ENTER THE WORLD OF

APT INVEREX®

FRONT INSIDE

APT INVEREX® SOLAR ENERGY

WHO AM I ?

I was born in 2007. I grew up to reach every corner of Pakistan, to spread the awareness about the use of solar products for the betterment of this environment, with a promise of progress and inclusion for all.
On my journey I have to encourage the people to protect the environment and I pledge everyone to join hands with me to make this world a better place to live. As a leader in solar industry I present a dream of clean tomorrow and future where all will live independently from captive energy.
This is my vision and I am looking forward to make Pakistan brighter.

I AM
INVEREX

VISION STATEMENT

To accelerate the adoption of solar technology to conserve our environment and provide sustainable, environment friendly and conflict-free power supply technologies.
We believe that solar power is now a mainstream, viable technology of 'today' enabling the move towards a zero-emission power supply. We seek to provide our customer's high-value added solutions through building on our strong foundation in photovoltaic and our commitment to innovation to drive the efficiency, quality and profitability of our products.

MISSION STATEMENT

To break the bonds of the predominantly fuel powered grid system and become a part of green power revolution. By turning the customers from captive energy consumer to educated energy producers and consumers.
We ensure a better life. Within our process, we meet clients to help them define their goals, evaluate their options, and make informed and confident decisions. Taking care of the entire process, from design to engineering, installation and monitoring, so that going solar is a seamless and hassle-free process.

APT INVEREX®
SOLAR ENERGY

AEROX 1.2 KW
SOLAR INVERTER

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

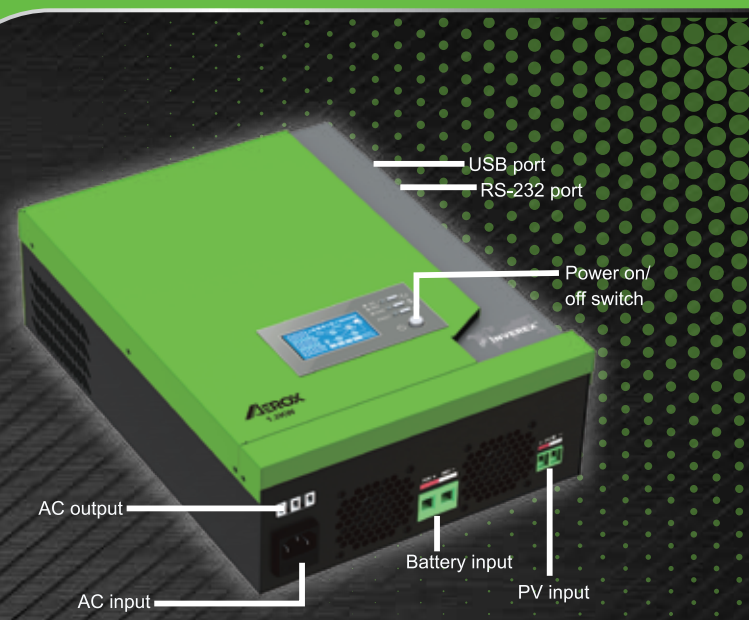
- ◇ 1st time in Pakistan MPPT Base Solar inverter with 1.2 kw
- ◇ Upgraded generation smart and intelligent solar inverter
- ◇ Advanced MPPT Solar Charger up to 50 AMP
- ◇ Battery Equalization
- ◇ Output power factor 1
- ◇ Compatible with SNMP Box / Wifi Box
- ◇ New Smart LCD Display
- ◇ Adaptable to Main Voltage / Generator Power
- ◇ Conformal Coating to Prevent From Dust and Humidity
- ◇ Configurable AC/Solar input priority via LCD Setting
- ◇ Overload and short circuit protection

BATTERY
CABLE INSIDE

LCD & GENERATION
Upgraded

APT **INVEREX®**
SOLAR ENERGY

AEROX 1.2 KW SOLAR INVERTER



MODEL	1.2KW
Capacity	1200W
INPUT	
Voltage	230 VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)
Frequency Range	50 Hz/60 Hz (Auto sensing)
OUTPUT	
AC Voltage Regulation (Batt. Mode)	230 VAC ± 5%
Surge Power	2400VA
Efficiency (Peak)	90% ~ 93%
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform	Pure sine wave
BATTERY	
Battery Voltage	12 VDC
Floating Charge Voltage	13.5 VDC
Overcharge Protection	16 VDC
SOLAR CHARGER & AC CHARGER	
Solar Charger Type	**MPPT**
Maximum PV Array Open Circuit Voltage	102 VDC
MPP Range @ Operating Voltage	15 ~ 80VDC
Maximum Solar Charge Current	50A
Maximum AC Charge Current	20A
PHYSICAL	
Dimension, D X W XH (mm)	103 x 225 x 320
Net Weight (kgs)	4.6
Communication Interface	USB/RS232
OPERATING ENVIRONMENT	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	-10°C to 50°C
Storage Temperature	-15°C to 60°C

* Product specifications are subject to change without further notice

APT INVEREX®
SOLAR ENERGY

AEROX 2.2 KW
SOLAR INVERTER

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

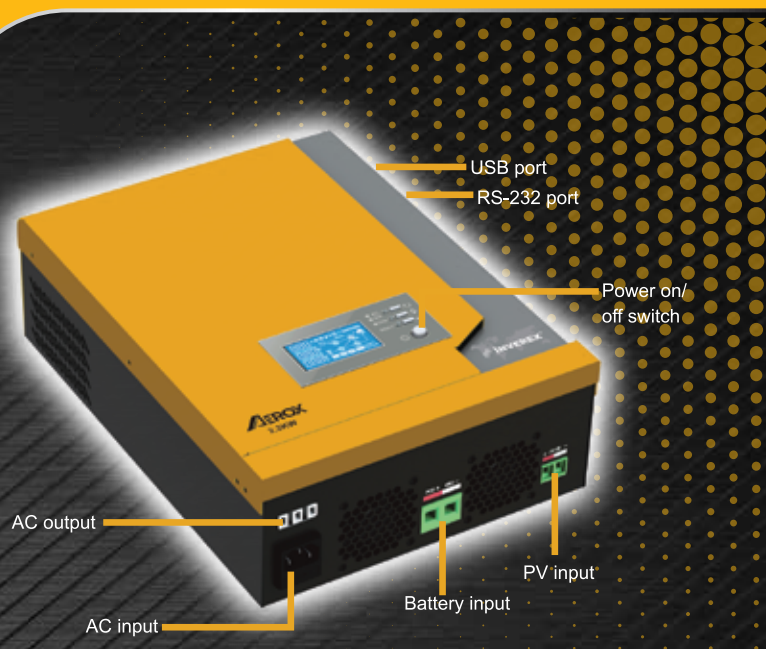
- 1st time in Pakistan MPPT Base Solar inverter with 2.2 kw
- Upgraded generation smart and intelligent solar inverter
- Advanced MPPT Solar Charger up to 50 AMP
- Battery Equalization
- Output power factor 1
- Compatible with SNMP Box / Wifi-Box
- New Smart LCD Display.
- Adaptable to Main Voltage / Generator Power
- Conformal Coating to Prevent From Dust and Humidity
- Overload and short circuit protection
- Configurable AC/Solar input priority via LCD Setting

BATTERY
CABLE INSIDE

LCD & GENERATION
Upgraded

APT INVEREX®
SOLAR ENERGY

AEROX 2.2 KW
SOLAR INVERTER



MODEL	2.2KW
Capacity	2200W
INPUT	
Voltage	230 VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)
Frequency Range	50 Hz/60 Hz (Auto sensing)
OUTPUT	
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%
Surge Power	4400VA
Efficiency (Peak)	90% ~ 93%
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform	Pure sine wave
BATTERY	
Battery Voltage	24 VDC
Floating Charge Voltage	27 VDC
Overcharge Protection	31 VDC
SOLAR CHARGER & AC CHARGER	
Solar Charger Type	**MPPT**
Maximum PV Array Open Circuit Voltage	102 VDC
MPP Range @ Operating Voltage	30 ~ 80 VDC
Maximum Solar Charge Current	50A
Maximum AC Charge Current	20A
PHYSICAL	
Dimension, D X W XH (mm)	103 x 245 x 330
Net Weight (kgs)	5.3
Communication Interface	USB/RS232
OPERATING ENVIRONMENT	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	-10°C to 50°C
Storage Temperature	-15°C to 60°C

