APT INVEREX®
SOLAR ENERGY

Ensuring Cleaner & Greener Future

بل کی فکر سے بے فکر

Head Office
Mubarak Manzil, Agha Khan III Road,
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UAN: +92-21-111-209-988

Content

Who we are?

Inverex was established in 2007

since then it is one of the leading Solar Brands in Pakistan.

Inverex Solar Energy is committed towards developing customised solar systems for Industrial, Commercial, Institutional and Residential consumers. We aim to be your reliable partner in your journey to adopting solar for a greener and more affordable electricity supply. Hence we are considered a pioneer in the solar industry.

We offer permanent and promising partnerships throughout Pakistan with deep-rooted success-oriented companies. Our sole perspective is to make the environment favorable and greener with advanced and revolutionary solar products to make Pakistan brighter.

Mission & Vision

To provide world-class renewable energy solutions, services, and technology in order to contribute to the sustainability of our planet and conflict-free power supply solar technologies.

To break the bonds of the predominantly fuel-powered grid system and become a part of the green power revolution. Our aim is to continuously improve efficiency, quality, and technology. To fulfill the goal of a cleaner and greener country and to make solar a seamless and hassle-free process.

Live Life Cleaner

By Making Earth

Greener!

Message from CEO

Muhammad Zakir Ali

As Inverex

is a well-known Solar Energy brand in Pakistan we are committed to providing superb quality products that not only aid in greener and sustainable Pakistan but also have a significant portion of impact on how greener energy is being established for such beneficial purposes that benefit today's environment.

As for our products, we offer permanent and promising partnerships throughout Pakistan with deep-rooted, success-oriented companies. Our sole perspective is to make the environment favorable and green with advanced and revolutionary solar products to make Pakistan brighter.

APT INVEREX® SOLAR ENERGY

5 YEARS WARRANTY
2 YEARS PRODUCT WARRANTY
3 YEARS SERVICE WARRANTY

VEYRON II 1200W-12V
MPPT SOLAR INVERTER 2500W-24V

PRODUCT KEY FEATURES

- First Time In Pakistan 1200Watt/2500Watt Inverter works without battery
- Auto Synchronization With Inverex Lithium Battery
- Output Power Factor 1.0
- Pure Sine Wave & High Voltage MPPT Solar Inverter
- Priority Setting For Grid/PV Usage
- Compatible To Mains Voltage Or Generator Power
- Auto Restart While AC Is Recovering
- Conformal Coating For Internal Boards
- Built-in Anti-Dust kit
- Upgraded MPPT Solar Charger of 80 AMP

PV-2000 WATTS SOLAR MPPT (1.2 KW)

PV-3000 WATTS SOLAR MPPT (2.5 KW)

Battery Cable Inside

UP Graded Model New Attractive Design

Anti Dust Kit

80 AMP Solar Charger

Works Without Battery

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APT INVEREX® SOLAR ENERGY

VEYRON II 1200W-12V
MPPT SOLAR INVERTER 2500W-24V

Technical Data

Model	VEYRON II 1200-12	VEYRON II 2500-24
Rated Power	1200W	2500W
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	2000VA	4500VA
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	24 VDC
Floating Charge Voltage	13.5 VDC	27 VDC
Overcharge Protection	16 VDC	32 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Open Circuit Voltage	350 VDC	450 VDC
Maximum PV Array Power	2000W	3000W
MPP Range @ Operating Voltage	60-300 VDC	60-400 VDC
Maximum Solar Charge Current	80A	
Maximum AC Charge Current	80A	
Maximum Charge Current	80A	
PHYSICAL		
Dimension, D X W X H (mm)	95 x 288 x 357	
Net Weight (kgs)	9	
Communication Interface	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	

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APT INVEREX® SOLAR ENERGY

VEYRON II 3200W-24V 3200W-48V

MPPT SOLAR INVERTER

PRODUCT KEY FEATURES

- Auto Synchronization With Inverex Lithium Battery
- Works Without Battery Directly On Solar
- Communication Port For BMS Through (RS485, CAN-BUS, RS232)
- Built-In Anti-Dust Kit For Dust Protection
- Conformal Coating For PCB Protection From Humidity
- With Grid-Tie/Net Metering Option
- Built-In MPPT Solar Charger Upto 4000 Watts (80 Amp)
- Built-In BMS & SOC based battery control (3200-48V)

PV-4000WATTS
SOLAR MPPT
(120-450 VDC)

18 AMP MPPT Supports
600 Watts Solar Panels

Built-in BMS CONTROL

Built-in Grid Feeding

UP Graded Model New Attractive Design

ANTI DUST FILTERS

Anti Dust Kit

80 AMP Solar Charger

Works Without Battery

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APT INVEREX® SOLAR ENERGY

VEYRON II 3200W-24V 3200W-48V
MPPT SOLAR INVERTER

Technical Data

Model	VEYRON II 3200-24	VEYRON II 3200-48
Rated Power	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)	230VAC ± 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	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	32 VDC	63 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	80A	
Maximum Charge Current	80A	
PHYSICAL		
Dimension, D X W X H (mm)	100 x 300 x 440	
Net Weight (kgs)	9	
Communication Interface	RS232	RS232 + RS485/CAN (BMS)
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	

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APT INVEREX® SOLAR ENERGY

5 YEARS WARRANTY
2 YEARS PRODUCT WARRANTY
3 YEARS SERVICE WARRANTY

VEYRON II

MPPT SOLAR INVERTER 6000W-48V

- Dual Output option with 6000W Inverter
- Auto Synchronization With Inverex Lithium Battery
- With Grid-Tie/Net Metering Option
- No Zero Export Device Required
- Optional Parallel Kit (Upto 9 Units)
- Works Without Battery Directly On Solar
- Built-in MPPT Solar Charger Upto 6500 Watts (120 Amp)
- Built-In Anti-Dust Kit For Dust Protection
- Communication Port For BMS Through (RS485, CAN-BUS, RS232)
- Conformal Coating For PCB Protection From Humidity
- Built-In BMS & SOC based battery control

PV-6500 WATTS
SOLAR MPPT
(120-430 VDC)

27 AMP MPPT Supports Upto 600 Watts Solar Panels

Parallel operation
Dual output
Maximum PV input current 27A

Built-in BMS CONTROL
Built-in Grid Feeding
UP Graded Model New Attractive Design
ANTI DUST FILTERS
Anti Dust Kit
120 AMP Solar Charger
Works Without Battery

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APT INVEREX® SOLAR ENERGY

VEYRON II
MPPT SOLAR INVERTER
6000W-48V

Technical Data

Model	VEYRON II 6000-48
Rated Power	6000W
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)	170-280 VAC (For Personal Computers)
Overload capacity	"5s@≥150% load; 10s@110%~150% load;
Efficiency (Peak)	90%
Transfer Time	"10 ms (For Personal Computers) 20 ms (For Home Appliances)"
Waveform	Pure sine wave
Dual Outputs	Yes
BATTERY	
Battery Voltage	48 VDC
Floating Charge Voltage	54 VDC
Overcharge Protection	66 VDC
SOLAR CHARGER & AC CHARGER	
Solar Charger Type	MPPT
Maximum PV Array Open Circuit Voltage	500 VDC
Maximum PV Array Power	6500W
MPP Range @ Operating Voltage	120 ~ 430 VDC
Maximum Solar Charge Current	120A
Maximum AC Charge Current	120A
Maximum Charge Current	120A
Maximum Solar Input Current	27A
PHYSICAL	
Dimension, D X W X H (mm)	140 x 295 x468
Net Weight (kgs)	11.0
Communication Interface	RS485, RS232, Optional for Wi-Fi (Built-in BMS)
OPERATING ENVIRONMENT	
Humidity	5% to 95% Relative Humidity(Non-condensing)
Operating Temperature	-10°C to 50°C
Storage Temperature	-15°C to 60°C

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NitroX®
3KW–24V SP–HYBRID
PV INVERTER WITH ENERGY STORAGE

- Max. Efficiency 97.6%
- IP65 Ingress Protection
- Smart MPPT
- Support Multiple Parallel
- Support Generator Connection
- Internal SPD
- Zero Export
- High Surge Endurance
- Six Time of Use Setting
- RS485 / CAN
- High Power Factor
- Safe
- Efficiency
- Touch Screen Display
- Dual Output

Remote Monitoring Features

- External light indicator, logging status at a glance.
- Plug & play, pick power within inverter, no external power needed, easy to install.
- IP65 water-proof design, resistant to bad weather, enhance stability.
- External design, easier to replace faulty equipment.
- End-user can monitor yields at any time with SOLARMAN APP.

4000 WATTS
DUAL MPPT
SUPPORTS UPTO 600 WATTS
SOLAR PANEL

140 AMP
Solar Charger

Smart PV Monitoring Platform

Stick Logger

Solarman Smart for enduser

Solarman Business for installers and EPC

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APT INVEREX® SOLAR ENERGY
NitroX® 3KW–24V SP–HYBRID

Technical Data

Model	NITROX HYBRID 3 KW SP-24V
Battery Input Data	
Battery Type	Lead-acid or Li-Ion
Battery Voltage Range (V)	20~30
Max. Charging Current (A)	140
Max. Discharging Current (A)	140
External Temperature Sensor	Optional
Charging Curve	3 Stages / Equalization
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
PV String Input Data	
Max. DC Input Power (W)	4000W
Rated PV Input Voltage (V)	370 (125~500)
Start-up Voltage (V)	125
MPPT Voltage Range (V)	150-425
Full Load DC Voltage Range (V)	300-425
PV Input Current (A)	13A
Max. PV ISC (A)	17A
Number of MPPT / Strings per MPPT	1/1
AC Output Data	
Rated AC Output and UPS Power (W)	3000
Max. AC Output Power (W)	3300
AC Output Rated Current (A)	13.6/13A
Max. AC Current (A)	15/14.3A
Max. Continuous AC Passthrough (A)	35
Peak Power (off grid)	2 time of rated power, 10 S
Power Factor	0.8 leading to 0.8 lagging
Output Frequency and Voltage	50/60Hz; 220V/187V-242V,230V/ 195.5V-253V
Grid Type	Single Phase
DC injection current (mA)	THD<3% (Linear load<1.5%)
Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	96.50%
MPPT Efficiency	>99%
Tranafer time	4ms
Protection	
Integrated	PV Arc Fault Detection,PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection,Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection,Surge protection
Certifications and Standards	
Grid Regulation	EN50549,AS4777.2,VDE0126,IEC61727,VDEN4105,G99, NBT32004,CEI0-21,NRS097,NBR16149/16150,RD1699
Safety EMC / Standard	IEC62109-1/-2, EN61000-6-1,EN61000-6-2,EN61000-6-3,EN61000-6-4
General Data	
Operating Temperature Range (℃)	-45~60℃, >45℃ derating
Cooling	Smart cooling
Noise (dB)	<30 dB
Communication with BMS	RS485; CAN
Weight (kg)	11.4
Size (mm)	330W×559.5H×228D
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years (T&C)

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NitroX®
6KW–48V SP–HYBRID
PV INVERTER WITH ENERGY STORAGE

- Max. Efficiency 97.6%
- IP65 Ingress Protection
- Dual MPPT
- Support Multiple Parallel
- Support Generator Connection
- Internal SPD
- Zero Export
- High Surge Endurance
- Six Time of Use Setting
- Dual Output
- RS485 / CAN
- High Power Factor
- Safe
- Efficiency
- Touch Screen Display

Remote Monitoring Features

- Compatible With Inverex Power Cube
- External light indicator, logging status at a glance.
- Plug & play, pick power within inverter, no external power needed, easy to install.
- IP65 water-proof design, resistant to bad weather, enhance stability.
- External design, easier to replace faulty equipment.
- End-user can monitor yields at any time with SOLARMAN APP.

