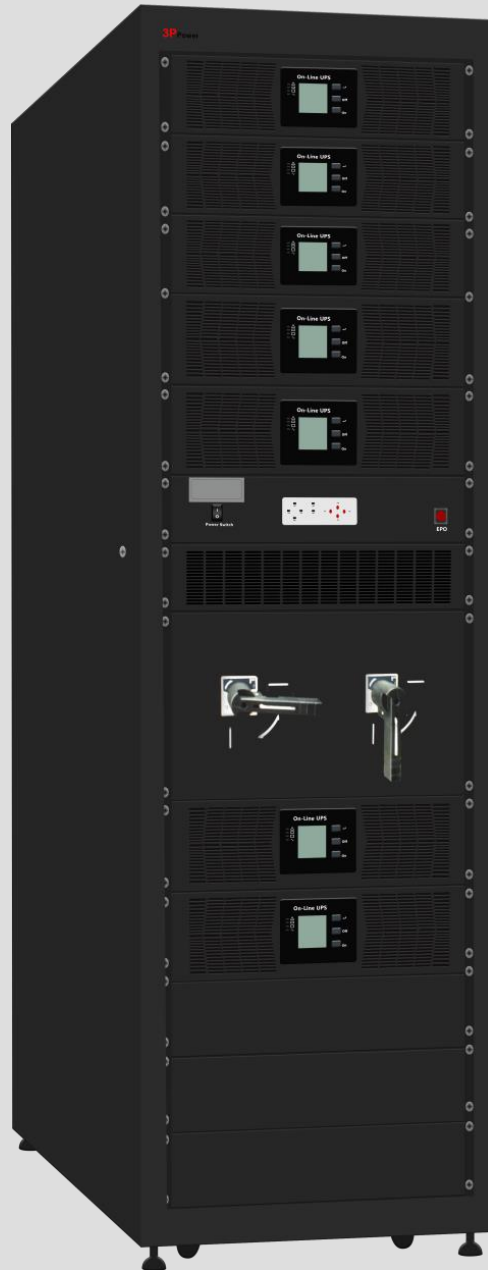


# 3P Power

Passion Profession Perfection



## PRODUCT CATALOGUE

Excellence MOD Series Scalable Modular AC UPS

# Excellence MOD Series Scalable Modular AC UPS

## FEATURES



### • ADAPTABILITY

Designed to accept a wide range of input voltages and frequency range, this DC UPS is capable to cope with the worst utility conditions. It can eliminate harmful distortion from utility power and withstand all kinds of severe impacts from various loads. It is fully capable to support heavy duty equipment, production equipment and DCS (Distributed Control System) system.

### • INCREASED EFFICIENCY

Increased efficiency leads to higher sustainability, through reduced carbon emissions. With higher efficiency being translated, cooling and electrical losses will be reduced which will minimize operational expenditure costs

### • NEW EDGE DESIGN TOPOLOGY

The true online double conversion scalable modular UPS is designed with distributed Static Bypass to provide better reliability and availability. The design topology of distributed bypass allows individual module to perform as a standalone UPS with smaller footprint

### • COMPREHENSIVE MONITORING

Dry contacts, RS232-1, RS232-2, RS485, Intelligent slots 1, 2 & 3 for SNMP, JBUS & MODBUS are available for users to monitor the system remotely

### • ADVANCED BATTERY MANAGEMENT

ABM system allows flexible battery configuration and 3 steps charged control as well as periodic battery self-test

### • FLEXIBLE HOT SWAPPABLE DESIGN

This unique modular design type of rectifier module and control module allows user to add or replace the modules during live system operation while the other existing module(s) continue protecting the load. This function aims to avoid interruption to the load during any module replacement or system upgrading works are in progress

### • COLORFUL MULTIFUNCTIONAL HMI

7 Inch colorful multifunctional human machine interface touch screen (HMI TFT) provides user with a friendly interface while having complete control to the essential operation parameters, status, alarms and measurements. The MOD Series UPS includes up to 500 events' logs allowing precise & detailed identification of any event

### • MAXIMUM SAFETY FEATURES

Safety features have always been the top priority for our equipment. Our modular UPS is designed with hot swapping features, distributed bypass, input breakers, in-built back-feed protection to be in compliance with all safety regulations world-wide