* Product specifications are subject to change without further notice

APT INVEREX®
SOLAR ENERGY

AEROX 3.2 KW
SOLAR INVERTER

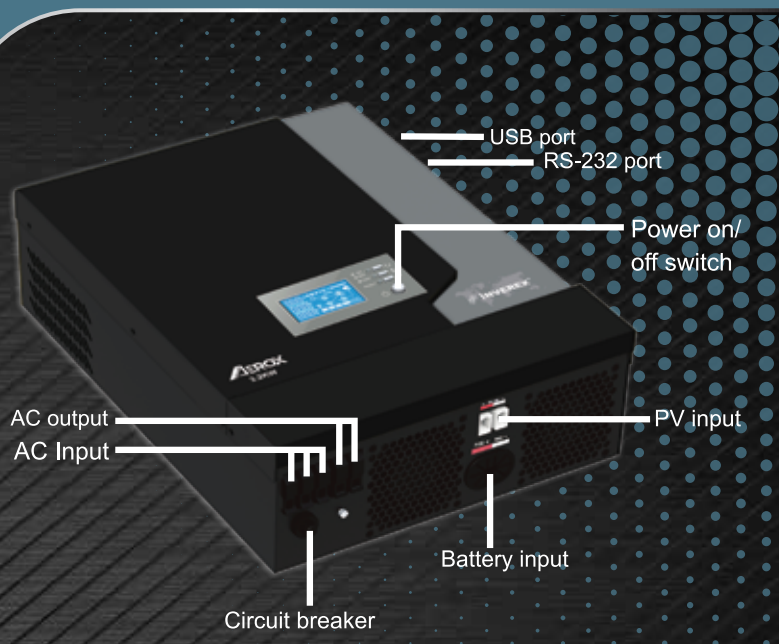
PRODUCT FEATURES

- 1st off-grid Inverter with 65 AMP MPPT
- Upgraded generation smart and intelligent solar inverter
- Output power factor 1
- New Smart LCD Display
- Compatible with SNMP Box / Wi-Fi Box
- Adaptable to Main Voltage / Generator Power
- Conformal Coating to Prevent From Dust and Humidity
- Configurable AC/Solar input priority via LCD Setting
- Overload and short circuit protection

LCD & GENERATION
Upgraded

APT **INVEREX®**
SOLAR ENERGY

AEROX 3.2 KW SOLAR INVERTER



MODEL	3.2KW
Capacity	3200W
INPUT	
Voltage	230 VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)
Frequency Range	50 Hz/60 Hz (Auto sensing)
OUTPUT	
AC Voltage Regulation (Batt. Mode)	230 VAC ± 5%
Surge Power	6400VA
Efficiency (Peak)	90% ~ 93%
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform	Pure sine wave
BATTERY	
Battery Voltage	24 VDC
Floating Charge Voltage	27 VDC
Overcharge Protection	33 VDC
SOLAR CHARGER & AC CHARGER	
Solar Charger Type	**MPPT**
Maximum PV Array Open Circuit Voltage	102 VDC
MPP Range @ Operating Voltage	30 ~ 80 VDC
Maximum Solar Charge Current	65A
Maximum AC Charge Current	25A
PHYSICAL	
Dimension, D X W XH (mm)	118.3 x 285 x 360.4
Net Weight (kgs)	7.6
Communication Interface	USB/RS232
OPERATING ENVIRONMENT	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	-10°C to 50°C
Storage Temperature	-15°C to 60°C

* Product specifications are subject to change without further notice

APT INVEREX®
SOLAR ENERGY

AEROX III 3.2 KW SOLAR INVERTER

WINNER 2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

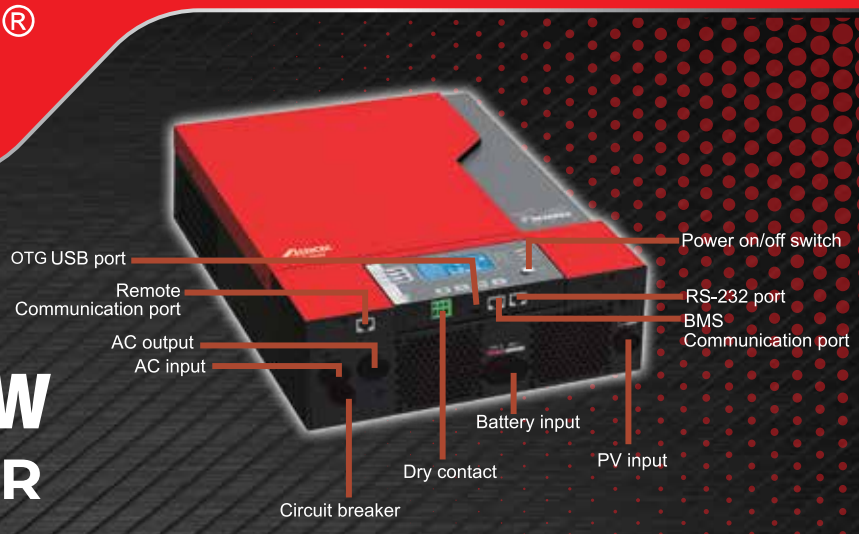
PRODUCT FEATURES

- 1st inverter in Pakistan with Grid-tie and Self-consumption feature
- Upgraded smart and intelligent solar inverter
- Integrated Bluetooth interface with Android App
- Enhance MPPT solar charge controller up to 4000 WATT
- Efficiently Work without battery
- Smart Battery Equalization
- Data logging and Storage feature
- Energy Prioritization according to the timer
- Conformal Coating to Prevent From Dust and Humidity
- Compatible with (Li-ion, LiFePo4 and etc.) batteries with BMS

3rd GENERATION Upgraded

GRID FEEDING OPTION
CONTROL THROUGH ANDROID APP
BLUETOOTH CONNECTING
OTG USB CONNECTING

APT **INVEREX®**
SOLAR ENERGY



AEROX III 3.2 KW
SOLAR INVERTER

MODEL	III 3.2KW
Capacity	3200W
INPUT	
Voltage	230 VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)
Frequency Range	50 Hz/60 Hz (Auto sensing)
OUTPUT (OFF-GRID OPERATION)	
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%
Surge Power	6400VA
Efficiency (Peak)	90% ~ 93%
Transfer Time	15 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform	Pure sine wave
OUTPUT (GRID-TIE OPERATION)	
Nominal Output Voltage	230VAC ± 5%
Output Voltage Range	195.5~253 VAC @ Asia Region Regulation
Nominal Output Current	13A
Power Factor	>0.99
BATTERY	
Battery Voltage	24 VDC
Floating Charge Voltage	27 VDC
Overcharge Protection	31 VDC
SOLAR CHARGER & AC CHARGER	
Solar Charger Type	**MPPT**
Maximum PV Array Open Circuit Voltage	500 VDC
Maximum PV Array Power	4000W
MPP Range @ Operating Voltage	120 ~ 450 VDC
Maximum Solar Charge Current	80A
Maximum AC Charge Current	60A
PHYSICAL	
Dimension, D X W XH (mm)	115 x 300 x 400
Net Weight (kgs)	8.9
Communication Interface	USB and RS232
OPERATING ENVIRONMENT	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	-10°C to 50°C
Storage Temperature	-15°C to 60°C

