3P Power

Passion **P**rofession **P**erfection

PRODUCT CATALOGUE

Excellence IND Series Industrial AC UPS

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Excellence IND Series AC UPS are suitable for Industrial environment

* Industrial application such as Process & Control System, Industrial Machinery, Instrument & Measurement, Process Monitoring and Control
* Infrastructures application such as Hospital, Airport, Semiconductor, Water Treatment , Incinerating plant and Rail Transportation
* Energy industry application such as Oil 7 Gas, Petrochemicals, Refinery, Power Plant,
* Military application such as Communication and Critical Power Backup

- **True online double conversion with DSP control**

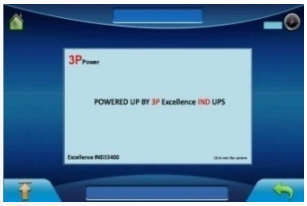
  Double isolation between input/output ,and bypass is applied to totally isolate power line noise, spikes and transients. A Dual Digital Signal Processor (DDSP) control provides an improved solution with high performance in communication and Network management.

- **Robust electrical performance to prevent the damages caused by up and down-streams**

  This UPS is designed to accept wide input voltage and frequency range 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's capable to support heavy duty equipment, production equipment and DCS (Distributed Control System) system.

- **Colourful Multifunctional Panel**

  The 5.7" & 7" colorful multifunctional HMI (Human Machine Interface) TFT touch screen of 3In1Out and 3In3Out IND UPS allows easy and humanized operation of the UPS. It gives access to the most important parameters, status and alarms, control commands, input, output, battery measurements (power, current, voltage, frequency and temperature) and settings. The IND series UPS includes 500 events' log allowing precise and detailed identification of any event.



- **Power Walk-in and Settable Eco Mode Function**

  The built-in power walk-in makes IND UPS to easily adapt the gen-set as an up-stream power. Unique energy efficiency design under good power condition, UPS can work in ECO mode for 96% efficiency, green and energy saving.

- **Advanced Battery Management (ABM)**

  The ABM system allows the flexible battery configuration and 3 steps charged control as well as extends the life span of battery by having a periodic battery self-test.

- **Comprehensive UPS Monitoring**

  Built-in slots of RS232-1, RS232-2, RS485, intelligent slots 1, 2, 3 for SNMP, JBUS and MODBUS dry contacts provide users' total preference on-site.

- **Front access makes maintenance and replacement easily**

  Its considerate to allow access to all of the electronic cards and power components in the unit through the front panel for further maintenance and replacement.

- **Maximum Safety Features**

  The built-in comprehensive protection of over voltage, over current, over temperature, over load, EPO and backfeed protection device that prevents any voltage backfeed in the upstream distribution board, thus ensuring the safety of the maintenance personnel.

- **Dual Bus & Load Bus Sync (LBS)**

  Dual Bus feature provides the no interruption to the load during partial system maintenance. LBS makes the 2 parallel UPS in synchronization at inverter mode and battery mode.

- **Parallel Redundancy up to 8 units**

  The none master and slave parallel redundancy configuration can be up to 8 units in parallel to increase the system capacity and operational reliability for power redundancy.

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Technical Specification - 3 Phase in / 1 Phase out

