

# APS-Solar Inverter Commercial Range

On-Grid Three Phase Inverter

12k/ 15k/ 17k/ 20k/ 25k/ 33k/ 40k/ 50k



## ABOUT PRODUCT

The APS – Solar Inverter Commercial range is a smart and energy efficient technology. The commercial solution can be used for power plant systems as a clean energy power plan. This approach can save on electricity bills and bring stable long term power generation benefits. This solution can be used a commercial rooftop system and can be called a commercial distributed power plant. A total solutions mainly consists of solar panels, brackets, on-grid solar inverter, AC anti-lightning combiner box and energy meters. The system is typically mounted on the rooftop of offices and factories with capacity of above 10KW.

## PRODUCT PERFORMANCE

The main characteristic of the APS Solar Inverter is its reliability, long life design and environmental friendliness based on it super energy efficient capability. The system has the capability of supporting data storage up to 25 years with smart digital interface for easy integration of the status of the inverter. This technology comes in single system ratings from 12kW to 50kW. With its integrated combiner box, ensures maximum ease on installation and integration, while reducing its total system cost. The system supports a E-Solar Portal for string current monitoring, highly visualised data, bar-code scan registration and power generation comparisons. The system can be easily paralleled to high capacity applications.



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## MAIN FEATURES

- Optimized global MPPT algorithm
- MPPT efficiency is higher than 99.5%
- Dual MPPT which are compatible to all kinds of solar roofs
- Super wide input voltage range(180V-1000V)
- Supports various solar panels and string designs
- One-button safety setting, easy configuration of all parameters
- Built-in independent RTC chip, supporting data storage of 25 years
- Integrated LCD graphical display, showing daily/monthly/yearly generation
- Integrated with the function of reactive power control & ZVRT, responds to power grid dispatching, energy management of grid
- Integrate string current monitoring, monitor string working status
- IP65 protection for indoor and outdoor installation
- Optional DC&AC surge protection- guaranteed system safety
- Optional Anti-PID module, protect panels from PID damage
- Aluminium case design to enhance heat dissipation and resist rust corrosion, prolong life time



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## TECHNICAL SPECIFICATIONS

Model	12K	15K	17K	20k
<b>Input DC</b>				
Max. DC Power [W]	14520	18150	20570	24200
Max DC Voltage [V]	1000			
MPPT Voltage Range [V]			180-900	
Nominal DC Voltage [V]			600	
Start Voltage [V]			200	
Min. DC Voltage [V]			180	
Max. DC Input Current PV1/ PV2 [A]	22/ 11	22/ 22	22/ 22	22/ 22
Number of MPPT			2	
Number of DC Connection Sets per MPPT	2/ 1	2/ 2	2/ 2	2/ 2
DC Switch			Integrated	
<b>Output (AC)</b>				
Rated AC Power [W] (@230V, 50Hz)	12000	15000	17000	20000
Max. AC Apparent Power [VA]	13200	16500	18700	22000
Rated AC Current [A]	18.2	22.7	25.8	30.3
Max. AC Current [A]	20	25	28.3	33
Nominal AC Voltage/ Range	3/N/PE, 220/380V, 230/400V, 240/415V; 180V-280V/312V-485V			
Grid frequency/ range	50Hz, 60Hz / 44Hz-55Hz, 54-65Hz			
Power factor, adjustable [cosφ]	0.8 leading- 0.8 lagging			
Total Harmonic Distortion (THDi)	< 3% (at nominal power)			
Feed-in Phase/ Connection Phase	3			
<b>Efficiency</b>				
Max. Efficiency	98.30%	98.40%	98.50%	98.50%
Euro Efficiency (@ 600Vdc)	98%	98.10%	98.20%	98.20%
MPPT Accuracy			>99.5%	
<b>Protection</b>				
Internal Over- Voltage Protection			Integrated	
Dc insulation Monitoring			Integrated	
DCI Monitoring			Integrated	
GFCI Monitoring			Integrated	
Grid Monitoring			Integrated	
AC Short Circuit Current Protection			Integrated	
LVRT			Integrated	
Thermal Protection			Integrated	
AC Surge Protection			III (Integrated), II (Optional)	
String Current Monitoring			Integrated	
Anti-PID Module			Optional	
DC Surge Protection			II (Optional)	
DC Fuse			Optional	
Anti-Island Protection Monitoring			AFD	
<b>Interface</b>				
DC Connection			MC4/H4	
AC Connection			Terminal Block	
LCD & LED Display			3.5 inch Graphic LCD Display, Backlight	
Display Language			English	
Communication Port			2*RS485 + 1*RS232	
Communication			Wi-Fi/GPRS/Ethernet (Optional)	
<b>General Data</b>				
Topology			Transformerless	
Consumption at Night [W]			<0.6	
Consumption at Standby [W]			<10	
Operating Temperature Range			- 25°C to + 60°C (45°C to 60°C with derating)	
Cooling Method			Intelligent Fan	
Ambient Humidity			0% to 100% Non-Condensing	
Altitude			4000m (>3000m Power derating)	
Noise [dBA]			<35	
Ingress Protection			IP65 (Indoor & Outdoor Installation)	
Mounting			Rear Panel	
Dimensions (H x W X D mm)			650 x 450 x 232	
Weight (kg)	29			33
Standard Warranty			5 (Standard)/ 10 / 15/ 20/ 25 (Optional)	
Certification	IEC62109-1/2, IEC61000-6-2/3, IEC61683,IEC60068-2,IEC62116,IEC61717,PEA/MEA,NRS 097-2-1, UTE-C-15-712-1,VDE0126-1-1/A1, VDE-AR-N 4105, AS4777.2,AS4777.3,C-TICK,CQC NB/T 32004, G83-2,G59-3,NBR 16149,NBR 16150,TF 3.2.1			