* Product specifications are subject to change without further notice

APT INVEREX®
SOLAR ENERGY

AEROX 5.2 KW
SOLAR INVERTER

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

- 1st inverter in Pakistan with Grid-tie and Self-consumption feature
- Upgraded 3rd generation smart and intelligent solar inverter
- Zero transfer time
- Parallel up to 9 Units with optional kit
- Efficiently Work without battery
- Upgraded MPPT based solar charge controller up to 5000Watts
- Integrated Bluetooth interface with Android App
- Battery Equalization
- Data logging and Storage function
- Energy Prioritization according to the timer
- Conformal Coating to Prevent from Dust and Humidity
- Compatible with (Li-ion, LiFePo4 and etc.) batteries with BMS

UP GRADED MODEL
NEW ATTRACTIVE DESIGN

0 MS Transfer Time

3rd GENERATION Upgraded

GRID FEEDING OPTION

CONTROL THROUGH ANDROID APP

BLUETOOTH CONNECTING

OTG USB CONNECTING

APT **INVEREX®**
SOLAR ENERGY

AEROX 5.2 KW
SOLAR INVERTER

Model	5.2KW
Capacity	5200W
INPUT	
Voltage	230 VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)
Frequency Range	50 Hz/60 Hz (Auto sensing)
OUTPUT (OFF-GRID OPERATION)	
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%
Overload capacity	5s @ ≥150% load; 10s @110%~150% load; 100ms @ ≥200% load
Efficiency (Peak)	90%
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform	Pure sine wave
OUTPUT (GRID-TIE OPERATION)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
Nominal Output Current	22A
Power Factor	>0.99
BATTERY	
Battery Voltage	48 VDC
Floating Charge Voltage	54 VDC
Overcharge Protection	64 VDC
SOLAR CHARGER & AC CHARGER	
Solar Charger Type	**MPPT**
Maximum PV Array Open Circuit Voltage	450 VDC
Maximum PV Array Power	5000W
MPP Range @ Operating Voltage	120 ~ 430 VDC
Maxmum Solar Charge Current	80A
Maximum AC Charge Current	80A
PHYSICAL	
Dimension, D X W XH (mm)	140 x 295 x 465
Net Weight (kgs)	12.2
Communication Interface	USB and RS232
OPERATING ENVIRONMENT	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating Temperature	-10°C to 50°C
Storage Temperature	-15°C to 60°C

* Product specifications are subject to change without further notice

APT INVEREX®
SOLAR ENERGY

AEROX SERIES
ON-GRID INVERTERS
6KW / 10KW / 20KW

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE
★★★★★

SALIENT FEATURES

6KW / 10KW

- ◇ Max efficiency 98.4%
- ◇ Ultra-wide operation voltage range (160V-950V)
- ◇ Excellent design of electromagnetic radiation
- ◇ Die-cast aluminum enclosure
- ◇ Natural convective cooling design
- ◇ Remote configuration and firmware upgrading

20 KW

- ◇ Max efficiency 98.6%,
- ◇ Ultra-wide operation voltage range (180V-950V)
- ◇ Excellent design of electromagnetic radiation
- ◇ Integrated type II DC/AC surge protection
- ◇ Natural convective cooling design
- ◇ Remote configuration and firmware upgrading

Flexible Communication

Grid Ready

More Efficient

Broad temperature range

5 YEAR WARRANTY

INVEREX®
SOLAR ENERGY

AEROX SERIES
ON-GRID INVERTERS
6KW / 10KW / 20KW

Model	AEROX 6KW	AEROX 10KW	AEROX 20KW
Efficiency			
Max. Efficiency	98.20%	98.40%	98.60%
Input(PV)			
Max. Input Voltage	1000V		
Over-Configuration PV Power Ratio	130%		
Rated Input Voltage	620V		
Max. Input Current	2*11A		2*25A
Start Input Voltage/Min. Operating Voltage	200V/160V		250V/180V
MPPT Operating Voltage Range	160V-950V		180V-950V
MPPT Operating Voltage Range (Full-Load)	300V-800V	470V-800V	480V-800V
Max. Number of PV Strings	2(1/1)		4(2/2)
Max.capacity of PV panel	7200W	12000W	24000W
No. of MPPTs	2		
Output(Grid)			
Rated AC Active Power	6,000W	10,000W	20,000W
Max. AC Apparent Power	6,600VA	11,000VA	22,000VA
Max. AC Active Power (PF=1)	6,600W	11,000W	22,000W
Max. AC Output Current	10A	16A	3*33.5A
Rated AC Voltage	380V/400V, 3W+N+PE		
AC Voltage Range*	277V-520V(adjustable)		
Rated Grid Frequency	50Hz/60Hz		
Grid Frequency Range**	45Hz-55Hz/55Hz-65Hz		
THDI	<3%(Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	> 0.99 rated power(adjustable 0.8 LG - 0.8 LD)		
Protection			
DC switch	support		
Anti-islanding protection	support		
AC overcurrent protection	support		
AC short circuit protection	support		
DC reverse connection	support		
Surge Arrester	AC Type III		DC Type II /AC Type II
Insulation detection	support		
Leakage current protection	support		
General			
Topology	Transformerless		
IP Rating	IP65		
Cooling	Natural cooling		
Operating Temperature Range	-25℃~60℃		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Noise	<25dB		<30dB
Dimensions (W*H*D)	400*500*190mm		515*470*282mm
Weight	19.8Kg		30Kg
HMI & COM			
Display	Bluetooth & LCD		
Communication	RS485, WIFI(Optional), GPRS(Optional)		
Certification			
Safety	IEC62109-1, IEC62109-2		
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		
Grid Code	NB/T32004, VDE-AR-N 4105, IEC61727, IEC62116, VDE 0126-1-1, AS4777		
Environment & Energy efficiency	IEC 60068, IEC61683		
Warranty	5 Years		

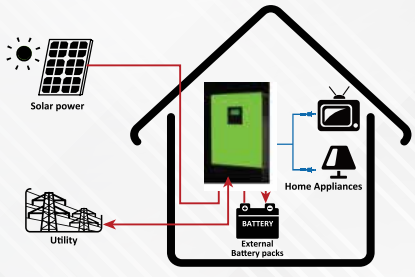
INVEREX®
SOLAR ENERGY

INFINI SERIES
V3KW,V5KW,10KW

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

- Pure sine wave output
- Self-consumption and feed in to the grid
- Programmable supply priority for PV, Battery or Grid
- User-adjustable battery Charging current suits different types of batteries
- Programmable multiple operation modes: Grid-tie, off-grid and Grid-tie with backup
- Built-in timer for various modes of on/off operation
- Multiple communication for USB, RS-232, Modbus and SNMP Card
- Monitoring software for real-time status display and control