MODEL	IND 31010	IND 31015	IND 31020	IND 31030	IND 31040	IND 31050	IND 31060
CAPACITY in kVA	10kVA	15kVA	20kVA	30kVA	40kVA	50kVA	60kVA
SYSTEM							
Output PF	0.8 Lagging						
System Efficiency (inverter mode)	94% @ 100% Load and 90% @ 50% Load						
System Efficiency (ECO mode)	98% @ 100% Load						
Maximum Leakage Current	100mA						
MTBF	Above 200,000 Hours						
Dry Contact	Standard: 3 types of Signal (Batt Low, Battery Mode, Bypass / Failure),, Option: 18 dry contacts						
Communication Interface	RS232，RS485 and SNMP as Standard. JBUS and MODBUS as option						
Operation Temperature	0 ~ 40 °C						
Humidity	95 % (Non-condense)						
Cooling	Forced Air (Fans' speeds vary according to the load percentage)						
Max. Altitude	Within 1000m (Every 100m increase, Capacity decrease 1%), Maximum 4000m						
Noise (dB)	52 ~ 58						
IP Protection (EN 60529)	IP20 as Standard Option: Up to IP54 upon request						
Input / Output way	Bottom / Rear						
Safety Standard	Safety: IEC60950-1, IEC62040-1-1 (2008), EMC: EN/IEC62040-2 (2005), Performance: IEC62040-3 (1999)						
PHYSICAL							
W * D * H in mm	690 * 600 * 1200			700 * 650 * 1400		790 * 700 * 1600	
Weight in kg	220	260	360	400	500	600	660
RECTIFIER INPUT PARAMETERS							
Rated Voltage	380/400/415VAC 3 Phase 4W						
Input Voltage Range	± 15 % Adjustable (290 – 498Vac)						
Rate Frequency	50 / 60 Hz Automatic Sensing						
Frequency Range	50 / 60 Hz +/- 5Hz						
Input soft Start Function	0 - 100%, 10 - 300s (Settable)						
Current Harmonic Distortion	< 5% @ 50% Load, < 4% @ 100% Load						
Input Power Factor	0.998						
RECTIFIER OUTPUT PARAMETERS							
DC Nominal Voltage	384VDC						
3 Levels Charging	Float Charge, Hi-rate Charge and Boost Charge						
Highest Charging Voltage	470VDC						
Charger Output Voltage Regulation	1%						
Ripple Voltage Component	≤5%						
BATTERY							
Nominal Number of Cells Range	Selectable from 174 cells to 192 cells for Lead Acid Battery. Selectable from 290 cells to 300 cells for Ni-Cd Battery						
Charging Current Settings	0.1C for Lead Acid Battery Capacity, 0.2C5 for Ni-Cd Battery						
Battery Discharge End Voltage	295VDC						
INVERTER OUTPUT							
Rated Capacity (kVA)	10	15	20	30	40	50	60
Rated Power (kW)	8	12	16	24	32	40	48
Rated Voltage (V)	220 / 230 / 240VAC 1 Phase 2W						
Phase Voltage Setting	200 ~ 244 V (Control Board)						
Crest Factor	3:1						
Waveform	Sine wave						
Steady State Voltage Stability	± 1 %						
Transient Voltage Response	± 5 % Within 10ms						
Rated Frequency	Same as Bypass Input						
Frequency Stability	When Asynchronous ± 0.5 %, Synchronization ± 2 %, (Can be set to ± 1~5 % from Touch Screen)						
Overload	600' / 10' / 1' (110 / 125 / 150% Rated Current)						
Short Circuit 0.1s	Double Input						
Inverter Efficiency @ 100% Load	94%						
BYPASS							
Rated Capacity (kVA)	10	15	20	30	40	50	60
Rated Voltage (V)	220 / 230 / 240vAC 1 Phase 2W						
Input Voltage Range	±15 % (Can be adjusted from Touch Screen to ± 10 %,± 20%)						
Rated frequency (Hz)	50 / 60						
Frequency Range	±2 % (Can be adjusted from Touch Screen to ± 5 %)						
"STANDBY ON" (Eco-mode) Transfer	2~4ms						
Inverter / Bypass Transfer Time	<4ms						
Overload	10' / 1' / 18" (150 / 175 / 200% Rated Current)						
Standard Configuration	Feed Flow Protection, Bypass Independently Isolated						

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Technical Specification - 3 Phase in / 3 Phase out