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## TECHNICAL SPECIFICATIONS

Model	25K	33K	40K	50K
Input DC				
Max. DC Power [W]	30 300	36 300	48 400	60 500
Max DC Voltage [V]	1000			
MPPT Voltage Range [V]	180-900		280-900	
Nominal DC Voltage [V]	600			
Start Voltage [V]	200		300	
Min. DC Voltage [V]	180		250	
Max. DC Input Current PV1/ PV2 [A]	22/ 22/ 22		40/ 30/ 30	
Number of MPPT	3			
Number of DC Connection Sets per MPPT	2/ 2/ 2		4/ 3/ 3	
DC Switch	Integrated			
Output (AC)				
Rated AC Power [W] (@230V, 50Hz)	25 000	30 000	40 000	50 000
Max. AC Apparent Power [VA]	27 500	33 000	44 000	55 000
Rated AC Current [A]	37.9	45.5	61	76
Max. AC Current [A]	42	50	65	80
Nominal AC Voltage/ Range	3/N/PE, 220/380V, 230/400V, 240/415V; 180V-280V/312V-485V			
Grid frequency/ range	50Hz, 60Hz / 44Hz-55Hz, 54-65Hz			
Power factor, adjustable [cosφ]	0.8 leading- 0.8 lagging			
Total Harmonic Distortion (THDI)	< 3% (at nominal power)			
Feed-in Phase/ Connection Phase	3			
Efficiency				
Max. Efficiency	98.60%	98.80%	98.80%	98.80%
Euro Efficiency (@ 600Vdc)	98%	98.50%	98.50%	98.50%
MPPT Accuracy	>99.5%			
Protection				
Internal Over- Voltage Protection	Integrated			
Dc insulation Monitoring	Integrated			
DCI Monitoring	Integrated			
GFCI Monitoring	Integrated			
Grid Monitoring	Integrated			
AC Short Circuit Current Protection	Integrated			
LVRT	Integrated			
Thermal Protection	Integrated			
AC Surge Protection	III (Integrated), II (Optional)			
String Current Monitoring	Integrated			
Anti-PID Module	Optional			
DC Surge Protection	II (Optional)			
DC Fuse	Optional			
Anti-Island Protection Monitoring	AFD			
Interface				
DC Connection	MC4/H4			
AC Connection	Terminal Block			
LCD & LED Display	3.5 inch Graphic LCD Display, Backlight			
Display Language	English			
Communication Port	2*RS485 + 1*RS232			
Communication	Wi-Fi/GPRS/Ethernet (Optional)			
General Data				
Topology	Transformerless			
Consumption at Night [W]	<0.6			
Consumption at Standby [W]	<10			
Operating Temperature Range	- 25°C to + 60°C (45°C to 60°C with derating)			
Cooling Method	Intelligent Fan			
Ambient Humidity	0% to 100% Non-Condensing			
Altitude	4000m (>3000m Power derating)			
Noise [dBA]	<35			
Ingress Protection	IP65 (Indoor & Outdoor Installation)			
Mounting	Rear Panel			
Dimensions (H x W X D mm)	700 x 530 x 260		800 x 550 x 280	
Weight (kg)	48		68	
Standard Warranty	5 (Standard)/ 10 / 15/ 20/ 25 (Optional)			
Certification	IEC62109-1/2, IEC61000-6-2/3, IEC61683,IEC60068-2,IEC62116,IEC61717,PEA/MEA,NRS 097-2-1, UTE-C-15-712-1,VDE0126-1-1/A1, VDE-AR-N 4105, AS4777.2,AS4777.3,C-TICK,CQC NB/T 32004, G83-2,G59-3,NBR 16149,NBR 16150,TF 3.2.1			



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