APT INVEREX®
SOLAR ENERGY

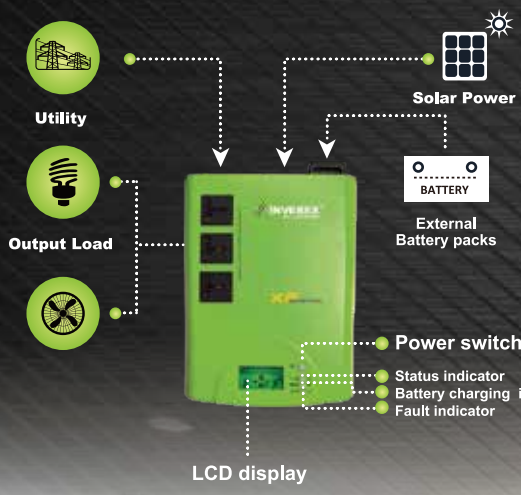
INFINI SERIES
V3KW,V5KW,10KW

MODEL	InfiniSolar V-3KW	InfiniSolar 3KW	InfiniSolar V-5KW	InfiniSolar 3P 10KW
PHASE	1-phase in / 1-phase out			3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	4000W	4500 W	6000W	14850 W
RATED OUTPUT POWER	3000W	3000 W	5000W	10000 W
MAXIMUM CHARGING POWER	1200 W			9600 W
GRID-TIE OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	145 VDC	360 VDC / 500 VDC	145 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	50 VDC/ 60VDC	116 VDC / 150 VDC	50 VDC/ 60VDC	320 VDC / 350 VDC
MPP Voltage Range	60 VDC ~ 115 VDC	250 VDC ~ 450 VDC	60 VDC ~ 115 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 18 A	1 / 1 x 18 A	2/2 x 60A	2 / 2 x 18.6A
GRID OUTPUT (AC)				
Nominal Output Voltage	208/220/230/240 VAC			230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 265 VAC*			184 - 265 VAC* per phase
Nominal Output Current	13 A		21.7 A	14.5A per phase
Power Factor	> 0.99			
EFFICIENCY				
Maximum Conversion Efficiency (DC/AC)	96%			
European Efficiency@ Vnominal	95%			
OFF-GRID OPERATION				
AC INPUT				
AC Start-up Voltage/Auto Restart Voltage	120 - 140 VAC / 180 VAC			120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC			170 - 280 VAC per phase
Maximum AC Input Current	40A	30 A	40 A	
PV INPUT (DC)				
Maximum DC Voltage	48 VDC	500 VDC	145 VDC	900 VDC
MPP Voltage Range	60 VDC ~ 115 VDC	250 VDC ~ 450 VDC	60 VDC ~ 115 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 18 A	1 / 1 x 18 A	2/2 x 60A	2 / 2 x 18.6A
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	202/208/220/230/240 VAC		220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Waveform	Pure Sinewave			
Efficiency (DC to AC)	93%			91%
HYBRID OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	145 VDC	360 VDC / 500 VDC	115VDC/ 145VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	50 VDC/ 60VDC	116 VDC / 150 VDC	50 VDC/ 60VDC	320 VDC / 350 VDC
MPP Voltage Range	60 VDC ~ 115 VDC	250 VDC ~ 450 VDC	60 VDC ~ 115 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current		1 / 1 x 18 A	2/2 x 60A	2 / 2 x 18.6A
GRID OUTPUT (AC)				
Nominal Output Voltage	202/208/220/230/240 VAC		220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 264.5 VAC*			184 - 264.5 VAC* per phase
Nominal Output Current	13 A		21.7A`	14.5 A per phase
AC INPUT				
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC			120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC			170 - 280 VAC per phase
Maximum AC Input Current	40 A	30 A	40 A	
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	202/208/220/230/240 VAC		220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Efficiency (DC to AC)	93%			91%
BATTERY & CHARGER				
Nominal DC Voltage	48 VDC			
Maximum Charging Current	Default 25A, 5A - 25A		180A	Default 60A, 10A - 200A (Adjustable)
GENERAL				
PHYSICAL				
Dimension, D X W X H (mm)	107 x 438 x 480		190 x 295 x 483	167.5 x 500 x 622
Net Weight (kgs)	15.5		16	45
INTERFACE				
Communication Port	RS-232/USB		RS-232/USB and CAN Interface	
Intelligent Slot	Optional SNMP, Modbus and AS-400 cards available			
ENVIRONMENT				
Humidity	0 ~ 90% RH (No condensing)			
Operating Temperature	0 to 40°C		-10 to 55°C	
Altitude	0 ~ 1000 m**			

*These figures may vary depending on different AC voltage and country requirements.
**Power derating 1% every 100 m when altitude is over 1000m.
Product specifications are subject to change without further notice.

APT INVEREX®
SOLAR ENERGY

XP SOLAR PRO
7+7 / 12+12



WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

- ◇ Simulated sine wave solar inverter
- ◇ Built-in 50amp Charge Controller
- ◇ MFD (Multifunction display)
- ◇ 10/20 amp Utility Charging
- ◇ AC/Solar Priority Setting for Load and Charging
- ◇ Smart Protection (Over load/Over temperature/Short Circuit)
- ◇ Mosfet based Reverse Polarity Protection
- ◇ Battery Type Selector
- ◇ Adjustable Battery charging voltages

7 7 12 12

MODEL	S1200 XP Solar	S2400 XP Solar
CAPACITY	720 W	1440 W
INPUT		
Voltage	230 VAC	
Voltage Range	170-280 VAC (UPS mode) 90-280 VAC (INV. Mode)	
OUTPUT		
Voltage Regulation (Batt. Mode)	+/-10%	
Transfer Time	20 ms typical	
Waveform	Simulated Sine Wave	
BATTERY		
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.7 VDC ±0.25 VDC	27.4 VDC ±0.5 VDC
Maximum Charge Current	10A or 20A	
SOLAR CHARGER		
Charging Current	50 A	
System Voltage	12 VDC	24 VDC
Operating Voltage Range	15~18 VDC	30~32 VDC
Max. PV Array Open Circuit Voltage	40 VDC	60 VDC
PHYSICAL		
Dimension (DxWxH) mm	325 X 230 X 86	
Net Weight (kgs)	2.5	2.8

CHARGER WITH SOLAR INVERTER SYSTEM

APT **INVEREX®**
SOLAR ENERGY

XP PRO 1200

INVERTER CHARGING SYSTEM

5+5 / 720 Watts

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

- ◇ Simulated sine wave inverter (UPS)
- ◇ MFD (Multifunction display)
- ◇ 10/20 amp Utility Charging
- ◇ Smart Protection (Over load/Over temperature/Short Circuit)
- ◇ Mosfet based Reverse Polarity Protection
- ◇ Battery Type Selector
- ◇ 12VDC battery voltage
- ◇ Auto restart while AC is Recovering

MODEL	XP Normal 1.2K
RATED POWER	
Capacity	1200VA / 720W
INPUT	
Voltage	220 / 230 / 240 VAC
Acceptable Voltage Range	170-280 VAC (UPS mode) 90-280 VAC (INV. Mode)
Frequency Range	60 Hz or 50 Hz (auto sensing)
OUTPUT	
AC Voltage Regulation (Batt. Mode)	230 VAC ±10%
Frequency Range (Batt. Mode)	60 Hz or 50 Hz ±1 Hz
Transfer Time	20 ms typical
Waveform (Batt. Mode)	Simulated Sine Wave
BATTERY	
Battery Voltage	12 VDC
Floating Range Voltage	13.7 VDC ±2%
Low Battery Alarm Voltage	10.2 VDC ±2%
Maximum Charge Current	10 A or 20 A
PROTECTION	
Full Protection	Overload, and short circut protection
PHYSICAL	
Dimension, D X W X H (mm)	293 x 231.5 x 82.5
Net Weight (kgs)	2.35
OPERATING ENVIRONMENT	
Humidity	0 to 90 % Relative Humidity (Non-condensing)
Operating Temperature	0ºC to 40ºC
Storage Temperature	-25ºC to 50ºC

* Product specificiation are subject to change without further notice

LONG BACKUP SOURCE

FOR HOME AND OFFICE APPLIANCES

MODIFIED SINE WAVE
XP PRO 1200 With LCD

APT INVEREX®
SOLAR ENERGY

FRONIUS SYMO
5.0 - 20.0 KW

FRONIUS ECO
25.0 & 27.0 KW

Fronius
SHIFTING THE LIMITS
MADE IN AUSTRIA

MANUFACTURED & DESIGNED IN EUROPE

WINNER 2018-19 Brands of the year Award NATION'S VOICE FOR NO.1 CHOICE

FRONIUS SYMO

With power categories ranging from 5.0 to 20.0 kw, the transformerless Fronius Symo is the three-phase inverter for systems of every size. Owing to the SuperFlex Design, the Fronius Symo is the perfect answer to irregularly shaped or multi-oriented roofs. The standard interface to the internet via WLAN or Ethernet and the ease of integration of third-party components make the Fronius Symo one of the most communicative inverters in the market. Furthermore, the meter interface permits dynamic feed-in management and a clear visualisation of the consumption overview.

FRONIUS ECO

The three-phase Fronius Eco in power categories 25.0 and 27.0 kw perfectly meets all the requirements of large-scale installations. Thanks to its light weight and SnapInverter mounting system, this transformerless device can be installed quickly and easily either indoors or outdoors. This inverter range is setting new standards with its IP 66 protection class. Furthermore, thanks to its integrated double fuse holders and optional overvoltage protection, string collection boxes are no longer necessary.