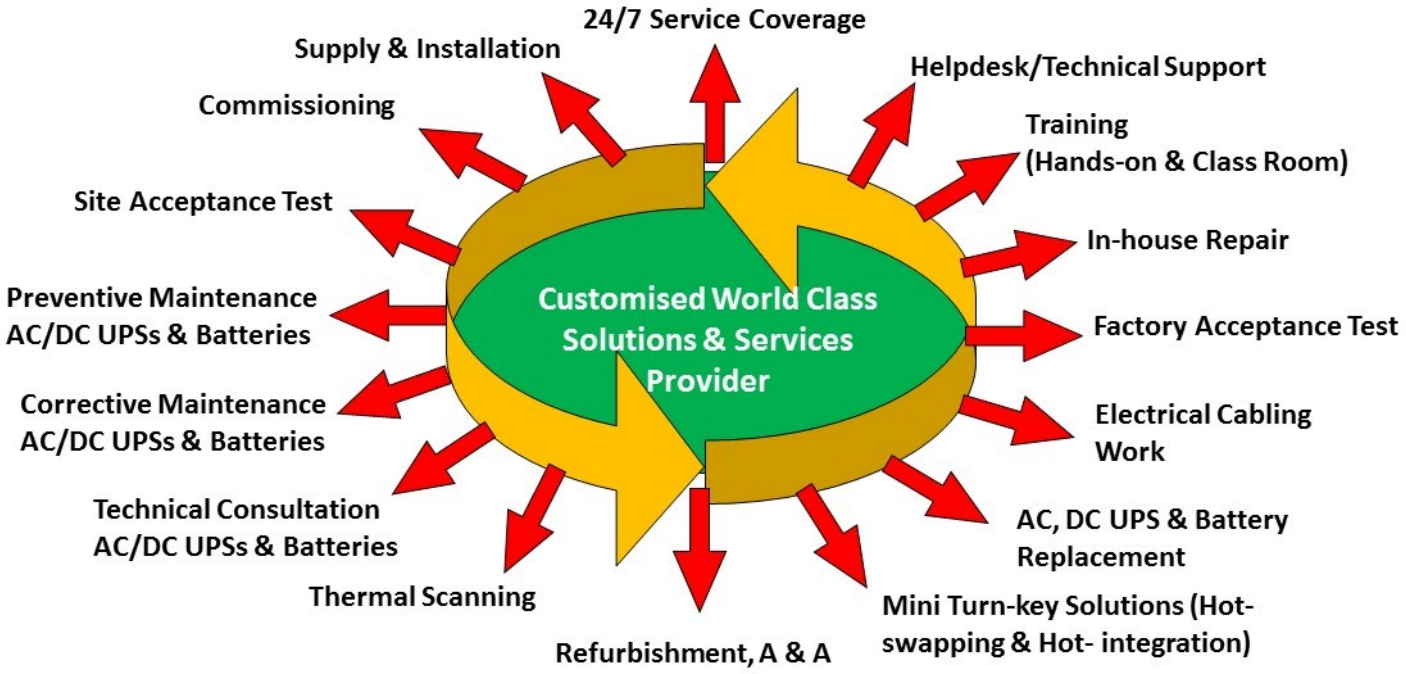
MODEL	IND 33010	IND 33015	IND 33020	IND 33030	IND 33040	IND 33060	IND 33080	IND 33100	IND 33120
CAPACITY in kVA	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA
SYSTEM									
Output PF	0.9 Lagging								
System Efficiency (Inverter mode)	94% @ 100% Load and 90% @ 50% Load								
System Efficiency (ECO mode)	98% @ 100% Load								
Maximum Leakage Current	100mA								
MTBF	Above 200,000 Hours								
Dry Contact	Standard: 3 types signal (Bat Low, Battery Mode, Bypass / Failure),, Option: 14 dry contacts								
Communication Interface	RS232，RS485 and SNMP as Standard. JBUS and MODBUS as option								
Operation Temperature	0 ~ 40 °C								
Humidity	95% (Non-condense)								
Cooling	Forced Air (Fans' speeds vary according to the load percentage)								
Max. Altitude	Within 1000m (Every 100m increase, Capacity decrease 1%), Maximum 4000m								
Noise (dB)	52 ~ 58								
IP Protection (EN 60529)	IP20 as Standard Option: Up to IP54 upon request								
Cable Entry	Bottom / Rear								
Safety Standard	Safety: IEC60950-1, IEC62040-1-1 (2008), EMC: EN/IEC62040-2 (2005), Performance: IEC62040-3 (1999)								
PHYSICAL									
W * D * H in mm	690 * 750 * 1208*			690 * 750 * 1400		790 * 840 * 1600		890 * 1000 * 1800	
Weight in kg	220	290	360	400	500	660	800	1000	1200
RECTIFIER INPUT PARAMETERS									
Rated Voltage	380 / 400 / 415VAC 3 Phase 4W								
Input Voltage Range	± 15 %- ± 25 % adjustable 290-498Vac								
Rate Frequency	50 / 60 Hz Automatic Sensing								
Frequency Range	50/60Hz+/-5Hz								
Input Soft Start Function	0 - 100%, 10-300s (Settable)								
Current Harmonic Distortion (THDi)	< 5% @ 50% Load, < 4% @ 100% Load								
Input Power Factor	0.998								
RECTIFIER OUTPUT PARAMETERS									