7800 WATTS
DUAL MPPT
SUPPORTS UPTO 600 WATTS
SOLAR PANEL

135 AMP
Solar Charger

Smart PV Monitoring Platform

Stick Logger

Solarman Smart for enduser

Solarman Business for installers and EPC

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INVEREX® SOLAR ENERGY

NitroX® 6KW–48V SP–HYBRID

Technical Data

Model	NITROX HYBRID 6 KW SP-48V
Battery Input Data	
Battery Type	Lead-acid or Li-Ion
Battery Voltage Range (V)	40~60
Max. Charging Current (A)	135
Max. Discharging Current (A)	135
External Temperature Sensor	Optional
Charging Curve	3 Stages / Equalization
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
PV String Input Data	
Max. DC Input Power (W)	7800W
Rated PV Input Voltage (V)	370 (125~500)
Start-up Voltage (V)	125
MPPT Voltage Range (V)	150-425
Full Load DC Voltage Range (V)	300-425
PV Input Current (A)	13+13A
Max. PV ISC (A)	17+17A
Number of MPPT / Strings per MPPT	2/1+1
AC Output Data	
Rated AC Output and UPS Power (W)	6000
Max. AC Output Power (W)	6600
AC Output Rated Current (A)	27.3/26.1A
Max. AC Current (A)	30/28.7A
Max. Continuous AC Passthrough (A)	40
Peak Power (off grid)	2 time of rated power, 10 S
Power Factor	0.8 leading to 0.8 lagging
Output Frequency and Voltage	50/60Hz; 220V/187V-242V,230V/ 195.5V-253V
Grid Type	Single Phase
DC injection current (mA)	THD<3% (Linear load<1.5%)
Max. Efficiency	97.60%
Euro Efficiency	96.50%
MPPT Efficiency	>99%
Tranafer time	4ms
Protection	
Integrated	PV Arc Fault Detection,PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection,Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection,Surge protection
Certifications and Standards	
Grid Regulation	EN50549,AS4777.2,VDE0126,IEC61727,VDEN4105,G99, NBT32004,CEI0-21,NRS097,NBR16149/16150,RD1699
Safety EMC / Standard	IEC62109-1/-2, EN61000-6-1,EN61000-6-2,EN61000-6-3,EN61000-6-4
General Data	
Operating Temperature Range (℃)	-45~60℃, >45℃ derating
Cooling	Smart cooling
Noise (dB)	<30 dB
Communication with BMS	RS485; CAN
Weight (kg)	14
Size (mm)	330W×433H×238D
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years (T&C)

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NitroX®
8KW-48V SP-HYBRID
PV INVERTER WITH ENERGY STORAGE

- Max. Efficiency 97.6%
- IP65 Ingress Protection
- Dual MPPT
- Support Multiple Parallel
- Support Generator Connection
- Internal SPD
- Zero Export
- High Surge Endurance
- Six Time of Use Setting
- Dual Output
- RS485 / CAN
- High Power Factor
- Safe
- Efficiency
- Touch Screen Display

Remote Monitoring Features

- Compatible With Inverex Power Cube
- External light indicator, logging status at a glance.
- Plug & play, pick power within inverter, no external power needed, easy to install.
- IP65 water-proof design, resistant to bad weather, enhance stability.
- External design, easier to replace faulty equipment.
- End-user can monitor yields at any time with SOLARMAN APP.

10400 WATTS
DUAL MPPT
SUPPORTS UPTO 600 WATTS
SOLAR PANEL

190 AMP
Solar Charger

Smart PV Monitoring Platform

Stick Logger

Solarman Smart for enduser

Solarman Business for installers and EPC

INVEREX® SOLAR ENERGY

NitroX® 8KW-48V SP-HYBRID

Technical Data

Model	NITROX HYBRID 8 KW SP-48V
Battery Input Data	
Battery Type	Lead-acid or Li-Ion
Battery Voltage Range (V)	40~60
Max. Charging Current (A)	190
Max. Discharging Current (A)	190
External Temperature Sensor	yes
Charging Curve	3 Stages / Equalization
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
PV String Input Data	
Max. DC Input Power (W)	10400W
Rated PV Input Voltage (V)	370 (125~500)
Start-up Voltage (V)	125
MPPT Voltage Range (V)	150-425
Full Load DC Voltage Range (V)	200-425
PV Input Current (A)	26+26A
Max. PV ISC (A)	34+34
Number of MPPT / Strings per MPPT	2/2+2
AC Output Data	
Rated AC Output and UPS Power (W)	8000
Max. AC Output Power (W)	8800
AC Output Rated Current (A)	36.4/34.8A
Max. AC Current (A)	40/38.3A
Max. Continuous AC Passthrough (A)	50
Peak Power (off grid)	2 time of rated power, 10 S
Power Factor	0.8 leading to 0.8 lagging
Output Frequency and Voltage	50/60Hz; 220/230 (single phase)
Grid Type	Single Phase
DC injection current (mA)	THD<3% (Linear load<1.5%)
Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	96.50%
MPPT Efficiency	>99%
Tranafer time	4ms
Protection	
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection,Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection,Surge protection
Certifications and Standards	
Grid Regulation	EN50549,AS4777.2,VDE0126,IEC61727,VDEN4105,G99, NBT32004,CEI0-21,NRS097,NBR16149/16150,RD1699
Safety EMC / Standard	IEC62109-1/-2, EN61000-6-1,EN61000-6-2,EN61000-6-3,EN61000-6-4
General Data	
Operating Temperature Range (℃)	-45~60℃, >45℃ derating
Cooling	Smart cooling
Noise (dB)	<30 dB
Communication with BMS	RS485; CAN
Weight (kg)	20.5
Size (mm)	330W×580H×232D
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years (T&C)

APT INVEREX® SOLAR ENERGY

NitroX®
12KW-48V 3P-HYBRID

PV INVERTER WITH ENERGY STORAGE

- Max. Efficiency 99%
- IP65 Ingress Protection
- Dual MPPT
- Support Multiple Parallel
- Support Generator Connection
- Internal SPD
- Zero Export
- High Surge Endurance
- Six Time of Use Setting
- Dual 3Phase Output
- RS485 / CAN
- High Power Factor
- Safe
- Premium Efficiency
- Colorful Touch Screen Display
- High DC Voltage Range 140-800
- Three Phase Hybrid Operation
- GRID FEEDING OPTION

Remote Monitoring Features

- Compatible With Inverex Power Cube
- External light indicator, logging status at a glance.
- Plug & play, pick power within inverter, no external power needed, easy to install.
- IP65 water-proof design, resistant to bad weather, enhance stability.
- External design, easier to replace faulty equipment.
- End-user can monitor yields at any time with SOLARMAN APP.

5 YEARS WARRANTY
Terms & Conditions Apply

15600 WATTS
DUAL MPPT
SUPPORTS UPTO 600 WATTS SOLAR PANEL

BUILT-IN AC BREAKER

240 AMP Solar Charger

Smart PV Monitoring Platform

Stick Logger

Solarman Smart for enduser

Solarman Business for installers and EPC

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APT INVEREX® SOLAR ENERGY

NitroX® 12KW-48V 3P-HYBRID

Technical Data

Model	NITROX HYBRID 12 KW 3P-48V
Battery Input Data	
Battery Type	Lead-acid or Li-Ion
Battery Voltage Range (V)	40~60
Max. Charging Current (A)	240
Max. Discharging Current (A)	240
External Temperature Sensor	yes
Charging Curve	3 Stages / Equalization
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
PV String Input Data	
Max. DC Input Power (W)	15600W
Rated PV Input Voltage (V)	550 (160~800)
Start-up Voltage (V)	160
MPPT Voltage Range (V)	200-650
PV Input Current (A)	26+13A
Max. PV ISC (A)	34+17A
Number of MPPT / Strings per MPPT	2/2+1
AC Output Data	
Rated AC Output and UPS Power (W)	12000
Max. AC Output Power (W)	13200
AC Output Rated Current (A)	18.2/17.4A
Max. AC Current (A)	27.3/26.1A
Max. Continuous AC Passthrough (A)	50
Peak Power (off grid)	2 time of rated power, 10 S
Power Factor	0.8 leading to 0.8 lagging
Output Frequency and Voltage	50/60Hz; 380/400Vac (Three phase)
Grid Type	Three Phase
DC injection current (mA)	THD<3% (Linear load<1.5%)
Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	97.00%
MPPT Efficiency	>99%
Tranafer time	4ms
Protection	
Integrated	PV Arc Fault Detection,PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection,Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection
Certifications and Standards	
Grid Regulation	EN50549,AS4777.2,VDE0126,IEC61727,VDEN4105,G99, NBT32004,CEI0-21,NRS097,NBR16149/16150,RD1699
Safety EMC / Standard	IEC62109-1/-2, EN61000-6-1,EN61000-6-2,EN61000-6-3,EN61000-6-4
General Data	
Operating Temperature Range (℃)	-45~60℃, >45℃ derating
Cooling	Smart cooling
Noise (dB)	≤45 dB(A)
Communication with BMS	RS485; CAN
Weight (kg)	33.6
Size (mm)	422W×699.3H×279D
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years (T&C)

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YUKON
3.2 KW/5.2 KW
SOLAR INVERTER

5 YEARS WARRANTY
2 YEARS PRODUCT WARRANTY
3 YEARS SERVICE WARRANTY

PRODUCT FEATURES

- Auto synchronization with Lithium-Ion Battery.
- High efficiency pure sine wave inverter (PF=1).
- Wide PV input range (120Vdc-500Vdc) 80A MPPT SCC.
- Intelligent 3 stage 80A AC battery charger.
- Intelligent functionality enables utility & solar input prioritization.
- Monitor, troubleshoot, or communication with USB/RS232.
- System configures quickly into compact, wall-mounted system.
- Enhance MPPT solar charge controller up to 5000 WATTS.
- Efficiently works without battery.
- Adaptable to Main Voltage / Generator Power.
- Built-in Anti Dust Kit.