24HRS SUN

Fronius 5 YEAR WARRANTY Extendable up to 20 YEAR

/ SnapINverter Technology

/ Integrated data communication

/ Smart Grid Ready

/ Dynamic Peak Manager

/ Zero feed-in

APT INVEREX®
SOLAR ENERGY

FRONIUS SYMO HYBRID
3.0 to 5.0 KW

Fronius
SHIFTING THE LIMITS
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WINNER 2018-19 Brands of the year Award NATION'S VOICE FOR NO.1 CHOICE

FRONIUS SYMO HYBRID

The Fronius Symo Hybrid is the heart of the 24 hours of sun storage solution – the Fronius Energy Package. This inverter combines a battery charging system, battery inverter, hybrid inverter, controller and system monitoring solution in one device. With AC power categories ranging from 3.0 to 5.0 kW, the inverter is able to process up to 8.0 kW in order to supply household consumers with energy and to temporarily store surplus energy from a photovoltaic system in the Fronius Solar Battery. Thanks to an intelligent energy flow management system, the built-in Multi Flow Technology supports simultaneous energy flows in all directions as well as AC-, DC- and AC- & DC coupling of the battery storage. The result: maximum self-consumption and optimum system profitability.

24HRS SUN

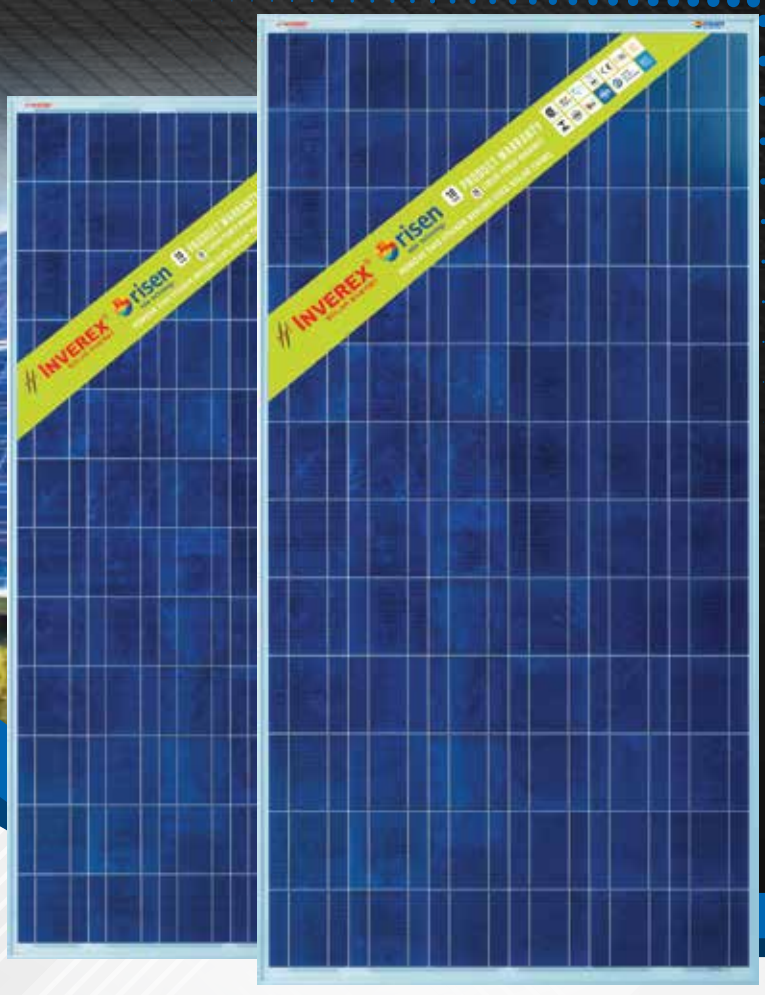
Fronius 5 YEAR WARRANTY Extendable up to 20 YEAR

SnapINverter technology
Integrated data communication
Dynamic Peak Manager
Smart Grid Ready
Zero feed-in
Multi Flow Technology

FRONIUS

APT **INVEREX®**
SOLAR ENERGY

RISEN SOLAR
POLY 270 & 325 WATTS



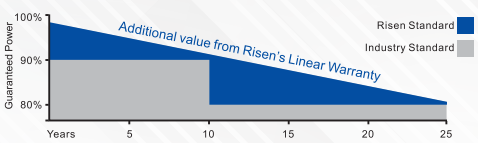
WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

- Bloomberg TIER1 — **Global, Tier 1 bankable brand, 5 Busbar with independently certified state-of-the-art automated manufacturing**
- Photon — **Photon Independent field testing- Ranked in the Top 2 of 176 international suppliers**
- **Industry leading lowest thermal co-efficient of Power**
- 12 years — **Industry leading 12 years product warranty**
- **Warranted reliability and stringent quality assurances well Beyond certified requirments**

12 years
Product Warranty
25 years
Linear Power Warranty
ON 80% EFFICIENCY

LINEAR PERFORMANCE WARRANTY



ISO9001
ISO14001

APT INVEREX® SOLAR ENERGY

RISEN SOLAR

POLY 270 & 325 WATTS

ELECTRICAL DATA(STC)

Model Number	RSM60-6-270P	RSM72-6-325P
Rated Power in Watts-Pmax(Wp)	**270**	**325**
Open Circuit Voltage-Voc(V)	38.2	46.0
Short Circuit Current-Isc(A)	9.20	9.20
Maximum Power Voltage-Vmpp(V)	31.2	37.7
Maximum Power Current-Impp(A)	8.66	8.65
Module Efficiency (%)	16.5	16.8

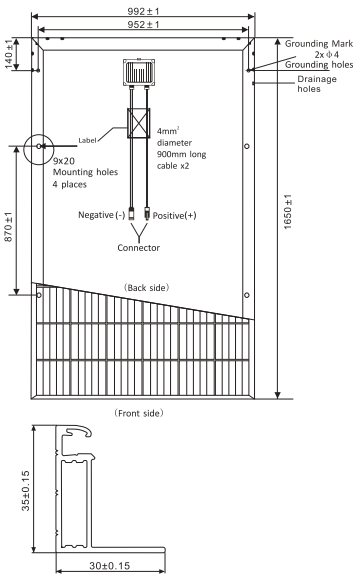
STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

ELECTRICAL DATA(NOCT)

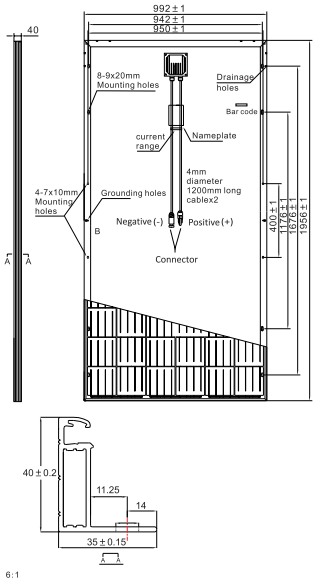
Model Number	RSM60-6-270P	RSM72-6-325P
Maximum Power-Pmax (Wp)	201	238.4
Open Circuit Voltage-Voc (V)	35.5	42.5
Short Circuit Current-Isc (A)	7.44	7.40
Maximum Power Voltage-Vmpp (V)	28.40	34.0
Maximum Power Current-Impp (A)	7.08	7.01

NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

Dimension of PV Modules Unit: mm



Dimension of PV Modules Unit: mm



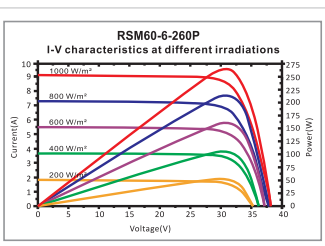
MECHANICAL DATA

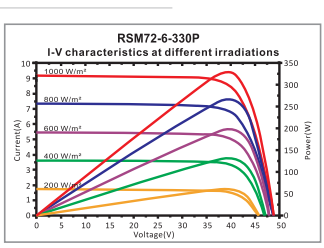
	270	325
Solar cells	Polycrystalline 156×156 mm	
Cell configuration	60 cells (6×10)	72 cells (6×12)
Module dimensions	1650×992×35mm	1956×992×40mm
Weight	18kg	26kg
Superstrate	3.2 mm, High Transmission, Low Iron, Tempered ARC Glass	
Substrate	White Backsheet	
Frame	Silver Anodized Aluminium Alloy type 6063T5, Silver Color	
J-Box	Potted, IP67, 1000VDC, 3 Schottky bypass diodes	
Cables	4.0mm² (12AWG), 900mm length	1200mm length
Connector	IP67 MC4 Compatible	