DC Nominal Voltage	384VDC								
3 Levels Charging	Float Charge, Hi-rate Charge and Boost Charge								
Highest Charging Voltage	470VDC								
Charger Output Voltage Regulation	1%								
Ripple Voltage Component	≤5%								
BATTERY									
Nominal Number of Cells Range	Selectable from 174 cells to 192 cells for Lead Acid Battery. Selectable from 290 cells to 300 cells for Ni-Cd Battery								
Charging Current Settings	0.1C for Lead Acid Battery Capacity, 0.2C5 for Ni-Cd Battery								
Battery Discharge End Voltage	295VDC								
INVERTER OUTPUT									
Rated Capacity (KVA)	10	15	20	30	40	60	80	100	120
Rated Power (W)	9	13.5	18	27	36	54	72	90	108
Rated Voltage (V)	380 / 400 / 415VAC 3 Phase 4W								
Phase Voltage Setting	200 ~ 244 V (Control Board)								
Crest Factor	3:1								
Waveform	Sine wave								
Steady-state Voltage Stability	± 1 %								
Transient Voltage Response	± 5 % Within 10ms								
Rated Frequency	Same as Bypass Input								
Frequency Stability	When Asynchronous ± 0.5%, Synchronization ± 2%, (Can be set to ± 1~5 % from Touch Screen)								
Overload	600' / 10' / 1' (110/125/150% Rated Current)								
Short Circuit 0.1s	Double Input								
Inverter efficiency @ 100 Load	94%								
BYPASS									
Rated Capacity (kVA)	10	15	20	30	40	60	80	100	120
Rated Voltage (V)	380 / 400 / 415VAC 3 Phase 4W								
Input Voltage Range	±15 % (Can be adjusted from Touch Screen to ± 10 %,± 20%) -40%								
Rated Frequency (Hz)	50 / 60								
Frequency Range	±2 % (Can be adjusted from Touch Screen to ± 5 %)								
"STANDBY ON" (Eco-mode) Transfer	2 ~ 4ms								
Inverter / Bypass Transfer Time	< 4ms								
Overload	10'/1'/18" (150 / 175 / 200% Rated Current)								
Standard Configuration	Feed Flow Protection, Bypass Independently Isolated								