ANTI DUST FILTERS
Anti Dust Kit

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INVEREX® SOLAR ENERGY

YUKON 3.2 KW/5.2 KW SOLAR INVERTER

Technical Data

	YUKON 3.2 KW	/ 5.2 KW
RATED POWER	3200VA/3200W	5200VA/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		
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%	
Surge Power	6400VA	10000VA
Efficiency (Peak) PV to INV.	97%	
Efficiency (Peak) Battery to INV.	94%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY & AC CHARGER		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
Maximum AC Charge Current	80 A	60 A
SOLAR CHARGER		
Maximum PV Array Power	4000W	5000W
MPPT Range @ Operating Voltage	120 ~ 450 VDC	
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum Charging Current	80A	
Maximum Efficiency	98%	
PHYSICAL		
Dimension, D x W x H (mm)	100 x 300 x 440	
Net Weight (kgs)	9	
Communication interface	USB / RS232	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	0°C - 55°C	
Storage Temperature	–15°C - 60°C	

Product specifications are subject to change without further notice

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APT INVEREX® SOLAR ENERGY

10 YEARS WARRANTY

5 YEARS REPLACEMENT WARRANTY
TERMS & CONDITIONS APPLY

NitroX®

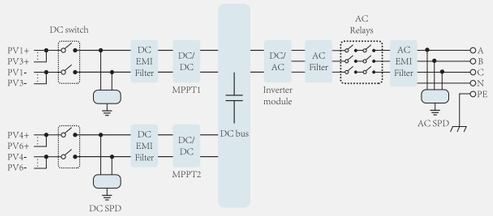
6.10.15.20KW 3Ph-5G

PV Solar On Grid Inverter

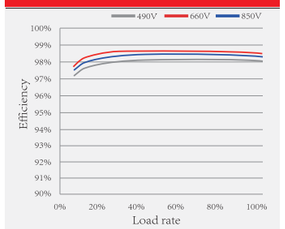
- Max. Efficiency 98.6%
- DUAL MPPT
- RS485/RS232
- Internal SPD
- Zero Export (Optional)
- IP65 Ingress Protection
- High Power Factor
- High Surge Endurance

Smart PV Monitoring Platfrom

Circuit block diagram



Efficiency curve



Solarman Smart for enduser

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APT INVEREX® SOLAR ENERGY

NitroX® 6.10.15.20KW 3Ph-5G PV Solar On Grid Inverter

Technical Data

Model	NITROX 6KW	NITROX 10KW	NITROX 15KW	NITROX 20KW
Input Side				
Max. DC Input Power (kW)	7.8	13	20	26
Max. DC Input Voltage (V)	1000			
Start-up DC Input Voltage (V)	250			
MPPT Operating Range (V)	200~850			
Max. DC Input Current (A)	13+13		13+26	32+32
Max. Short Circuit Current (A)	19.5+19.5		19.5+39	48+48
Number of MPPT / Strings per MPPT	2/2			
Output Side				
Rated Output Power (kW)	6	10	15	20
Max. Active Power (kW)	6.6	11	16.5	22
Nominal Output Voltage / Range (V)	3L/N/PE 380V/323V-418V, 400V/340V-440V			
Rated Grid Frequency (Hz)	50 / 60 (Optional)			
Operating Phase	Three phase			
Rated AC Grid Output Current (A)	8.7	14.5	21.7	29
Max. AC Output Current (A)	9.6	15.9	23.9	31.9
Output Power Factor	0.8 leading to 0.8 lagging			
Grid Current THD	<3%			
DC Injection Current (mA)	<0.5%			
Grid Frequency Range	47~52 or 57~62 (Optional)			
Efficiency				
Max. Efficiency	98.6%			
Euro Efficiency	97.8%			
MPPT Efficiency	>99%			
Protection				
DC Reverse-Polarity Protection	Yes			
AC Short Circuit Protection	Yes			
AC Output Overcurrent Protection	Yes			
Output Overvoltage Protection	Yes			
Insulation Resistance Protection	Yes			
Ground Fault Monitoring	Yes			
Anti-islanding Protection	Yes			
Temperature Protection	Yes			
Integrated DC Switch	Yes			
Remote software upload	Yes			
Remote change of operating parameters	Yes			
Surge protection	DC Type II / AC Type II			
General Data				
Size (mm)	330W×457H×185D	330W×508H×206D	333W×472H×202D	362W×527H×220D
Weight (kg)	10	10	15	20
Topology	Transformerless			
Internal Consumption	<1W (Night)			
Running Temperature	-25~65℃, >45℃derating			
Ingress Protection	IP65			
Noise Emission (Typical)	<45 dB			
Cooling Concept	Smart cooling			
Max. Operating Altitude Without Derating	2000m			
Designed Lifetime	>20 years			
Grid Connection Standard	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11			
Operating Surroundings Humidity	0-100%			
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			
Features				
DC Connection	MC-4 mateable			
AC Connection	IP65 rated plug			
Display	LCD1602			
Interface	RS485/RS232/Wifi/LAN			
Warranty	10 Years Warranty (5 Years Replacment Warranty) (T&C)			

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APT INVEREX® SOLAR ENERGY

NitroX®
35KW 3Ph-5G
PV Solar On Grid Inverter

- Max. Efficiency 98.7%
- Dual MPPT Multi String
- RS485/RS232
- Internal SPD
- Zero Export (Optional)
- IP65 Ingress Protection
- High Power Factor
- High Surge Endurance
- PV string current monitoring (Optional)
- PV string current monitoring(Optional)
- PID-Recovery function(optional)

Smart PV Monitoring Platfrom

10 YEARS WARRANTY + 5 YEARS REPLACEMENT WARRANTY

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APT INVEREX® SOLAR ENERGY

NitroX® 35KW 3Ph-5G PV Solar On Grid Inverter

Technical Data

Model	NITROX 35KW
Input Side	
Max. DC Input Power (kW)	45.5
Max. DC Input Voltage (V)	1000
Start-up DC Input Voltage (V)	250
MPPT Operating Range (V)	200~850
Max. DC Input Current (A)	40+40
Max. Short Circuit Current (A)	60+60
Number of MPPT / Strings per MPPT	2/3
Output Side	
Rated Output Power (kW)	35
Max. Active Power (kW)	38.5
Nominal Output Voltage / Range (V)	3L/N/PE 380V/323V-418V, 400V/340V-440V
Rated Grid Frequency (Hz)	50 / 60 (Optional)
Operating Phase	Three phase
Rated AC Grid Output Current (A)	50.7
Max. AC Output Current (A)	55.8
Output Power Factor	0.8 leading to 0.8 lagging
Grid Current THD	<3%
DC Injection Current (mA)	<0.5%
Grid Frequency Range	47~52 or 57~62 (Optional)
Efficiency	
Max. Efficiency	98.6%
Euro Efficiency	97.8%
MPPT Efficiency	>99%
Protection	
DC Reverse-Polarity Protection	Yes
AC Short Circuit Protection	Yes
AC Output Overcurrent Protection	Yes
Output Overvoltage Protection	Yes
Insulation Resistance Protection	Yes
Ground Fault Monitoring	Yes
Anti-islanding Protection	Yes
Temperature Protection	Yes
Integrated DC Switch	Yes
Remote software upload	Yes
Remote change of operating parameters	Yes
Surge protection	DC Type II / AC Type II
General Data	
Size (mm)	362W×577H×215D
Weight (kg)	25.5
Topology	Transformerless
Internal Consumption	<1W (Night)
Running Temperature	-25~65℃, >45℃ derating
Ingress Protection	IP65
Noise Emission (Typical)	<45 dB
Cooling Concept	Smart cooling
Max. Operating Altitude Without Derating	2000m
Designed Lifetime	>20 years
Grid Connection Standard	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11
Operating Surroundings Humidity	0-100%
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
Features	
DC Connection	MC-4 mateable
AC Connection	IP65 rated plug
Display	LCD1602
Interface	RS485/RS232/Wifi/LAN
Warranty	10 Years Warranty (5 Years Replacment Warranty)(T&C)

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APT INVEREX® SOLAR ENERGY

10 YEARS WARRANTY

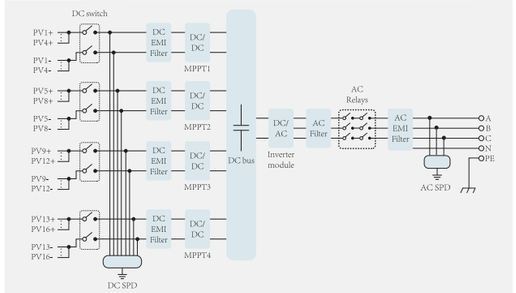
5 YEARS REPLACEMENT WARRANTY
TERMS & CONDITIONS APPLY