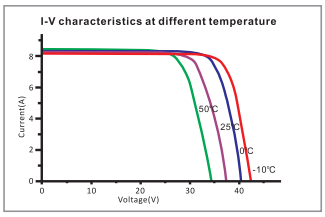
TEMPERATURE & MAXIMUM RATINGS

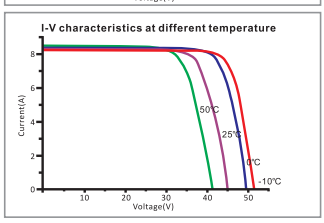
Nominal Operating Cell Temperature (NOCT)	45°C±2°C
Temperature Coefficient of Voc	-0.32%/°C
Temperature Coefficient of Isc	0.05%/°C
Temperature Coefficient of Pmax	-0.39%/°C
Operational Temperature	-40~+85°C
Maximum System Voltage	1000VDC
Max Series Fuse Rating	15A
Limiting Reverse Current	15A

PACKAGING CONFIGURATION	270		325	
	40ft	20ft	40ft	20ft
Number of modules per container	840	360	624	260
Number of modules per pallet	30	30	26	26
Number of pallets per container	28	12	24	10
Packaging box dimensions (LxWxH) in mm	1680×1120×1250		1980×1100×1135	
Box gross weight[kg]	580	580	680	680





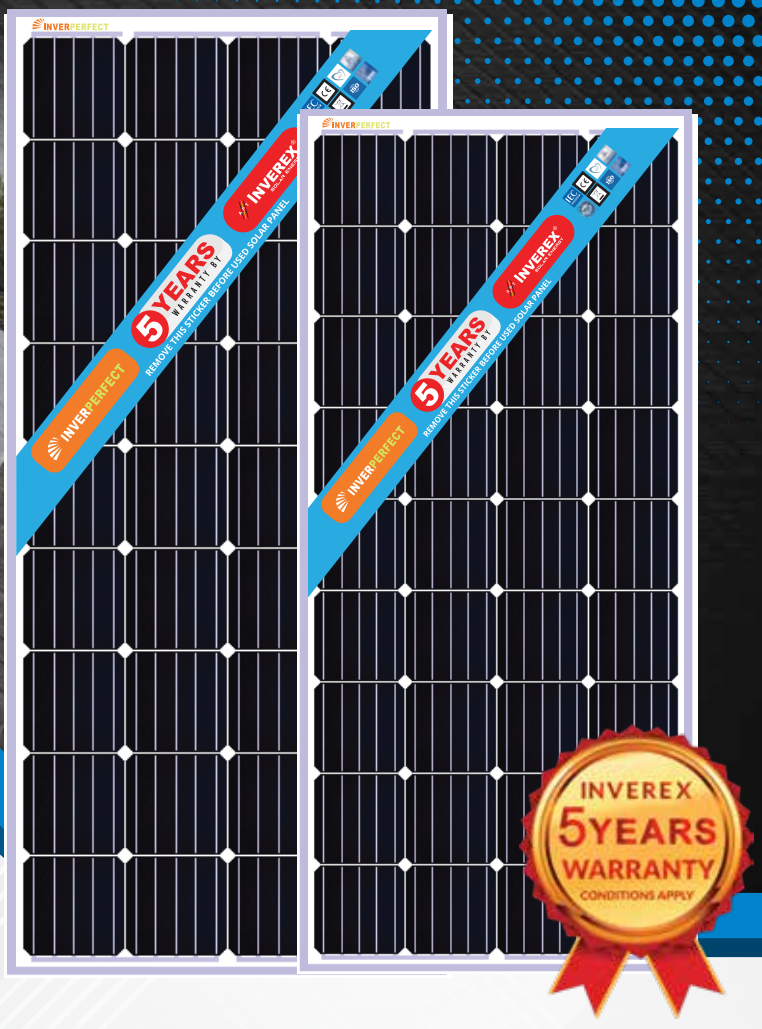




INVERPERFECT

INVERPERFECT

MONO INV-150 & 300 WATTS



WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

INVEREX 5YEARS WARRANTY CONDITIONS APPLY

KEY SALIENT FEATURES

- Bankable Brand — **5 Busbar with independently certified state-of-the-art automated manufacturing**
- **Industry Leading lowest thermal co-efficient of Power**
- 05 Years — **05 year Product Warranty**
- **Warranted reliability and string quality Assurances' well beyond certified requirements**

SPECIFICATION

MODEL NUMBER	INV-150 MONO	INV-300 MONO
Peak Power (Pmax)	150.00	300.00
Maximum Power Voltage (Vmp)	18.20	36.05
Maximum Power Current(Imp)	8.25	8.33
Open Circuit Voltage (Voc)	22.30	43.26
Short Circuit Current (Isc)	9.03	9.00
Cells Efficiency (%)	17.05	17.05
Module Efficiency (%)	15.12	15.46

*STC: Irradiance 1000 W.m², AM 1,5 Gand cell temperature of 25°C

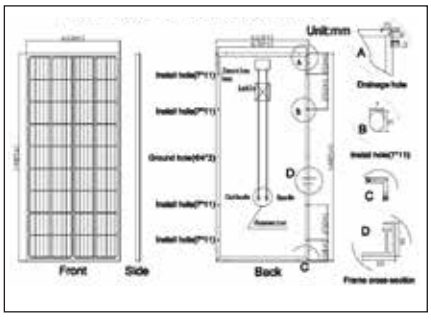
IEC CE MCS ISO IDCOL TUV SUD TÜVRheinland CERTIFIED

INVERPERFECT

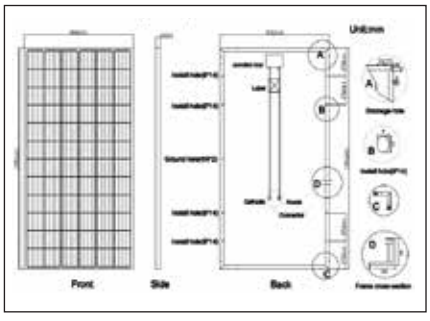
SOLAR PANEL

Maximum System Voltage (V)	1000/1500	1000/1500
Maximum Series Fuse Rating (A)	15	20
Power Tolerance	0~+3 %	0~+3 %
Pmax Temperature Coefficients (W/°C)	-0.400 %	-0.400 %
Voc Temperature Coefficients(V/°C)	-0.290 %	-0.290 %
Isc Temperature Coefficients(V/°C)	+0.048 %	+0.048 %
NOCT Nominal Operating Cell Temperature(°C)	47 ± 2	47 ± 2
Operating and storage Temperature(°C)	-40~+85	-40~+85

150W MONO SOLAR PANEL (1485*668*30)



300W MONO SOLAR PANEL (1956*992*40)