Excellence IND Series Industrial AC UPS

Technical Specification - 3 Phase in / 3 Phase out

MODEL	IND 33160	IND 33200	IND 33250	IND 33300	IND 33350	IND 33400	IND33500	IND33600
CAPACITY in kVA	160kVA	200kVA	250kVA	300kVA	350kVA	400kVA	500kVA	600kVA
SYSTEM								
Output PF	0.9 Lagging							
System Efficiency (Inverter mode)	94% @ 100% Load and 90% @ 50% Load							
System Efficiency (ECO mode)	98% @ 100% Load							
Maximum Leakage Current	100mA							
Standby Economic Mode	Standard Functions							
Mean Time Before Failure (MTBF)	Above 200,000 Hours							
Dry Contact	Standard: 3 types signal (Bat Low, Battery Mode, Bypass / Failure),, Option: 14 dry contacts							
Communication Interface	RS232，RS485 and SNMP as Standard. JBUS and MODBUS as option							
Running Temperature	0 ~ 40 °C							
Maximum Relative Humidity	95 % (Non-condensing)							
Cooling	Forced Air (Fans' speeds vary according to the load percentage)							
Max. Altitude	Within 1000m (Every 100m increase, Capacity decrease 1%), Maximum 4000m							
Noise dB	54 ~ 62							
Protection Class (EN 60529)	IP20 as Standard, Option: Up to IP54 upon request							
Cable Entry	Bottom / Rear							
Safety Standard	Safety: IEC60950-1, IEC62040-1-1 (2008), EMC: EN/IEC62040-2 (2005), Performance:IEC62040-3 (1999)							
PHYISCAL								
Width in mm	1400		1635					
Depth * High in mm	920*1900		1040*1900					
Weight (kg)	1219	1425	1800	1800	1950	2050	2300	2550
RECTIFIER INPUT PARAMETERS								
Rated Voltage	380 / 400 / 415VAC 3 Phase 4W							
Voltage Range	± 15 % (± 25 % Adjustable) 290-498Vac							
Rated Frequency	50 / 60 Hz Aautomatic Sensing							
Frequency Range	45 ~ 65							
Input Power Slow Start Function	Yes, 0 - 100%, Can be set to 10 - 300 seconds							
Current Harmonic Distortion (THDi)	< 5% @ 50% Load, < 4% @ 100% Load							
Input Power Factor	0.998							
RECTIFIER OUTPUT PARAMETERS								
DC Nominal Voltage	384VDC							
3 Levels Charging	Float Charge, Hi-rate Charge and Boost Charge							
Highest Charging Voltage	470VDC							
Charger Output Voltage Regulation	1%							
Ripple Voltage Component	≤5%							
BATTERY								
Nominal Number of Cells Range	Selectable from 174 cells to 192 cells for Lead Acid Battery. Selectable from 290 cells to 300 cells for Ni-Cd Battery							
Charging Current Settings	0.1C for Lead Acid Battery Capacity, 0.2C5 for Ni-Cd Battery							
Battery Discharge End Voltage	295VDC							
INVERTER OUTPUT								
Rated Capacity (kVA)	160	200	250	300	350	400	500	600
Rated Power (kW)	144	180	225	270	315	360	450	540
Rated Voltage (V)	380 / 400 / 415VAC 3 Phase 4W							
Phase Voltage Setting	200 ~ 244 V (Control Board)							
Crest Factor	3:1							
Waveform	Sine wave							
Steady State Voltage Stability	± 1 %							
Transient Voltage Response	± 5 % Within 10ms							
Rated Frequency	Same As Input							
Frequency Stability	When Asynchronous ± 0.5 %, Synchronization ± 2 %, can be set to ± 1~5 %, from touch screen							
Overload	600' / 10' / 1'（110 / 125 / 150% Rated Current）							
Short Circuit 0.1s	Double Input							
Inverter Efficiency @ 100% Load	94%							
BYPASS								
Rated Capacity (kVA)	160	200	250	300	350	400	500	600
Rated Voltage (V)	380 / 400 / 415VAC 3 Phase 4W							
Input Voltage Range	±15 % , Adjustable from Touch Screen to ± 10 %, ± 20%， -40%							
Rated Frequency (Hz)	50 / 60							
Frequency Range	±2 %, Adjustable from Touch Screen to ± 5 %							
"STANDBY ON" (Eco-mode) Transfer	2 ~ 4ms							
Inverter / Bypass Transfer Time	<4ms							
Overload	10'/1'/18" (150 / 175 / 200% Rated Current)							
Standard Configuration	Feed Flow Protection, Bypass Independently Isolated							

3P Power One Stop Solution



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