NitroX®
50,75,100KW 3Ph-5G
PV Solar On Grid Inverter

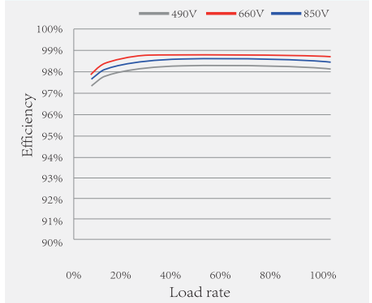
- Max. Efficiency 98.9%
- 4 MPPT For 50 & 75KW
- 6 MPPT for 100 KW
- Internal SPDs
- Zero Export (Optional)
- RS485/RS232
- High Power Factor
- High Surge Endurance
- IP65 Ingress Protection

Smart PV Monitoring Platfrom

Circuit block diagram



Efficiency curve



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APT INVEREX® SOLAR ENERGY

NitroX® 50,75,100KW 3Ph-5G PV Solar On Grid Inverter

Technical Data

Model	NITROX 50KW	NITROX 75KW	NITROX 100KW
Input Side			
Max. DC Input Power (kW)	65	97.5	150
Max. DC Input Voltage (V)		1000	
Start-up DC Input Voltage (V)		250	
MPPT Operating Range (V)		200~850	
Max. DC Input Current (A)	40+40+40+40	40+40+40+40	40+40+40+40+40+40
Max. Short Circuit Current (A)	60+60+60+60	60+60+60+60	60+60+60+60+60+60
Number of MPPT / Strings per MPPT	4/3	4/4	6/4
Output Side			
Rated Output Power (kW)	50	75	100
Max. Active Power (kW)	55	82.5	110
Nominal Output Voltage / Range (V)		3L/N/PE 380V/323V-418V, 400V/340V-440V	
Rated Grid Frequency (Hz)		50 / 60 (Optional)	
Operating Phase		Three phase	
Rated AC Grid Output Current (A)	72.4	108.7	144.9
Max. AC Output Current (A)	79.7	119.6	159.4
Output Power Factor		0.8 leading to 0.8 lagging	
Grid Current THD		>0.99	
DC Injection Current (mA)		<3%	
Grid Frequency Range		47~52 or 57~62 (Optional)	
Efficiency			
Max. Efficiency		98.7%	
Euro Efficiency		98.3%	
MPPT Efficiency		>99%	
Protection			
DC Reverse-Polarity Protection		Yes	
AC Short Circuit Protection		Yes	
AC Output Overcurrent Protection		Yes	
Output Overvoltage Protection		Yes	
Insulation Resistance Protection		Yes	
Ground Fault Monitoring		Yes	
Anti-islanding Protection		Yes	
Temperature Protection		Yes	
Integrated DC Switch		Yes	
Remote software upload		Yes	
Remote change of operating parameters		Yes	
Surge protection		DC Type II / AC Type II	
General Data			
Size (mm)	647.5W×537H×303,5D	700W×575H×297D	838W×568H×323D
Weight (kg)	44.5	60	73.7
Topology		Transformerless	
Internal Consumption		<1W (Night)	
Running Temperature		-25~65℃, >45℃ derating	
Ingress Protection		IP65	
Noise Emission (Typical)		<55 dB	
Cooling Concept		Smart cooling	
Max. Operating Altitude Without Derating		2000m	
Designed Lifetime		>20 years	
Grid Connection Standard		CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11	
Operating Surroundings Humidity		0-100%	
Safety EMC / Standard		IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	
Features			
DC Connection		MC-4 mateable	
AC Connection		IP65 rated plug	
Display		LCD 240 × 160	
Interface		RS485/RS232/Wifi/LAN	
Warranty		10 Years Warranty (5 Years Replacment Warranty)(T&C)	

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APT INVEREX® SOLAR ENERGY

5 YEARS Fronius WARRANTY Extendable up to 20 YEARS Terms & Conditions Apply

Fronius

Fronius SYMO
5.0 - 20.0 KW

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
25.0 & 27.0 KW

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.

Snap Inverter Technolgy | Integrated Data Communication | Smart Grid Ready | Dynamic Peak manage | Zero Feed-In

MADE IN AUSTRIA

Fronius

24 HOURS OF SUN

Manufactured & Designed in Europe

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APT INVEREX® SOLAR ENERGY

5 YEARS Fronius WARRANTY Extendable up to 20 YEARS Terms & Conditions Apply

Fronius

Fronius TAURO
50 - 100 KW

INPUT DATA	FRONIUS TAURO 50-3-D FRONIUS TAURO 50-3-P	FRONIUS TAURO ECO 50-3-D FRONIUS TAURO ECO 50-3-P	FRONIUS TAURO ECO 100-3-D FRONIUS TAURO ECO 100-3-P
Number of MPP trackers	3	1	1
Max. input current ($I_{dc\,max}$)	36 / 36 / 72 A	87,5 A	175 A
DC input voltage range ($U_{dc\,min}$ - $U_{dc\,max}$)	200 - 1000 V	580 - 1000 V	
Feed-in start voltage ($U_{dc\,start}$)	400 V	650 V	
Usable MPP voltage range	400-930 V	580-930 V	
Number of DC connections	D: 3/4/7[1], P: 3[2]	D: 14/0/0[1], P: 2[2]	D: 22/0/0[1], P: 3[2]
Max. PV generator power ($P_{dc\,max}$)	75kWp		150kWp
OUTPUT DATA	**FRONIUS TAURO 50-3-D FRONIUS TAURO 50-3-P**	**FRONIUS TAURO ECO 50-3-D FRONIUS TAURO ECO 50-3-P**	**FRONIUS TAURO ECO 100-3-D FRONIUS TAURO ECO 100-3-P**
AC nominal output ($P_{ac,r}$)	50,000 W	50,000 W	100,000 W
Max. AC output current ($I_{ac\,max}$)	75 A		150 A
Grid connection (voltage range)	3~ NPE 380/220V or 3~ NPE 400/230V		
Frequency (Frequency range)	50 Hz / 60 Hz (45 - 65 Hz)		
Total harmonic distortion	< 3 %		
Power factor (cos $\varphi_{ac,r}$)	0 - 1 ind. / cap.		
GENERADATA	**FRONIUS TAURO 50-3-D FRONIUS TAURO 50-3-P**	**FRONIUS TAURO ECO 50-3-D FRONIUS TAURO ECO 50-3-P**	**FRONIUS TAURO ECO 100-3-D FRONIUS TAURO ECO 100-3-P**
Dimensions (height x width x depth)	644mm x 1038mm x 316mm		
Weight	93 kg	80 kg	105 kg
Degree of protection	Power electronics area: IP66 / DC connection area: IP66 / AC connection area: IP65		
Protection class	1		
Overvoltage category (DC / AC)	2 / 3		
Inverter concept	Transformerless		
Cooling	Regulated air cooling		
Installation	Indoor and outdoor installation		
Ambient temperature range	-40 - +65 °C		
Permitted humidity	0 to 100 % (condensing)		
DC connection technology	MC4 whips[1], V-clamps [2]		
AC connection technology	V-clamps		
Certificates and compliance with standards	IEC62109-1:2010, IEC62109-2:2011, DIN V VDE 0126-1-1:2006		
EFFICIENCY	**FRONIUS TAURO 50-3-D FRONIUS TAURO 50-3-P**	**FRONIUS TAURO ECO 50-3-D FRONIUS TAURO ECO 50-3-P**	**FRONIUS TAURO ECO 100-3-D FRONIUS TAURO ECO 100-3-P**
Max. efficiency	98.2 %	98.5 %	98.5 %
European efficiency (ηEU)	97.4 / 97.8 / 97.5 %	98.2 / 98.0 / 97.5 %	98.2 / 98.0 / 97.5 %
PROTECTION DEVICES	**FRONIUS TAURO 50-3-D FRONIUS TAURO 50-3-P**	**FRONIUS TAURO ECO 50-3-D FRONIUS TAURO ECO 50-3-P**	**FRONIUS TAURO ECO 100-3-D FRONIUS TAURO ECO 100-3-P**
DC insulation measurement	Yes		
Overload behavior	Operating point shift, power limitation		
Reverse polarity protection	Yes		

[1] direct [2] precombined

MADE IN AUSTRIA

Fronius

24 HOURS OF SUN

Manufactured & Designed in Europe

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APT INVEREX® SOLAR ENERGY

Fronius

SYMO GEN24 PLUS 3P - HYBRID

6-8-10 KW

The Fronius Symo GEN24 Plus, with power categories of between 3 and 10 kW, is the ideal hybrid inverter for private households. With many features as standard, the three-phase device covers all customer requirements.

The GEN24 Plus leaves nothing to be desired with numerous features such as energy management functions, WLAN connection as standard, Ethernet connectivity and easy integration of third-party components. Thanks to a selection of backup power options (PV Point, full backup 1) in particular, it ensures the highest degree of power supply reliability.

Integrated Data Communication · Dynamic Peak manage · Multi Flow Technology · SuperFlex Design · Full Backup · PV Point Basic Grid Backup