## SUITABLE FOR INDUSTRIAL & COMMERCIAL APPLICATIONS



\* Industrial application such as Process and Control system, Industrial Machinery, Instrument and Measurement, Process monitoring, Control and Security



\* Infrastructures application such as Hospital, Airport, Data Centre, Telecommunication, Semiconductor, Water treatment and Rail Transportation



\* Energy industry application such as Oil & Gas, Petrochemicals, Power Plant, Power Transmission



\* Military application such as Communication and Data Centre

# Excellence MOD Series Scalable Modular AC UPS

MODEL	MOD33020	MOD33060	MOD33080	MOD33100	MOD33120	MOD33160	MOD33180	MOD33200
<b>CAPACITY in kVA / kW</b>	20kVA/18kW	60kVA/54kW	80kVA/72kW	100kVA/90kW	120kVA/108kW	160kVA/144kW	180kVA/162kW	200kVA/180kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	20kVA to 200kVA (Distributed Static Bypass)							
External Paralleling	Up to 4 Cabinets can be paralleled							
UPS Topology	Double Conversion							
IP Rating	IP 20 As Standard (Option: Up to IP42 is available upon request)							
Acoustic noise at 1 m, in 25 °C Ambient Temperature	< 70 dBA in DCM, < 55 dBA in ESM							
Altitude (Maximum)	Within 1000m above sea level at 40 °C, Every 100m increase, Capacity decrease 1%, Maximum 2000m							
Cable Entry	Rare Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380V / 400V / 415V 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380V (+25% to -45%) / 400V (+20% to -45%) / 415V(+15% to -45%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -15% / +10%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDI)	< 3%							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>MODULAR OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380V, 230/400V, 240/415V (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	< 1% (100% Linear load); < 5% (100% Non-linear load)							
Output Power Factor	0.9 Lagging							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	102 ~ 110% For 10 minutes, 111 ~ 125% For 60 seconds, 126 ~ 150% For 10 seconds, > 150% Transfer to bypass immediately							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY</b>								
Battery Type	VRLA / GEL							
Temperature Compensation	Option							
Battery Nominal Voltage	384VDC -- 480VDC configurable							
Battery Quantity in Cell	192 Cells to 240 Cells (240 Cells as default)							
Charge Current Limit	10A per UPS Module							
Black/Battery Start Capability	Option							
<b>COMMUNICATIONS</b>								
Comm-slot	RS232 for LAN monitor & Communication, SNMP, JBUS, MODBUS and Expandable Dry Contacts							
Network / SNMP Interface	SNMP card, Built-in external Network Card (monitoring working environment) or Relay card							
Monitor Module & Indicators	EPO Button (REPO), Touch Screen TFT Central Display, UPS Module LCD Display and LED Indicators							
Audible Alarm	Audible Alarm from Beeper							
<b>ACCESSORIES</b>								
Options	SNMP, Network Card, Relay Card External Battery Cabinet or Box c/w Breaker or Fuse Parallel Tie Cabinet, Parallel card (Distribution Confluence Cabinet) Input and / or Output Isolation Transformer / Lightning Protection Device / SPD							
<b>STANDARDS COMPLIED</b>								
Safety	IEC 62040-1 YD/T1095-2008							
EMC	IEC 62040-2							
Performance	IEC 62040-3							
<b>PHYSICAL</b>								
Cabinet Frame IP20	200kVA Frame, customized design as per request							
Rating	20Kva to 200kVA per frame							
Dimension (W * D * H) in mm	600 * 1100 * 1475 For 5 UPS Modules and 600 * 1100 * 2000 For 10 UPS Modules							
Approx. Weight (KG)	210							
Building Block Components	1 to 10 Units of 20kVA UPS Modules + Monitor Module + Distributed Bypass + PDU							

