30kVA	45kVA	60kVA	80kVA	100kVA	120kVA
Power	8kW	12kW	18kW	24kW	36kW	48kW	64kW	80kW	96kW
P.F.	0.8								
<i>Input</i>									
Phase	3 Phase 3 wire / 3 Phase 4 wire and ground								
Voltage range	280 V / 120V or 380V / 220V +/- 20%								
Frequency range	Auto-sensing, 50/60 Hz +/- 5Hz								
Way of rectifier	3 phase 6 pulses or 12 pulse (optional)								
Efficiency of rectifier	>97%								
Efficiency of inverter	>88%								
Total Efficiency	>85%								
<i>Output</i>									
Phase	3 phase 4 wire and ground								
Voltage range	280V / 120V or 380V / 220V								
Voltage regulation	+/- 1%								
Transient state	Return to 90% with 4 cycles								
Overload capacity	Bypass after 30 min while overload >100% < 125% Bypass after 30 sec while overload = 125% < 150% Bypass after 30 cycles while overload exceed = 150%								
Way of inverter	Sine wave modulated from 20kHz pulse by DSP control								
Frequency	50/60 Hz								
Frequency regulation	+/- 1%								
Range of phase lock	+/- 5Hz								
Range of lock released	>+/- 5Hz								
Range of lock back	+/- 3Hz								
Wave	Sinewave								
Load crest factor	3:1								
Total harmonic distortion	Less 3% for linear load								
<i>Static Switch</i>									
Transfer way	When inverter and utility are synchronized at same phase and voltages, bypass to inverter								
Transfer time	Bypass to inverter 0ms Normal state, inverter to bypass 0ms								
Efficiency	>99%								
<i>Charger</i>									
Voltage	DC410V								
Current	Current can be adjusted at 1A, 2A, 3A, 5A, 10A, 15A, 20A, 30A automatically								
Charging period	Return to 90% from 100% exhausted battery within 8 hours (depending on type of batteries)								
<i>Unit</i>									
Battery type	Bank with 12V x 30pcs								
Backup time	Depending on type of batteries								
Noise	Less than 60dBA from the surface of 1m away								
<i>Environment</i>									
Operating Temperature	0°C - 40°C								
Storage Temperature	-25°C - 55°C								
Ambient operation	3,500 meters max. elevation, 0 - 95% humidity non-condensing								
<i>Dimensions (WxDxH)</i>									
208/120	530x875x1010mm		530x960x1180mm		750x800x1700mm		1500x800x1700mm		1500x800x1700mm
380/220	530x875x1010mm		530x960x1180mm		750x800x1700mm			1500x800x1700mm	
<i>Net Weight (kg)</i>									
208/120	427	463	457	530	800	950	TBD	TBD	TBD
380/220	333	343	345	395	530	590	TBD	TBD	TBD