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APT INVEREX® SOLAR ENERGY

Fronius

SYMO GEN24 PLUS 3P - HYBRID

6-8-10 KW

INPUT DATA	SYMO GEN24 6.0 PLUS	SYMO GEN24 8.0 PLUS	SYMO GEN24 10.0 PLUS
Number of MPP trackers		2	
Max. input current ($I_{dc\ max\ MPPT1\ /\ MPPT2}$)		25 A / 12,5 A	
Max. array short circuit current (MPPT1/MPPT2)		37.5 A / 18.75 A	
DC input voltage range ($U_{dc\ min}$ - $U_{dc\ max}$)		80 V - 1,000 V	
Nominal input voltage ($U_{dc,r}$)		610 V	
Feed-in start voltage ($U_{dc\ start}$)		80 V	
Usable MPP voltage range		80 V - 800 V	
Number of DC connections (MPPT1 / MPPT2)		2 / 1	
Max. PV generator output ($P_{dc\ max}$)	9 kW peak	12 kW peak	15 kW peak
OUTPUT DATA	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
AC nominal output ($P_{ac,r}$)	6,000 W	8,000 W	10,000 W
Max. output power	6,000 VA	8,000 VA	10,000 VA
Max. output current ($I_{ac\ max}$)		16.4 A	
Grid connection (voltage range)		3~NPE 400 V / 230 V or 3~NPE 380 V / 220 V (+ 20 % / - 30%)	
Frequency (frequency range)		50 Hz / 60 Hz (45 Hz – 66 Hz)	
Total harmonic distortion		< 3.5 %	
Power factor (cos $\varphi_{ac,r}$)		0.7 - 1 ind. / cap.	
Backup power		3~NPE 400 V / 230 V	
OUTPUT DATA PV POINT / FULL BACKUP[1]	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
Nom. output power PV Point / full backup	3,000 VA / 6,000 VA	3,000 VA / 8,000 VA	3,000 VA / 10,000 VA
Nominal power per phase full backup		3.68 kVA	
Grid connection (voltage range) PV Point		1 ~ NPE 220 V / 230 V	
Grid connection (voltage range) full backup		3~NPE 400V/230V or 3~NPE 380V/220V	
Switchover time		< 90 seconds	
BATTERY CONNECTION	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
Number of DC connections		1	
Max. input current ($I_{dc\ max}$)		22 A	
DC input voltage range ($U_{dc\ min}$- $U_{dc\ max}$)		160 V - 500 V	
Max. input / output power[2]	6,220 W	8,260 W	10,300 W
Max. AC charging power	6,000 W	8,000 W	10,000 W
GENERAL DATA	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
Dimensions (height x width x depth)		595 x 529 x 180 mm	
Weight (inverter / with packaging)		23,4 / 28,5 kg	
Degree of protection		IP 66	
Protection class		1	
Nighttime power loss		< 10 W	
Overvoltage category (DC/AC)		2 / 3	
Inverter design		Transformerless	
Cooling		Regulated air cooling	
Installation		Indoor and outdoor installation	
Ambient temperature range		-25 - +60 °C	
Permitted humidity		0 - 100 %	
Noise Emission		< 47 dB (A)	
Max. altitude		3,000 m / 4,000 m (unrestricted / restricted voltage range)	
DC PV connection technology		3x DC+ and 3x DC- push-in spring terminals 2.5 - 10 mm²	
DC battery connection technology		1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm²	
AC connection technology		5 pole AC push-in spring terminals 1.5 - 10 mm² 3 pole backup power push-in spring terminals 1.5mm² - 10mm² 5x PE-screw terminals 2.5 - 16 mm²	
Certificates and compliance with standards		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25[4]	
Back-up power functions		PV Point or Full Backup	
Compatible batteries		BYD Battery-Box Premium HVS/HVM[5]	
EFFICIENCY	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
Max. efficiency		98.2 %	
Europ. efficiency (ηEU)	97.7 %	97.8 %	97.9 %
MPP-tracking efficiency		> 99.9 %	
PROTECTIVE DEVICES	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
DC insulation measurement		Yes	
Overload behaviour		Operating point shift. Power limitation	
DC disconnector		Yes	
Reverse polarity protection		Yes	
INTERFACES	**SYMO GEN24 6.0 PLUS**	**SYMO GEN24 8.0 PLUS**	**SYMO GEN24 10.0 PLUS**
WLAN / 2x Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)	
6x digital in/out + 6x digital in		Interface to ripple control receiver, energy management	
USB 2.0 (A-socket)		1 A supply	
Emergency stop (WSD)		Yes	
Datalogger and webserver		Included	
2x RS485		Modbus RTU SunSpec (third-party supplier) / Fronius Smart Meter, battery, Fronius Ohmpilot	

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APT INVEREX® SOLAR ENERGY

XTRON

X1200/X2400

BUILT-IN 50A MPPT SOLAR CHARGER

FEATURES

- Simulated sine wave inverter
- Built-in 50A MPPT solar Charger
- Compatible with Lithium-Ion Battery
- Selectable output source priority via LCD setting
- Wide input voltage range 90-280 VAC
- Overload and short circuit protection
- Combines LCD display and LED indicator
- For comprehensive information

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NATION'S VOICE FOR NO.1 CHOICE

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APT INVEREX® SOLAR ENERGY

XTRON

X1200/X2400

BUILT-IN 50A MPPT SOLAR CHARGER

Technical Data

SPECIFICATIONS		
MODEL	**X1200**	**X2400**
CAPACITY	900W	1600W
INPUT		
Voltage	230 VAC	230 VAC
Selectable Voltage Range	90-280 VAC	90-280 VAC
Frequency Range	50 Hz/60 Hz (Auto sensing)	50 Hz/60 Hz (Auto sensing)
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230 VAC ± 10%	230 VAC ± 10%
Efficiency (Peak)	82%, 85%	82%, 85%
Transfer Time	20 ms	20 ms
Waveform	Simulated Sine Wave	Simulated Sine Wave
BATTERY		
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.7 VDC ± 0.5 VDC	27.4 VDC ± 0.5 VDC
Overcharge Protection	15.0VDC ± 0.5 VDC	30.0VDC ± 1 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	**MPPT**	**MPPT**
Maximum PV Array Open Circuit Voltage	100 VDC	100 VDC
Maximum PV Array Power	600W	1200W
MPP Range @ Operating Voltage	15 ~ 80 VDC	30 ~ 80 VDC
Maxmum Solar Charge Current	50A	50A
Maximum AC Charge Current	10A/20A	10A/20A
Maximum Charge Current	50A	50A
PHYSICAL		
Dimension, D X W X H (mm)	272 x 212 x 127	272 x 212 x 127
Net Weight (kgs)	4.5	4.8
OPERATING ENVIRONMENT		
Humidity	0 to 90% Relative Humidity (Non-condensing)	
Operating Temperature	0℃ to 40℃	0℃ to 40℃
Storage Temperature	-15℃ to 50℃	-15℃ to 50℃

* Product specifications are subject to change without further notice

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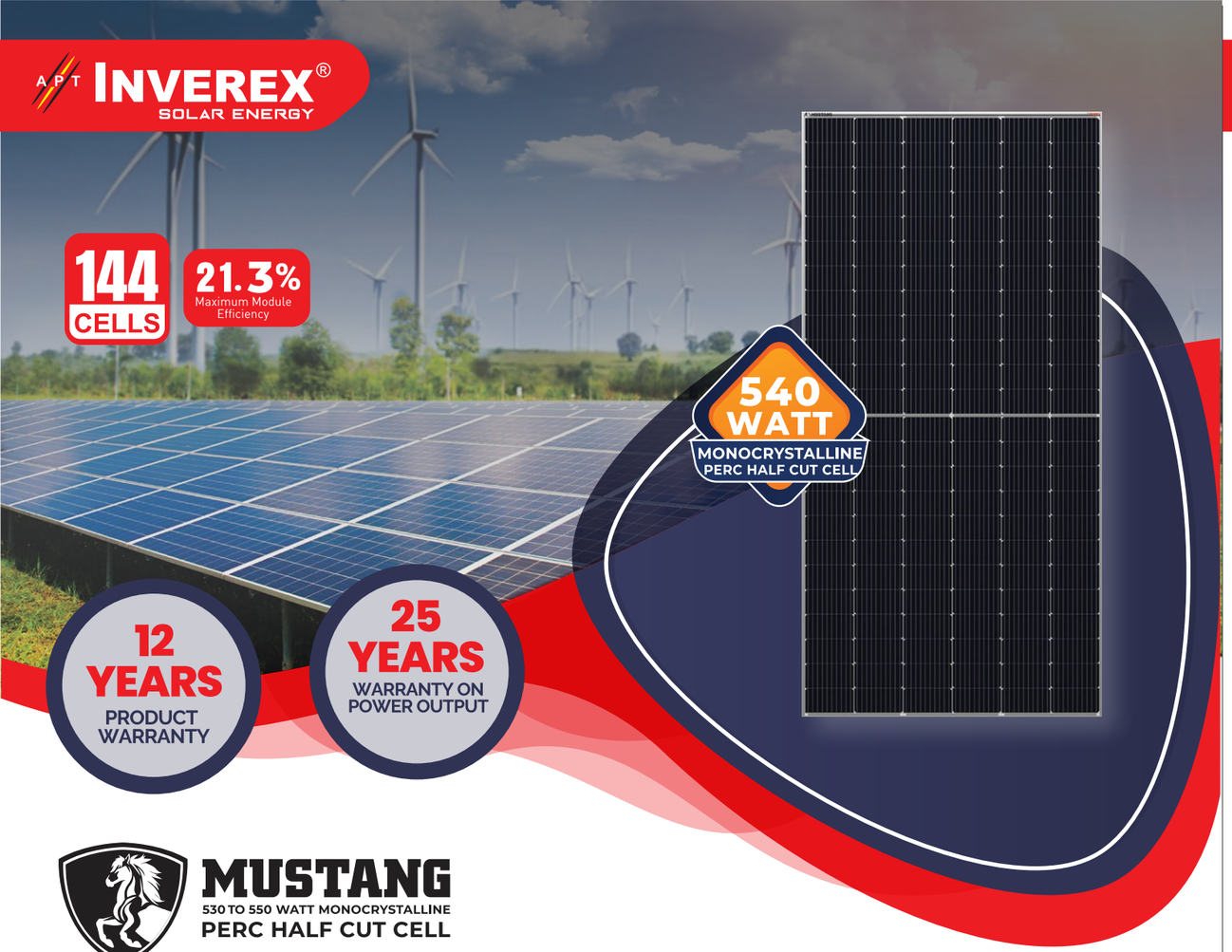

MUSTANG
530 TO 550 WATT MONOCRYSTALLINE
PERC HALF CUT CELL

PRODUCT FEATURES

- Ideal choice for large scale ground Installation
- Selected encapsulating material and Stringent production process control Ensure the product is highly PID resistant And snail trails free
- Special cutting and soldering Technology leads to low hotspot risk
- Sand blowing test, salt mist test and Ammonia test passed to endure harsh Environments
- Optimized system performance due to Module level current sorting
- Highly transparent self-cleaning glass brings Additional yield and easy maintenance

5W
Positive Tolerance
0/+5W Guaranteed

PID
PID Resistant

BRAND OF THE YEAR AWARDS 2021
NATION'S VOICE FOR NO.1 CHOICE

- manufacturer of crystalline silicon photovoltaic modules
- Fully automatic facility and world-class technology
- Rigorous quality control to meet the highest standard: ISO9001:2015, ISO14001: 2015 and OHSAS: 18001 2007
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716, DIN EN 60068-2- 68)
- Long term reliability tests
- 2×100% EL inspection ensuring defect-free modules

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APT INVEREX®
SOLAR ENERGY

MUSTANG
530/550 WATT MONOCRYSTALLINE
PERC HALF CUT CELL

Electrical Specification (STC*)