# Excellence MOD Series Scalable Modular AC UPS

MODEL	MOD33030	MOD33090	MOD33150	MOD33180	MOD33210	MOD33240	MOD33270	MOD33300
<b>CAPACITY in kVA / kW</b>	30kVA/27kW	90kVA/81kW	150kVA/135kW	180kVA/162kW	210kVA/189kW	240kVA/216kW	270kVA/243kW	300kVA/270kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	30kVA to 300kVA (Distributed Static Bypass)							
External Paralleling	Up to 4 Cabinets can be paralleled							
UPS Topology	Double Conversion							
IP Rating	IP 20 As Standard (Option: Up to IP42 is available upon request)							
Acoustic noise at 1 m, in 25 °C Ambient Temperature	< 70 dBA in DCM, < 55 dBA in ESM							
Altitude (Maximum)	Within 1000m above sea level at 40 °C, Every 100m increase, Capacity decrease 1%, Maximum 2000m							
Cable Entry	Rare Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380V / 400V / 415V 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380V (+25% to -45%) / 400V (+20% to -45%) / 415V(+15% to -45%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -15% / +10%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDI)	< 3%							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>MODULAR OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380V, 230/400V, 240/415V (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	< 1% (100% Linear load); < 5% (100% Non-linear load)							
Output Power Factor	0.9 Lagging							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	102 ~ 110% For 10 minutes, 111 ~ 125% For 60 seconds, 126 ~ 150% For 10 seconds, > 150% Transfer to bypass immediately							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY</b>								
Battery Type	VRLA / GEL							
Temperature Compensation	Option							
Battery Nominal Voltage	384VDC -- 480VDC configurable							
Battery Quantity in Cell	192 Cells to 240 Cells (240 Cells as default)							
Charge Current Limit	10A per UPS Module							
Black/Battery Start Capability	Option							
<b>COMMUNICATIONS</b>								
Comm-slot	RS232 for LAN monitor & Communication, SNMP, JBUS, MODBUS and Expandable Dry Contacts							
Network / SNMP Interface	SNMP card, Built-in external Network Card (monitoring working environment) or Relay card							
Monitor Module & Indicators	EPO Button (REPO), Touch Screen TFT Central Display, UPS Module LCD Display and LED Indicators							
Audible Alarm	Audible Alarm from Beeper							
<b>ACCESSORIES</b>								
Options	SNMP, Network Card, Relay Card External Battery Cabinet or Box c/w Breaker or Fuse Parallel Tie Cabinet, Parallel card (Distribution Confluence Cabinet) Input and / or Output Isolation Transformer / Lightning Protection Device / SPD							
<b>STANDARDS COMPLIED</b>								
Safety	IEC 62040-1 YD/T1095-2008							
EMC	IEC 62040-2							
Performance	IEC 62040-3							
<b>PHYSICAL</b>								
Cabinet Frame IP20	300kVA Frame, customized design as per request							
Rating	30kva to 300kVA per frame							
Dimension (W * D * H) in mm	600 * 1100 * 1475 For 5 UPS Modules and 600 * 1100 * 2000 For 10 UPS Modules							
Approx. Weight (KG)	320							
Building Block Components	1 to 10 Units of 30kVA UPS Modules + Monitor Module + Distributed Bypass + PDU							