MECHANICAL CHARACTERISTICS

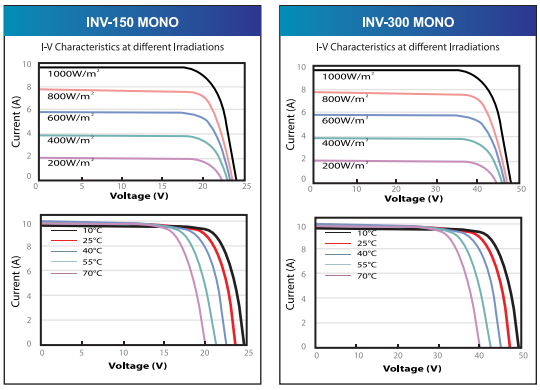
DATA	INV-150 MONO	INV-300 MONO
Cell Type	156.75x156.75 Mono	156.75x156.75 Mono
No. of Cells	36(4x9)	72(6x12)
Dimensions	1485x668x30	1956x992x40
Weight	11.0kg	22.5kg
Front Glass	3.2mm high transmission,low iron,tempered glass	3.2mm high transmission,low iron,tempered glass
Frame	Anodized Aluminium Alloy	Anodized Aluminium Alloy
Junction box	IP65/IP67	IP65/IP67
Output cables	4mm² cable 90cm+mc4	4mm² cable 90cm+mc4
MaxWind Load/Snow Load	2400Pa/5400Pa	2400Pa/5400Pa

PACKING LIST

CONTAINER STOCK	INV-150 MONO	INV-300 MONO
20FT container	14 Packages / 700 PCS	12 Packages / 296 PCS
40HQ container	45 Packages/1600 PCS	24 Packages/ 644 PCS

PRODUCT STANDARD

Product Performance	IEC61215
Product Safety	IEC61730



INVERPERFECT

INVERPERFECT

POLY INV-150 & 300 WATTS

WINNER
2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

INVEREX 5YEARS WARRANTY CONDITIONS APPLY

KEY SALIENT FEATURES

- Bankable Brand — **5 Busbar with independently certified state-of-the-art automated manufacturing**
- **Industry Leading lowest thermal co-efficient of Power**
- 05 Years — **05 year Product Warranty**
- **Warranted reliability and string quality Assurances' well beyond certified requirements**

SPECIFICATION

MODEL NUMBER	INV-150 POLY	INV-300 POLY
Peak Power (Pmax)	150.00	300.00
Maximum Power Voltage (Vmp)	18.10	36-08
Maximum Power Current(Imp)	8.29	8.32
Open Circuit Voltage (Voc)	21.75	43.28
Short Circuit Current (Isc)	8.95	8.99
Cells Efficiency (%)	17.05	17.05
Module Efficiency (%)	15.12	15.46

*STC: Irradiance 1000 W/ m^2, AM 1,5 Gand cell temperature of 25°C

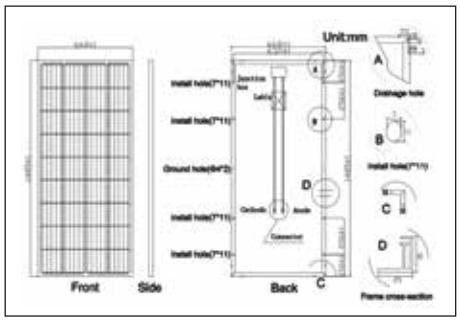
IEC CE MCS ISO IDCOL TÜV SÜD TÜVRheinland CERTIFIED

INVERPERFECT

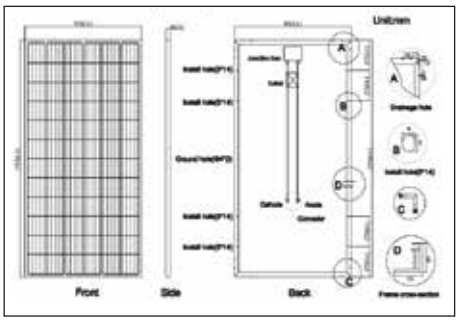
SOLAR PANEL

Maximum System Voltage (V)	1000/1500	1000/1500
Maximum Series Fuse Rating (A)	15	20
Power Tolerance	0~+3 %	0~+3 %
Pmax Temperature Coefficients (W/℃)	-0.400 %	-0.400 %
Voc Temperature Coefficients(V/°C)	-0.300 %	-0.300 %
Isc Temperature Coefficients(V/°C)	+0.060 %	+0.060 %
NOCT Nominal Operating Cell Temperature(°C)	47 ± 2	47 ± 2
Operating and storage Temperature(°C)	-40~+85	-40~+85

150W POLY SOLAR PANEL (1485*688*30)



300W POLY SOLAR PANEL (1956*992*40)



MECHANICAL CHARACTERISTICS

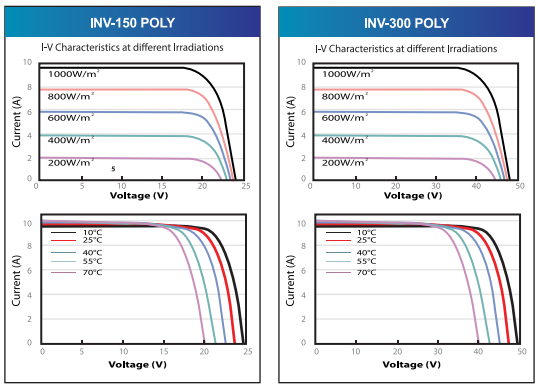
DATA	INV-150 POLY	INV-300 POLY
Cell Type	156.75x156.75 Poly	156.75x156.75 Poly
No. of Cells	36(4x9)	72(6x12)
Dimensions	1485x668x35	1956x992x40
Weight	11.0kg	22.5kg
Front Glass	3.2mm high transmission,low iron,tempered glass	3.2mm high transmission,low iron,tempered glass
Frame	Anodized Aluminium Alloy	Anodized Aluminium Alloy
Junction box	IP65/IP67	IP65/IP67
Output cables	4mm² cable 90cm+mc4	4mm² cable 90cm+mc4
MaxWind Load/Snow Load	2400Pa/5400Pa	2400Pa/5400Pa

PACKING LIST

CONTAINER STOCK	INV-150 POLY	INV-300 POLY
20FT container	14 Packages / 700 PCS	12 Packages / 296 PCS
40HQ container	45 Packages/1600 PCS	24 Packages/ 644 PCS

PRODUCT STANDARD

Product Performance	IEC61215
Product Safety	IEC61730



APT INVEREX®
SOLAR ENERGY

TALL TUBULAR BATTERY

ITT - 12V - 150 AH / 10 HR
ITT - 12V - 185 AH / 10 HR

WINNER 2018-19 Brands of the year Award NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES

- ◇ Tubular type positive plates
- ◇ Superior high density online materials
- ◇ Excellent corrosion resistance
- ◇ Ultra Low Maintenance
- ◇ Ceramic Water Level indicates
- ◇ Excellent cyclic performance with quick change application
- ◇ Deep Discharge abilities
- ◇ Ultra low Self Discharge

APPLICATION:

- ◇ Solar PV Applications
- ◇ Office automation equipment's
- ◇ Fire Alarm & Security systems
- ◇ Railway signaling
- ◇ Emergency lighting
- ◇ Telecommunication
- ◇ UPS & online UPS
- ◇ Home Inverters

Capacity	150AH	185AH
TECHNICAL SPECIFICATION		
Noiminal Voltage	12.0	
OVERALL DIMENSHIONS		
Length	± 3 mm - 503	
Width	± 3 mm - 189	
Height up to float top	± 3 mm - 411	
Filled Weight	±58% Kg	±65% Kg
CONSTANT POWER DISCHARGE PERFORMANCE	**150 AH**	**185 AH**
Load - Maximum Duration		
150 Watts / 185 Watts	10 Hr	
200 Watts	6 hr	7 hr 20 minutes
400 Watts	3 hr	3 hr 30 minutes
600 Watts	2 hr	2 hr 30 minutes
800 Watts	1 hr 30 minutes	1 hr 50 minutes

HEAVY DUTY TUBULAR PLATES

LOW MAINTENANCE | HIGH PERFORMANCE | ECO FRIENDLY | RECYCLABLE

INVEREX®
SOLAR ENERGY

GEL BATTERY SERIES
INV 12V-100AH, 150AH & 200AH

SPECIAL DESIGNED
ZS MOTOR BIKE SERIES

WINNER 2018-19 Brands of the year Award NATION'S VOICE FOR NO.1 CHOICE

PRODUCT FEATURES
- ◇ Non-Spillable
- ◇ High Quality and high Reliability
- ◇ Exceptional deep discharge recovery
- ◇ Long service Life
- ◇ Solid Copper Terminals
- ◇ Tank-Formed Plates