Maximum Power	Pmax(W)	530	535	540	545	550
Maximum Power Voltage	Vmp(V)	40.74	40.88	41.01	41.15	41.28
Maximum Power Current	Imp(A)	13.01	13.09	13.17	13.24	13.32
Open Circuit Voltage	Voc(V)	49.26	49.40	49.53	49.67	49.80
Short Circuit Current	Isc(A)	13.69	13.77	13.85	13.93	14.01
Module Efficiency	(%)	20.5	20.7	20.9	21.1	21.3
Power Output Tolerance	(W)			0~+5		

* Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

Electrical Specification (NOCT*)

Maximum Power	Pmax (W)	394	398	402	406	410
Maximum Power Voltage	Vmp (V)	37.92	38.05	38.19	38.32	38.46
Maximum Power Current	Imp (A)	10.40	10.46	10.52	10.58	10.64
Open Circuit Voltage	Voc(V)	46.50	46.63	46.75	46.88	47.00
Short Circuit Current	Isc (A)	11.06	11.12	11.19	11.25	11.32

* Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Mechanical Data

Number of Cells	144 Cells (6×24)
Dimensions of Module L*W*H (mm)	2279×1134×35mm (89.81×44.64×1.38 inches)
Weight (kg)	29.4 kg
Glass	High transparency solar glass 3.2mm (0.13 inches)
Backsheet	White
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm² (0.006 inches²), 300mm (11.8 inches)
Number of diodes	3
Wind/ Snow Load	2400Pa/ 5400Pa*
Connector	MC4

* For more details please check the installation manual

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	44±2°C
Temperature Coefficient of Isc	+0.048%/°C
Temperature Coefficient of Voc	-0.270%/°C
Temperature Coefficient of Pmax	-0.350%/°C

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC -(H)
Max Series Fuse Rating	25A

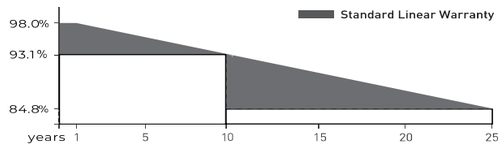
Packaging Configuration

Module per box	31 pieces
Module per 40' container	620 pieces

Optional

Connector	MC4

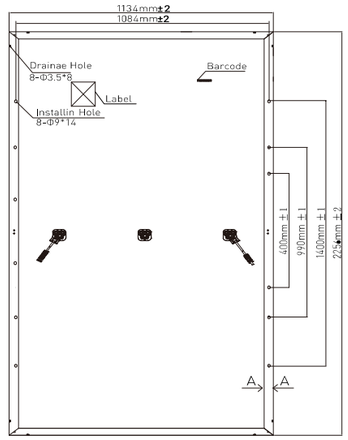
Linear Performance Warranty



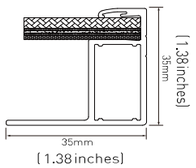
12 Years Warranty | 25 Years Linear Power Warranty

* Please refer to standard warranty for details

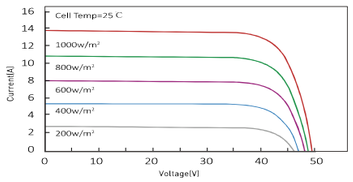
Module Dimension



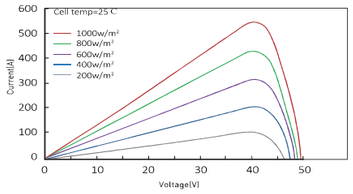
Back View



I-V Curve at Different Temperature (530W)



I-V/P-V Curve at Different Irradiation (530W)



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APT INVEREX® SOLAR ENERGY

RISEN SOLAR
540 WATT MONOCRYSTALLINE
PERC HALF CUT CELL

PRODUCT FEATURES

- **Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing**
- **Industry leading lowest thermal co-efficient** of power
- **Industry leading 10 years product warranty**
- **Excellent low irradiance performance**
- **Excellent PID resistance**
- **Positive tight power tolerance**
- **Dual stage 100% EL Inspection warranting defect-free product**
- **Excellent wind load 2400Pa & snow load 5400Pa under certain installation method**
- **Comprehensive product and system certification**
  - IEC61215:2016; IEC61730-1/-2:2016;
  - ISO 9001:2015 Quality Management System
  - ISO 14001:2015 Environmental Management System
  - ISO 45001:2018 Occupational Health and Safety Management System

ISO9001
ISO14001
OHSAS18001
IEC TS 62941

★ As there are different certification requirements in different markets, please contact your local Risen Energy sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

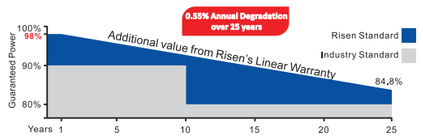
RISEN ENERGY CO., LTD.

Risen Energy is a leading, global tier 1 manufacturer of high-performance solar photovoltaic products and provider of total business solutions for residential, commercial and utility-scale power generation. The company, founded in 1986, and publicly listed in 2010, compels value generation for its chosen global customers. Techno-commercial innovation, underpinned by consummate quality and support, encircle Risen Energy's total Solar PV business solutions which are among the most powerful and cost-effective in the industry. With local market presence and strong financial bankability status, we are committed, and able, to building strategic, mutually beneficial collaborations with our partners, as together we capitalise on the rising value of green energy.

Tashan Industry Zone, Meilin, Ninghai 315609,Ningbo | PRC
Tel: +86-574-59953239 Fax: +86-574-59953599
E-mail: marketing@risenenergy.com Website: www.risenenergy.com

LINEAR PERFORMANCE WARRANTY

12 year Product Warranty / 25 year Linear Power Warranty

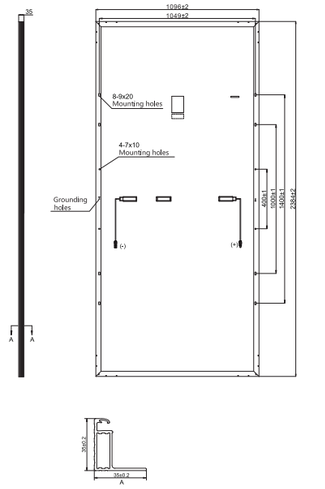


★ Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd

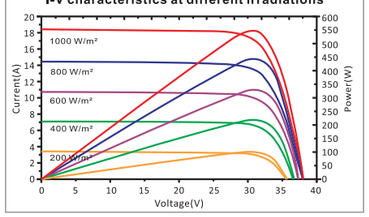
APT INVEREX® SOLAR ENERGY

RISEN SOLAR
540 WATT MONOCRYSTALLINE
PERC HALF CUT CELL

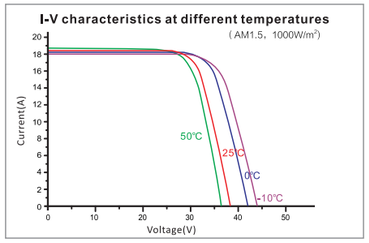
Dimensions of PV Module Unit: mm



RSM110-8-540M
I-V characteristics at different irradiations



I-V characteristics at different temperatures



Our Partners:

ELECTRICAL DATA (STC)

Model Number	RSM110-8-530M	RSM110-8-535M	RSM110-8-540M	RSM110-8-545M	RSM110-8-550M
Rated Power in Watts-Pmax(Wp)	**530**	**535**	**540**	**545**	**550**
Open Circuit Voltage-Voc(V)	37.38	37.58	37.78	38.02	38.24
Short Circuit Current-Isc(A)	18.08	18.13	18.18	18.23	18.28
Maximum Power Voltage-Vmpp(V)	31.06	31.26	31.46	31.66	31.86
Maximum Power Current-Impp(A)	17.07	17.12	17.17	17.22	17.27
Module Efficiency (%) ★	20.3	20.5	20.7	20.9	21.0

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
★ Module Efficiency (%): Round-off to the nearest number

ELECTRICAL DATA (NMOT)

Model Number	RSM110-8-530M	RSM110-8-535M	RSM110-8-540M	RSM110-8-545M	RSM110-8-550M
Maximum Power-Pmax (Wp)	401.5	405.3	409.0	412.8	416.7
Open Circuit Voltage-Voc (V)	34.76	34.95	35.14	35.36	35.56
Short Circuit Current-Isc (A)	14.83	14.87	14.91	14.95	14.99
Maximum Power Voltage-Vmpp (V)	28.82	29.01	29.19	29.38	29.57
Maximum Power Current-Impp (A)	13.93	13.97	14.01	14.05	14.09

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

MECHANICAL DATA

Solar cells	Monocrystalline
Cell configuration	110 cells (5×11+5×11)
Module dimensions	2384×1096×35mm
Weight	29kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy type 6005-2T6, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm² (12AWG), Positive(+)350mm, Negative(-)350mm (Connector Included)
Connector	Risen Twinsel PV-SY02, IP68

TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	44°C±2°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.04%/°C
Temperature Coefficient of Pmax	-0.34%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	30A
Limiting Reverse Current	30A

PACKAGING CONFIGURATION

	40ft(HQ)
Number of modules per container	620
Number of modules per pallet	31
Number of pallets per container	20
Packaging box dimensions (LxWxH) in mm	2401×1115×1235
Box gross weight[kg]	950

REM110-M-12BB-EN-H2-1-2021

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APT INVEREX® SOLAR ENERGY

PANTHER SERIES POLYCRYSTALLINE INV-330 WATTS

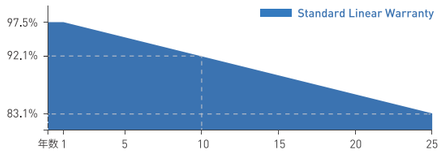
- Highly transparent self-cleaning glass brings additional yield and easy maintenance
- Selected encapsulating material and stringent production process control ensure the product is highly PID resistant and snail trails free
- Sand blowing test, salt mist test and ammonia test passed to endure harsh environments
- Lower LID due to lower oxygen and carbon content
- Optimized system performance due to module level current sorting
- Special cutting and soldering technology leads to low hotspot risk

Delivers Reliable Performance Over Time

- manufacturer of crystalline silicon photovoltaic modules
- Fully automatic facility and world-class technology
- Rigorous quality control to meet the highest standard: ISO9001:2015, ISO14001: 2015 and OHSAS: 18001 2007
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716, DIN EN 60068-2- 68)
- Long term reliability tests
- 2×100% EL inspection ensuring defect-free modules

