

# 3P Power

Passion Profession Perfection



## PRODUCT CATALOGUE

Excellence MODS 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 AC 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

### • HIGH SCALABILITY

DSP control provides the improved solutions high performance and integrated with modular design and parallel technology for future power expansion vertically and horizontally.

### • 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

5.7 Inch (Optional 10 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 swappable 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 MODS Series Scalable Modular AC UPS

MODEL	MODS33020	MODS33060	MODS33080	MODS33100	MODS33120	MODS33160	MODS33180	MODS33200
<b>CAPACITY in kVA/kW</b>	20kVA/20kW	60kVA/60kW	80kVA/80kW	100kVA/100kW	120kVA/120kW	160kVA/160kW	180kVA/180kW	200kVA/200kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	20kVA to 200kVA							
External Paralleling	Up to 2 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	Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380/400/415Vac 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 -20% / +15%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDi)	< 3% at 100% Load							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380Vac, 230/400Vac, 240/415Vac (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	≤ 2% THD (Linear load), ≤ 4% (Non-linear load)							
Output Power Factor	1.00							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	110% For 60 minutes, 125% For 10 minutes, 150% For 1 minute, > 150% For 200ms and Transfer to bypass							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY CHARGER</b>								
Battery Type	VRLA (AGM or GEL) / NI-CD / LIB							
Temperature Compensation	Built-in							
Battery Nominal Voltage	384Vdc, 432Vdc and 480Vdc configurable							
VRLA Battery Quantity in Cell or in Block	+/-96 Cells, +/-108 Cells to +/-120 Cells or 32 Blocks, 26 Blocks and 40 Blocks for 12Vdc VRLA							
Charge Current Limit	6A per Power Module							
Charging Voltage per Cell	2.25V for Float Charge Mode and 2.35V for Boost Charge Mode							
<b>COMMUNICATIONS</b>								
RS232 / USB	Supports Windows® Family, Linux and MAC							
Optional SNMP	SNMP Power Management and Web Browser							
HMI LCD Touch Screen	Comprehensive Information, Events and LEDs							
<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/EN 60950-1, IEC/EN 62040-1							
EMC	IEC 62040-2 Category C3							
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 6 Power Modules and 600 * 1100 * 2010 For 10 Power Modules							
Approx. Weight (KG)	34kg per 20kVA Power Module, 240kg for 1475mm Cabinet Height and 270kg for 2010mm Cabinet Height							
Building Block Components	1 to 10 Units of 20kVA Power Modules + STS Module + Switches (Input, Output and Maintenance Bypass)							

# Excellence MODS Series Scalable Modular AC UPS

MODEL	MODS33030	MODS33090	MODS33120	MODS33150	MODS33180	MODS33240	MODS33270	MODS33300
<b>CAPACITY in kVA/kW</b>	30kVA/30kW	90kVA/90kW	120kVA/120kW	150kVA/150kW	180kVA/180kW	240kVA/240kW	270kVA/270kW	300kVA/300kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	30kVA to 300kVA							
External Paralleling	Up to 2 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	Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380/400/415Vac 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380Vac (+25% to -45%) / 400Vac (+20% to -45%) / 415Vac (+15% to -45%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -20% / +15%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDi)	< 3% at 100% Load							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380Vac, 230/400Vac, 240/415Vac (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	≤ 2% THD (Linear load), ≤ 4% (Non-linear load)							
Output Power Factor	1.00							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	110% For 60 minutes, 125% For 10 minutes, 150% For 1 minute, > 150% For 200ms and Transfer to bypass							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY CHARGER</b>								
Battery Type	VRLA (AGM or GEL) / NI-CD / LIB							
Temperature Compensation	Built-in							
Battery Nominal Voltage	384Vdc, 432Vdc and 480Vdc configurable							
VRLA Battery Quantity in Cell or in Block	+/-96 Cells, +/-108 Cells to +/-120 Cells or 32 Blocks, 26 Blocks and 40 Blocks for 12Vdc VRLA							
Charge Current Limit	8A per Power Module							
Charging Voltage per Cell	2.25V for Float Charge Mode and 2.35V for Boost Charge Mode							
<b>COMMUNICATIONS</b>								
RS232 / USB	Supports Windows® Family, Linux and MAC							
Optional SNMP	SNMP Power Management and Web Browser							
HMI LCD Touch Screen	Comprehensive Information, Events and LEDs							
<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/EN 60950-1, IEC/EN 62040-1							
EMC	IEC 62040-2 Category C3							
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 6 Power Modules and 600 * 1100 * 2010 For 10 Power Modules							
Approx. Weight (KG)	35kg per 30kVA Power Module, 240kg for 1475mm Cabinet Height and 270kg for 2010mm Cabinet Height							
Building Block Components	1 to 10 Units of 30kVA Power Modules + STS Module + Switches (Input, Output and Maintenance Bypass)							