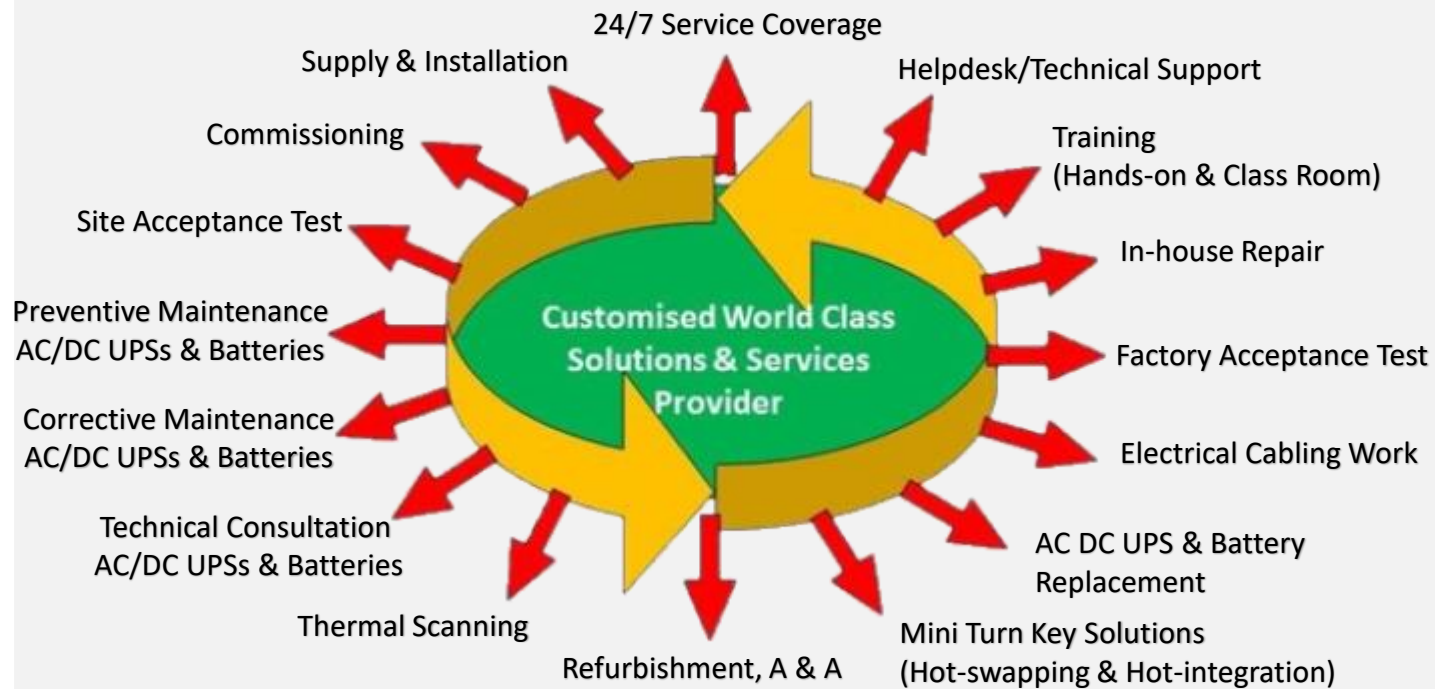
# Excellence MOD Series Scalable Modular AC UPS

MODEL	MOD33040	MOD33160	MOD33200	MOD33240	MOD33280	MOD33320	MOD33360	MOD33400
<b>CAPACITY in kVA / kW</b>	40kVA/36kW	160kVA/144kW	200kVA/180kW	240kVA/216kW	280kVA/252kW	320kVA/288kW	360kVA/324kW	400kVA/360kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	40kVA to 400kVA (Distributed Static Bypass)							
External Paralleling	Up to 4 Cabinets can be paralleled							
UPS Topology	Double Conversion							
IP Rating	IP 20 As Standard (Option: Up to IP42 is available upon request)							
Acoustic noise at 1 m, in 25 °C Ambient Temperature	< 70 dBA in DCM, < 55 dBA in ESM							
Altitude (Maximum)	Within 1000m above sea level at 40 °C, Every 100m increase, Capacity decrease 1%, Maximum 2000m							
Cable Entry	Rare Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380V / 400V / 415V 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380V (+25% to -45%) / 400V (+20% to -45%) / 415V(+15% to -45%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -15% / +10%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDi)	< 3%							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>MODULAR OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380V, 230/400V, 240/415V (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	< 1% (100% Linear load); < 5% (100% Non-linear load)							
Output Power Factor	0.9 Lagging							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	102 ~ 110% For 10 minutes, 111 ~ 125% For 60 seconds, 126 ~ 150% For 10 seconds, > 150% Transfer to bypass immediately							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY</b>								
Battery Type	VRLA / GEL							
Temperature Compensation	Option							
Battery Nominal Voltage	384VDC -- 480VDC configurable							
Battery Quantity in Cell	192 Cells to 240 Cells (240 Cells as default)							
Charge Current Limit	10A per UPS Module							
Black/Battery Start Capability	Option							
<b>COMMUNICATIONS</b>								
Comm-slot	RS232 for LAN monitor & Communication, SNMP, JBUS, MODBUS and Expandable Dry Contacts							
Network / SNMP Interface	SNMP card, Built-in external Network Card (monitoring working environment) or Relay card							
Monitor Module & Indicators	EPO Button (REPO), Touch Screen TFT Central Display, UPS Module LCD Display and LED Indicators							
Audible Alarm	Audible Alarm from Beeper							
<b>ACCESSORIES</b>								
Options	SNMP, Network Card, Relay Card External Battery Cabinet or Box c/w Breaker or Fuse Parallel Tie Cabinet, Parallel card (Distribution Confluence Cabinet) Input and / or Output Isolation Transformer / Lightning Protection Device / SPD							
<b>STANDARDS COMPLIED</b>								
Safety	IEC 62040-1 YD/T1095-2008							
EMC	IEC 62040-2							
Performance	IEC 62040-3							
<b>PHYSICAL</b>								
Cabinet Frame IP20	400kVA Frame, customized design as per request							
Rating	40kVA to 400kVA per frame							
Dimension (W * D * H) in mm	600 * 1100 * 2000 For 10 UPS Modules							
Approx. Weight (KG)	430							
Building Block Components	1 to 10 Units of 40kVA UPS Modules + Monitor Module + Distributed Bypass + PDU							