Typical Application
- ◇ Telecommunication equipment
- ◇ Electric instruments
- ◇ UPS Power Supply
- ◇ Solar Application

Parameter Chart

Volts	12V	INV-12 -100 AH GEL	INV-12 -150 AH GEL	INV-12 -200 AH GEL
Capacity (25°C)	10 hrs Rate (10A) , (15A), (20A)	100Ah	150Ah	200Ah
Discharge Current	1 hrs Rate (55A), (82.5A), (110)	60Ah	84Ah	110Ah
Testing (25°C)	3 hrs Rate (37.5A)	80Ah	114Ah	150Ah
Internal Resistance	Full Charged Battery 25°C	4mΩ	3.4mΩ	2.5mΩ
Capacity Affected by Temperature	40°C	104%		
	25°C	100%		
	0°C	83%		
	-15°C	65%		
Charging (Constant Voltage)	Cycle (25°C)	Intial Charging Current Less Than 30 A Voltage 14.5~14.9V	Intial Charging Current Less Than 45 A Voltage 14.5~14.9V	Intial Charging Current Less Than 60 A Voltage 14.5~14.9V
	Float (25°C)	Voltage 13.6~13.8 V		
Weight (Approx)		32.5Kg	47.5Kg	64.1Kg

The above are average and data obtaibed from the first 3 charge / discharge cycles. These are not minimum values

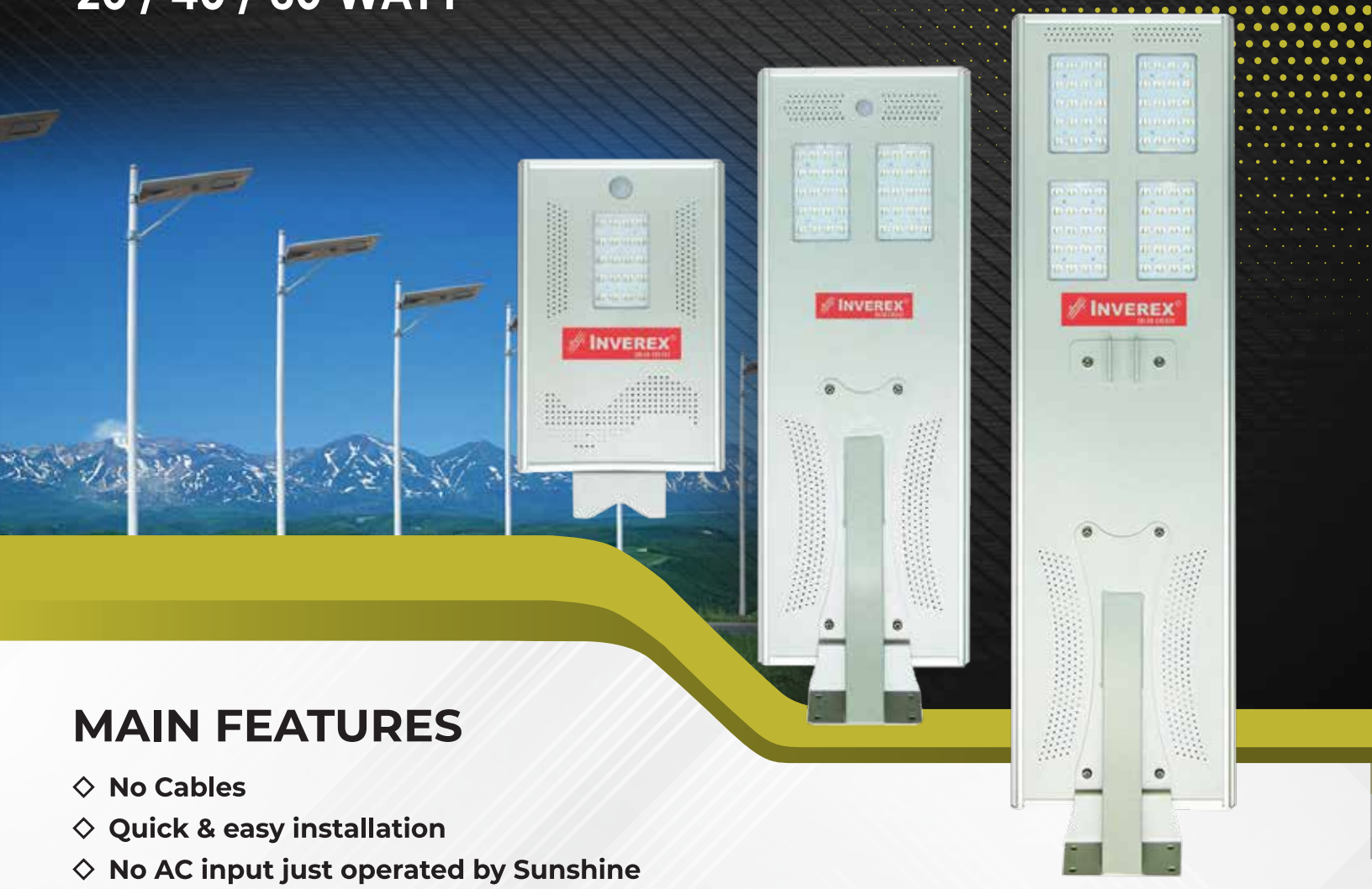
ISO 9001
ISO 14001
OHSAS18001

APT INVEREX®
SOLAR ENERGY

ALL IN ONE

SOLAR LED STREET LIGHT

20 / 40 / 60 WATT



MAIN FEATURES

- ◇ No Cables
- ◇ Quick & easy installation
- ◇ No AC input just operated by Sunshine
- ◇ Eliminate the risk of battery theft
- ◇ Unique design, single unit all in one
- ◇ Energy efficiency and low long-term cost
- ◇ No electricity, no monthly bills, environment friendly
- ◇ All Aluminum lamp body, waterproof (IP65), rust proof, anti-corrosion
- ◇ Mono crystalline panel, with higher conversion rate and long lifespan

WORKING MODE:

PIR MOTION SENSOR WORKING MODE:
when someone come, it will work with 100% brightness, 45s later, it will work with 30% brightness for energy saving.

TIME CONTROL WORKING MODE: 4 hrs 100% + 3 hrs 50% +3 hrs 25%

LIGHT CONTROL: The light will turn on automatically when sunset, and turn off when sun rises.

APT **INVEREX®**
SOLAR ENERGY

SOLAR 14W
WALL-MOUNTED LIGHT

WINNER 2018-19 Brands of the year Award
NATION'S VOICE FOR NO.1 CHOICE

MAIN FEATURES

- LED Lamp 20w LED 6000k-6500K
- Solar Panel 9w 8.5V
- Battery Type Lithium-Ion 7.4v 4.8 ah
- Charging Time 6-8 hours
- Discharging Time 20-24 hours
- Lumen 100 lm.w
- Install height 3-5m
- Lamp size 372*177*45mm
- 1 year warranty


SOLAR PANEL

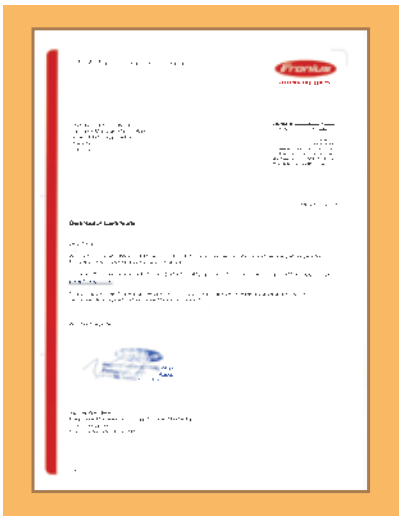

ENVIRONMENTALLY


PHOTOCELL

ENERGY SAVING

APT INVEREX® SOLAR ENERGY

AUTHORIZATION CERTIFICATION



INVEREX®
SOLAR ENERGY

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