# Excellence MODS Series Scalable Modular AC UPS

MODEL	MODS33150	MODS33200	MODS33250	MODS33300	MODS33350	MODS33400	MODS33450	MODS33500
<b>CAPACITY in kVA/kW</b>	150kVA/150kW	200kVA/200kW	250kVA/250kW	300kVA/300kW	350kVA/350kW	400kVA/400kW	450kVA/450kW	500kVA/500kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	150kVA to 500kVA							
External Paralleling	Up to 2 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	Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380/400/415Vac 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380Vac (+25% to -45%) / 400Vac (+20% to -45%) / 415Vac (+15% to -45%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -20% / +15%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDi)	< 3% at 100% Load							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380Vac, 230/400Vac, 240/415Vac (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	≤ 2% THD (Linear load), ≤ 4% (Non-linear load)							
Output Power Factor	1.00							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	110% For 60 minutes, 125% For 10 minutes, 150% For 1 minute, > 150% For 200ms and Transfer to bypass							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY CHARGER</b>								
Battery Type	VRLA (AGM or GEL) / NI-CD / LIB							
Temperature Compensation	Built-in							
Battery Nominal Voltage	384Vdc, 432Vdc and 480Vdc configurable							
VRLA Battery Quantity in Cell or in Block	+/-96 Cells, +/-108 Cells to +/-120 Cells or 32 Blocks, 26 Blocks and 40 Blocks for 12Vdc VRLA							
Charge Current Limit	12A per Power Module							
Charging Voltage per Cell	2.25V for Float Charge Mode and 2.35V for Boost Charge Mode							
<b>COMMUNICATIONS</b>								
RS232 / USB	Supports Windows® Family, Linux and MAC							
Optional SNMP	SNMP Power Management and Web Browser							
HMI LCD Touch Screen	Comprehensive Information, Events and LEDs							
<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/EN 60950-1, IEC/EN 62040-1							
EMC	IEC 62040-2 Category C3							
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 * 1475 For 3 Power Modules and 600 * 1100 * 2010 For 10 Power Modules							
Approx. Weight (KG)	35kg per 50kVA Power Module, 260kg for 1475mm Cabinet Height and 320kg for 2010mm Cabinet Height							
Building Block Components	1 to 10 Units of 50kVA Power Modules + STS Module + Switches (Input, Output and Maintenance Bypass)							

# Excellence MODS Series Scalable Modular AC UPS

MODEL	MODS33180	MODS33240	MODS33300	MODS33360	MODS33420	MODS33480	MODS33540	MODS33600
<b>CAPACITY in kVA/kW</b>	180kVA/180kW	240kVA/240kW	300kVA/300kW	360kVA/360kW	420kVA/420kW	480kVA/480kW	540kVA/540kW	600kVA/600kW
<b>SYSTEM</b>								
System Efficiency @ DCM (Double Conversion Mode)	95%							
System Efficiency @ ESM (Energy Saver Mode)	98%							
Static Bypass Rating	180kVA to 600kVA							
External Paralleling	Up to 2 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	Bottom (Customization is available upon request)							
<b>MODULAR UPS INPUT PARAMETERS</b>								
Rated Input Voltage	380/400/415Vac 3 Phase 4W							
Voltage Tolerance - Rectifier Input	380Vac (+25% to -45%) / 400Vac (+20% to -45%) / 415Vac (+15% to -45%) 3 Phase 4W							
Voltage Tolerance - Bypass Input	Rated voltage -20% / +15%							
Rated Input Frequency	40 - 70 Hz							
Frequency Tolerance	Rated Frequency +/- 10% (Bypass)							
Input Power Factor @ 100% Load	> 99%							
Input Current Harmonic Distortion (THDi)	< 3% at 100% Load							
Rectifier Soft Start	Built-in							
Internal Backfeed Protection	Built-in							
<b>OUTPUT PARAMETERS</b>								
Rated Output Voltage Rating	220/380Vac, 230/400Vac, 240/415Vac (Configurable) 3 Phase + N							
Total Voltage Harmonic Distortion	≤ 2% THD (Linear load), ≤ 4% (Non-linear load)							
Output Power Factor	1.00							
Permitted Load Power Factor	0.8 Lagging to 0.8 Leading							
Overload on Inverter	110% For 60 minutes, 125% For 10 minutes, 150% For 1 minute, > 150% For 200ms and Transfer to bypass							
Overload on Bypass	< 125% For Continuous Operation, 1000% for 20m second							
<b>BATTERY CHARGER</b>								
Battery Type	VRLA (AGM or GEL) / NI-CD / LIB							
Temperature Compensation	Built-in							
Battery Nominal Voltage	384Vdc, 432Vdc and 480Vdc configurable							
VRLA Battery Quantity in Cell or in Block	+/-96 Cells, +/-108 Cells to +/-120 Cells or 32 Blocks, 26 Blocks and 40 Blocks for 12Vdc VRLA							
Charge Current Limit	18A per Power Module							
Charging Voltage per Cell	2.25V for Float Charge Mode and 2.35V for Boost Charge Mode							
<b>COMMUNICATIONS</b>								
RS232 / USB	Supports Windows® Family, Linux and MAC							
Optional SNMP	SNMP Power Management and Web Browser							
HMI LCD Touch Screen	Comprehensive Information, Events and LEDs							
<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/EN 60950-1, IEC/EN 62040-1							
EMC	IEC 62040-2 Category C3							
Performance	IEC 62040-3							
<b>PHYSICAL</b>								
Cabinet Frame IP20	600kVA Frame, customized design as per request							
Rating	60kVA to 600kVA per frame							
Dimension (W * D * H) in mm	600 * 1100 * 1475 For 3 Power Modules and 600 * 1100 * 2010 For 10 Power Modules							
Approx. Weight (KG)	44kg per 60kVA Power Module, 260kg for 1475mm Cabinet Height and 580kg for 2010mm Cabinet Height							
Building Block Components	1 to 10 Units of 60kVA Power Modules + STS Module + Switches (Input, Output and Maintenance Bypass)							

## 3P Power One Stop Solution



**3P**Power

Passion Profession Perfection

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