# Excellence MOD Series Scalable Modular AC UPS

MODEL	MOD33050	MOD33100	MOD33200	MOD33300	MOD33350	MOD33400	MOD33450	MOD33500
<b>CAPACITY in kVA / kW</b>	50kVA/50kW	100kVA/100kW	200kVA/180kW	300kVA/300kW	350kVA/350kW	400kVA/400kW	450kVA/450kW	500kVA/500kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95.5%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	50kVA to 500kVA (Distributed Static Bypass)							
External Paralleling	Up to 4 Cabinets can be paralleled							
UPS Topology	Double Conversion							
IP Rating	IP 20 As Standard (Option: Up to IP42 is available upon request)							
Acoustic noise at 1 m, in 25 °C Ambient Temperature	< 70 dBA in DCM, < 55 dBA in ESM							
Altitude (Maximum)	Within 1000m above sea level at 40 °C, Every 100m increase, Capacity decrease 1%, Maximum 2000m							
Cable Entry	Rare Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380V / 400V / 415V 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380V (+25% to -15%) / 400V (+20% to -15%) / 415V(+20% to -15%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -15% / +10%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDi)	< 4%							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>MODULAR OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380V, 230/400V, 240/415V (Configurable) 3 Phase + N							
Rated Output Frequency	50Hz or 60Hz							
Output Power Factor	1.0							
Total Voltage Harmonic Distortion	< ±1% (100% Linear load); < ±2% (100% Non-linear load)							
Overload on Inverter	102 ~ 110% For 10 minutes, 111 ~ 125% For 60 seconds, 126 ~ 150% For 10 seconds, > 150% Transfer to bypass immediately							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY</b>								
Battery Type	VRLA / GEL							
Temperature Compensation	Option							
Battery Nominal Voltage	384VDC (±192VDC) -- 480VDC (±240VDC) configurable							
Battery Quantity in Cell	192 Cells to 240 Cells (240 Cells as default)							
Charge Current Limit	12A per UPS Module							
Black/Battery Start Capability	Option							
<b>COMMUNICATIONS</b>								
Comm-slot	RS232 for LAN monitor & Communication, SNMP, MODBUS and Expandable Dry Contacts							
Network / SNMP Interface	SNMP card, Built-in external Network Card (monitoring working environment), Relay card							
Monitor Module & Indicators	EPO Button (REPO), Touch Screen TFT Central Display, UPS Module LCD Display and LED Indicators							
Audible Alarm	Audible Alarm from Beeper							
<b>ACCESSORIES</b>								
Options	SNMP, Network Card, Relay Card External Battery Cabinet or Box c/w Breaker or Fuse Parallel Tie Cabinet, Parallel card (Distribution Confluence Cabinet) Input and / or Output Isolation Transformer / Lightning Protection Device / SPD							
<b>STANDARDS COMPLIED</b>								
Safety	IEC 62040-1 YD/T1095-2008							
EMC	IEC 62040-2							
Performance	IEC 62040-3							
<b>PHYSICAL</b>								
Cabinet Frame IP20	500kVA Frame, customized design as per request							
Rating	50kVA to 500kVA per frame							
Dimension (W * D * H) in mm	600 * 1100 * 2010 For 10 UPS Modules							
Approx. Weight (KG)	350 ~ 1020							
Building Block Components	1 to 10 Units of 50kVA UPS Modules + Monitor Module + Distributed Bypass + PDU							

## 3P Power One Stop Solution



**3P Power**

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