BRAND OF THE YEAR AWARDS 2021
NATION'S VOICE FOR NO.1 CHOICE

Linear Performance Warranty



10 Years Product Warranty 25 Years Linear Power Warranty

* Please refer to standard warranty for details

Product certification

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APT INVEREX® SOLAR ENERGY

330-Watt Polycrystalline Module

Technical Data

Electrical Specification (STC*)

Maximum Power	Pmax(W)	330	335	340	345	350	355	360	365
Maximum Power Voltage	Vmp(V)	37.97	38.32	38.61	38.84	39.11	39.40	39.70	38.15
Maximum Power Current	Imp(A)	8.69	8.74	8.81	8.88	8.95	9.01	9.07	9.57
Open Circuit Voltage	Voc(V)	46.18	46.41	46.65	46.88	47.10	47.30	47.50	46.83
Short Circuit Current	Isc(A)	9.23	9.31	9.40	9.49	9.58	9.67	9.76	10.13
Module Efficiency	(%)	16.8	17.0	17.3	17.5	17.8	18.0	18.3	18.5
Power Output Tolerance	(W)	0~+5							

* Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

Electrical Specification (NOCT*)

Maximum Power	Pmax (W)	246.39	250.28	254.18	256.69	260.64	264.62	268.63	272.70
Maximum Power Voltage	Vmp (V)	35.30	35.50	35.70	35.80	36.00	36.20	36.40	35.60
Maximum Power Current	Imp (A)	6.98	7.05	7.12	7.17	7.24	7.31	7.38	7.66
Open Circuit Voltage	Voc(V)	43.10	43.30	43.60	43.70	43.90	44.10	44.30	43.70
Short Circuit Current	Isc (A)	7.45	7.51	7.59	7.66	7.73	7.80	7.88	8.19

* Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Mechanical Data

Number of Cells	144 Cells (6×24)
Dimensions of Module L*W*H (mm)	1986×992×35mm (78.18×39.05×1.38 inches)
Weight (kg)	22.6 kg
Glass	High transparency solar glass 3.2mm (0.13 inches)
Backsheet	White
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm² (0.006 inches²), 300mm (11.8 inches)
Number of diodes	3
Wind/ Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible

* For more details please check the installation manual of SI

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	44±2°C
Temperature Coefficient of Isc	+0.06%/°C
Temperature Coefficient of Voc	-0.30%/°C
Temperature Coefficient of Pmax	-0.39%/°C

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	20A

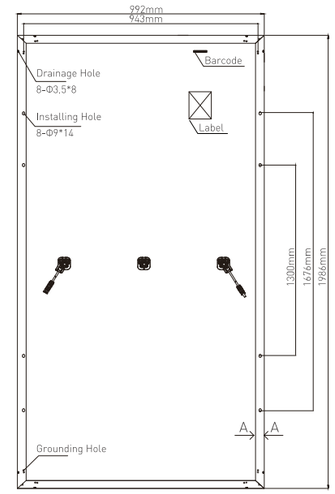
Optional

Connector: ☐ Original MC4

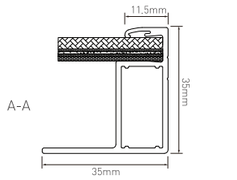
Packaging Configuration

Module per box	30 pieces
Module per 40' container	660 pieces

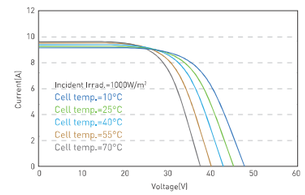
Module Dimension



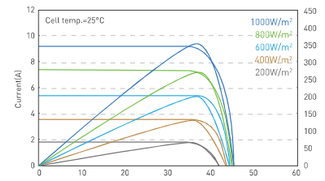
Back View



I-V Curve at Different Temperature (335W)



I-V/P-V Curve at Different Irradiation(335W)



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APT INVEREX® SOLAR ENERGY

10 YEARS Guarantee on product material and workmanship

30 YEARS Linear Power Output Warranty

170-WATT
POLY CRYSTALLINE SOLAR PANEL

PRODUCT FEATURES

- Industry leading module power output warranty
- International quality, safety and performance certifications
- Manufacturing facility certified to ISO9001 quality management system standards
- Beautiful appearance, good durability & easy installation
- Special design in accordance with requirements of customers

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APT INVEREX® SOLAR ENERGY

170-WATT
POLY CRYSTALLINE SOLAR PANEL

Technical Data

SPECIFICATIONS	* STC: irradiance 1000 W/m2, AM 1.5,Gand cell temperature of 25°C
Max power(Pmax)	170.00
Max power voltage(Vmp)	19.84
Max power current(Imp)	8.73
Open circuit voltage(Voc)	23.44
Short circuit current(Isc)	9.27
Cell Efficiency(%)	19.22
Module Efficiency(%)	17.13

NOCT : irradiance 800w/m2, AM 1.5G, ambient temperature. 20 ℃ , wind speed 1 m/s

Peak Power(Pmax)	127.00
Maximum Power Voltage(Vmp)	17.70
Maximum Power Current(Imp)	7.18
Open Circuit Voltage(Voc)	21.23
Short Circuit Current(Isc)	7.75

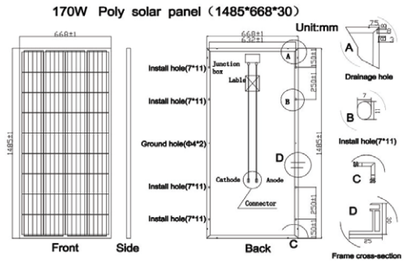
ELECTRICAL DATA (NOCT)	
Maximum System Voltage (V)	1000/1500
Maximum Series Fuse Rating(A)	15
Power Tolerance	0 ~ +3 %
Pmax Temperature Coefficients (W/ ℃)	-0.400%
Voc Temperature Coefficients (V/℃)	-0.300%
Isc Temperature Coefficients (A/℃)	+0.060%
NOCT Nominal Operating Cell Temperature(℃)	47±2
Operating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

MECHANICAL DATA	
Cell Type	156.75x156.75 poly
Number of Cells	36(4x9)
Dimensions	1485x668x35
Weight	11.0kg
Front glass	3.2mm high transmission,low iron,tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP65/IP67
Output Cables	4mm² cable 90cm+MC4
MaxWind Load/Snow Load	2400Pa/5400Pa

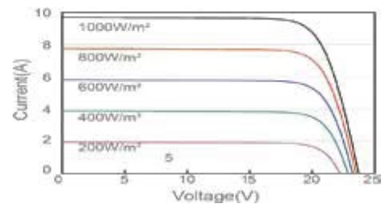
PACKING LIST	
40HQ Container	15 Packages / 1620pcs

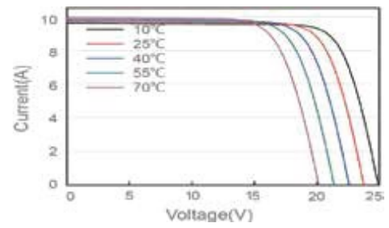
PRODUCT STANDARD	
Product Proformance	IEC61215
Product Safety	IEC61730

DIMENSIONS AND STRUCTURE



IV CURE





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POWER CUBE®
48V-5000WH
LITHIUM-ION

ADVANCE KEY FEATURES

- Each group battery Flexible capacity from 5kWh to 20kWh
- 12 groups can be connected in parallel by communication 240kWh (12 Packs)
- Compact size and easy installation
- High energy density and efficiency
- Excellent safety of LiFePO4 battery
- Remote firmware upgrade
- Long lifespan, 5 years warranty

MOST UNIQUE LiFePO4 BATTERY IN PAKISTAN

IP65

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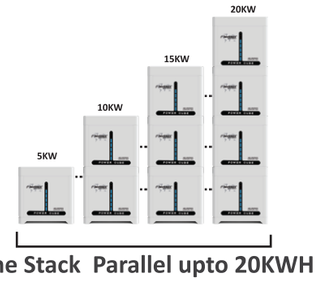
APT INVEREX®
SOLAR ENERGY

POWER CUBE®
48V-5000WH
Lithium-Ion

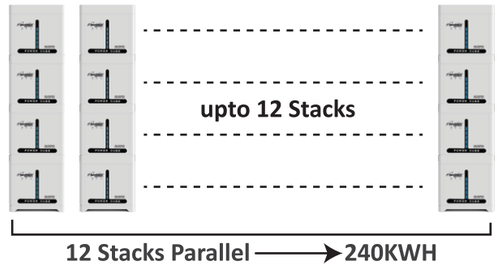
Technical Data

Model	INV48-5000Wh
Cell Technology	LFP (LiFePO4)
Battery Module Capacity(Wh)	5000
Rated Capacity:	100Ah
Battery Module Capacity(Ah)	96%
Battery Module Charging/ Discharging Current(A)	96%
Battery Module Quantity(pcs)	1
Battery Group Voltage(V)	51.2
Battery Group Charging/ Discharging Current(A)	96%
Battery Group Total Capacity(kWh)	4.91
Battery Group Usable Capacity(kWh)	4.42
Battery Group Rated Capacity	96%
Depth of Discharge(%)	90%
Efficiency(%, 1C)	96%
Weight (kg)	50.7
Master LED indicator	5LED (20%40%, 60%100%), 3LED(working, warning, protecting)
IP Protection	IP65
Altitude	≤2000m
Working temperature	Charge: 0~50°C / Discharge: -30~50°C
Storage Temperature	-30°C ~ 60°C
Humidity	≤90%
Cycle Life	4000 @ 1C
Installation Location	Ground-Mounted
Communication Port	CAN2.0 / RS485
Warranty	5 years (T&C)

One Stack (4 Banks)



Stacks in Parallel (by communication)



UAN: +92-21-111-209-988 www.aptinverex.com info@aptinverex.com

TALL TUBULAR BATTERIES

DESCRIPTION

These are made using the most advanced technology.
They are Lead Acid Storage Batteries designed for solar UPS / Inverter applications, availability of uninterrupted power for long hours during utility failure. The superior tubular positive plates are built with grid design and high electrolyte volume, which is delivered to enhance the performance. Inverex Flat Plate Battery is very heavy duty battery with robust design, excellent charging acceptance, and longer service life. They are perfectly suitable for Pakistan power conditions.

APPLICATIONS:

- Domestic Inverter / UPS System
- Solar & Wind Power Storage
- Fire Alarm & Security Systems
- Emergency Lighting
- Telecommunication
- Elevator Back-Ups
- Hotel, Banks, Offices

Model	Vol	Ah	Weight approx	Dimensions (mm)			Charging Method			Tall Tubular
			Filled	L	W	H	Initial Current (Max)	Trickle / Float Volume	Cyclic Use	Warranty
APT 165	12V	165	58 kg	510	190	390	20 A	13.6V	14.4V	12 Months
APT 220	12V	220	66 kg	510	190	390	25 A	13.6V	14.4V	12 Months

FAST CHARGING | ELECTROLYTE LEVEL INDICATOR | LONG LIFE | SUPPORTS FREQUENT / LONG POWER CUTS

SOLAR 14W
WALL-MOUNTED LIGHT

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


Solar Panel


Environmntally


Photocell

Energy Saving

APT INVEREX® SOLAR ENERGY

FIRST TIME IN PAKISTAN SOLAR AIR CONDITIONER

WITH BUILT-IN SOLAR MPPT INVERTER

1 TON (12000BTU) | **1.5 TON (18000BTU)** | **2 TON (24000BTU)**

97% ENERGY SAVING ON DAY TIME

GOLD SERIES

SOLAR AIRCON

MONITORING & OPERATING THROUGH MOBILE APP

- III-D DESIGN
- 100% Copper
- 80% Energy Saving
- Hot & Cool
- T3 COMPRESSOR WORK AT 55°C
- Solar Panel Capable
- Wifi Capable
- Built-In MPPT Solar Inverter

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APT INVEREX® SOLAR ENERGY

FIRST TIME IN PAKISTAN SOLAR AIR CONDITIONER

WITH BUILT-IN SOLAR MPPT INVERTER

MPPT DC Input (Solar) Vdc	80-380V
MPPT DC Input (Solar) Amperes	12A
MPPT DC Input (Solar) Watts	2000W/2500W/3000W
No. of Solar Panels (300Watts) MIN/MAX (Series)	04Pcs/09Pcs
No. of Solar Panels (400Watts) MIN/MAX (Series)	03Pcs/7Pcs
Low DC Watts Operation	Yes
Consumption Monitoring	Yes
Temperature Range (Cooling/Heating)	16℃~32℃
Turbo Option	Yes
Compressor Type	Rotary Inverter
Real Time Power Sharing	Yes

	1 TON (12000BTU)	1.5 TON(18000BTU)	2 TON (24000BTU)
Rated Input Power (Heating) (depends on inner and outer T)	1170(150-1700)Watts	1770(220-2500)Watts	2290(390-3500)W
Compressor Brand	GMCC	Panasonic	Panasonic
Rated Input Power (Cooling) (depends on inner and outer T)	940(190-1270)Watts	1400(185-2100)Watts	1790(470-3200)Wa
Works Without Grid	Yes	Yes	Yes

UAN: +92-21-111-209-988 www.aptinverex.com info@aptinverex.com

INVEREX SOLAR ENERGY

AUTHORIZATION **CERTIFICATION**

Deye

CERTIFICATE OF AUTHORIZATIONS

We, Ningbo Deye Inverter Technology Co.,Ltd. who is official manufacturer of PV Grid-tied Inverters, Hybrid Inverters and Microinverter, having headquarter at No.26, Yongjiang Road, Beilun, Ningbo, 315806, China. Do hereby Authorize:

Inverex power solution

As our official exclusive distributor and service partner in the Territory of Pakistan and Afghanistan for the following product and services:

Model Name	Brand of Products
PV Grid-tied Inverters	Inverex
Hybrid Inverter	Inverex

Region: Pakistan and Afghanistan

Effective Date of Appointment: 2022 / 1 / 1

Period of Validity: One (1) Year

SIGNATURE Ningbo Deye Inverter Technology Co.,Ltd

CERTIFICATE

WINNING CONFIRMATION

INVEREX SOLAR ENERGY

risen

Authorization Distribution Letter

To whom it may concern,

Signed:

Risen Energy Co., Ltd

Fronius

CERTIFICATE

Fronius

FRONIUS INTERNATIONAL GMBH

confirms that

INVEREX POWER SOLUTION

PSA

PAKISTAN SOLAR ASSOCIATION

MEMBERSHIP CERTIFICATE

APT INVEREX® SOLAR ENERGY

INVEREX® Customer Care

OUR SERVICE CENTERS
ACROSS PAKISTAN & AFGHANISTAN

KARACHI (HEAD OFFICE)
Inverex Customer Care Center
Address: 2nd Floor Mubarak Manzil, Aga Khan III Road Near Mobile Market Saddar Karachi.
Contact : 0300-0560830

NORTH KARACHI
Inverex Customer Care Center
Address: Shop No. 01, Plot No R-96 Section 11-B, North Karachi, Karachi
Contact : 0317-1112459

MEMON GOTH (KARACHI)
Inverex Customer Care Center
Address: Shop no#10 Haji Ishaqe Memon Market Near Road Kathor Bus Stop Memon Goth Malir Karachi
Contact : 0300-0658690

HYDERABAD (MAIN BRANCH)
Inverex Customer Care Center
Address: House No. 246/C Unit #09, Near Comprehensive School Latifabad, Hyderabad
Contact : 0300-0560831
Tel : **022-3401630**

HALANAKA (HYDERABAD)
Inverex Customer Care Center
Address : Plot #29, Shop No. 01/02 Near National Super Market, Khurshed Tower, Near Halanaka.
Contact : 0300-2026842
Tel : 022-2031544

MIRPURKHAS
Inverex Customer Care Center
Address: House No. 626/A Street Khari Quarter Near, Al-Noor Hospital Station Road, Mirpurkhas
Contact : 0300-0560329

NAWABSHAH
Inverex Customer Care Center
Address: Shan Plaza, Shop # 21, Liaqat Market, Nawabshah.
Contact : 0301-8319516

LARKANA
Inverex Customer Care Center
Address: 18 C First Floor Sheikh Muhallah Jaral Shah Road Near Latif Biryani Center Pakistan Chowk Larkana
Contact : 03000560832

SUKKUR
Inverex Customer Care Center
Address: Shikarpur Road 1st floor Near subhan masjid, Sukkur.
Contact : 0300-0560833
Tel : 071-5616677

RAHIM YAR KHAN
Inverex Customer Care Center
Address: Near New Ali Electric Store Bano Bazar Rahim Yar Khan.
Contact : 0300-0560835

BAHAWALPUR
Giri Gunj Bazar Near Mohkam Plaza, Bahawalpur.
Contact: 0303-6118018

MULTAN (MAIN BRANCH)
Inverex Customer Care Center
Address: **Plot No.2369, 1st Floor, Water Works Road, Mohalla Nawazabad, Ghanta Ghar, Multan**
Contact: 03000560837

MULTAN (COLLECTION POINT)
Inverex Customer Care Center
Address: Shop #6 Ishaq Market Near Nobel Electronics Hussain Agahi Road Multan.
Contact : 0300-0560837
Tel : 061-4510172

LAHORE (MAIN BRANCH)
Inverex Customer Care Center
Address: 36-A First Floor Chaman Park, Near Bird Market Naya Pull Fateh Garh, Lahore
Contact : **0300-0220189**

LAHORE (COLLECTION POINT)
Inverex Customer Care Center
Address: Shop No S-13 First Floor Regal Center Hall Road The Mall Lahore.
Contact : 0300-0560838
Tel : 042-37226000

FAISALABAD
Inverex Customer Care Center
Address: Shop # 22 Ibrahim Plaza, Eid Gah Road, Faisalabad.
Contact : 0300-0560842

SARGODHA
Inverex Customer Care Center
Address: HBL Street Block No: 05 Near Allah Wala Hotel Sargodha.
Contact : 0300-0560840

MIANWALI
Inverex Customer Care Center
Address: Near Mukhtiaar Electronic City Street Miawali.
Contact : 0300-0560836

DERA ISMAIL KHAN
Inverex Customer Care Center
Address: Crown Plaza haq Nawaz park Shop No 12 Dera Ismail Khan.
Contact : 0300-0560845

GUJRAT
Inverex Customer Care Center
Address: Service Mor Jinnah Super Market Gujrat.
Contact : 0300-0560841

RAWALPINDI
Inverex Customer Care Center
Address: Shop, No 06 Millat Plaza D.A.V Collage Road, Rawalpindi.
Contact : 0300-0560839

PESHAWAR (MAIN BRANCH)
Inverex Customer Care Center
Address: Landi Arbab, Near Toyota showroom, Ring Road, Peshawar (KPK)
Contact : 0300-0560844
Tel : 091-2586877

PESHAWAR
(COLLECTION POINT)
Inverex Customer Care Center
Address: Shop No. UG-303, Deans Trade Center, Peshawar, Cantt (KPK)
Tel : **0301-8319515**

NAURANG
Inverex Customer Care Center
Address: Attach Bank Of Khyber Islam Main G.T Road, Sarai Naurang District Lakki Marwat.
Contact : 0300-0560846

BANNU
Inverex Customer Care Center
Address: Near Peshawar Coaster Stand New Adda Bannu.
Contact : 0300-0658278

QUETTA
Inverex Customer Care Center
Address: Shop # 11, Insaf Solar Market, Ali Bhai Road, Civic Center Quetta
Contact : 0300-0560843
Tel : 081-2823859

GWADAR
Inverex Customer Care Center
Address: Shop No.02, Aman Market Main Syed Hashmi Road, Near Suzuki Showroom, Gwadar
Contact : 0300-0560331

MARDAN
Inverex Customer Care Center
Address: Block # 'C' 1st Floor Haji Gul Plaza Sugar Mill Road Mardan
Contact : 0300-0560834

AFGHANISTAN (KABUL)
Inverex Customer Care Center
Address: Khushal Khan,Spin Kalai Square Imam e Azam Mosque,Street #2,House#1 Kabul,Afghanistan
Contact : 0093 704080770
0093 700847458

FOR TECHNICAL SUPPORT

info@inverexcustomercare.com
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