



Apex Solar Energy Technology GmbH

Tel: + (+49) 0211 3023 4872

E-mail: service@apex-solarenergy.com

Web: www.apex-solar.de

Add: No.76, Reisholzer Werft Road, Duesseldorf, Germany 40589



WORLD-LEADING
ENERGY STORAGE SYSTEM PROVIDER

PV ONE-STOP SOLUTION

Core Technology

apex solar hybrid inverter 3-50kW with 208/230/240/400Vac



Capable | Intelligent | User-friendly | Safety
Reduce your electricity bill and improve your energy independence
Your ideal residential solar energy storage solution

4

Automatic switching time 4ms

6

6 time periods for battery charging/discharging

16

V/f droop control, Max. 16pcs in parallel

24

Supports using diesel generator to charge battery directly, ensuring system energy supply 7* 24H

95.5

Max. conversion efficiency of 97.6%;
Max. battery charge efficiency of 95.5%

240

Max. charging/discharging current of 240A

Core Features

apex solar grid-connected inverter 1-110kW

- ✓ Max. 8 MPP trackers, Max. efficiency up to 98.9%
- ✓ High DC/AC ratio 1.5 times for more yields
- ✓ Wide output voltage range 277-520Vac
- ✓ Zero export application, response speed within 0.5S
- ✓ T-type three-level topology and enhanced SVPWM
- ✓ Type II DC / AC SPD, frequency droop control technology
- ✓ Max. DC input current of 16A/string, adapt to 600W solar panel
- ✓ String intelligent monitoring (optional), Ani-PID function (Optional)



Main Highlights

apex solar microinverter 300-2000W

- ◆ Support reactive power compensation, comply with UL code.
- ◆ Module level monitoring, Max. 4 MPPTs design
- ◆ Max. DC input current 13A, adapt to 600W PV module
- ◆ Rapid shutdown function, safe and reliable
- ◆ PLC, Zigbee or WIFI communication
- ◆ IP67 protection degree, 10 years warranty



Physical Layout



World-Class Components Suppliers

apex solar chooses world-class suppliers to ensure the high quality of its products.

MOSFET, IGBT



IC



Capacitor, Inductor



Relay



FAN



APEX Inverter Portfolio



Three Phase
String Inverter (LV)



Single Phase
Hybrid Inverter



Microinverter



Single Phase
String Inverter



Three Phase
String Inverter



Three Phase
Hybrid Inverter



Accessory &
monitoring

Single Phase String Inverter



APEX-P1-1/1.5/2/2.5/3/3.6/4K



1 MPP trackers, Max. efficiency up to 97.5%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)



80 Low start-up voltage of 80V

Technical Data

Model	APEX -P1-1000	APEX -P1-1500	APEX -P1-2000	APEX -P1-2500	APEX -P1-3000	APEX -P1-3600	APEX -P1-4000
Input Side							
Max. DC Input Power (kW)	1.3	2	2.6	3.3	3.9	4.7	5.2
Max. DC Input Voltage (V)	550						
Start-up DC Input Voltage (V)	80						
MPPT Operating Range (V)	70~500						
Max. DC Input Current (A)	13						
Max. Short Circuit Current (A)	19.5						
No. of MPP Trackers	1						
No. of Strings per MPP Tracker	1						
Output Side							
Rated Output Power (kW)	1	1.5	2	2.5	3	3.6	4
Max. Active Power (kW)	1.1	1.65	2.2	2.75	3.3	3.96	4.4
Nominal Output Voltage / Range (V)	L/N/PE 220/230V (Optional)						
Rated Grid Frequency (Hz)	50 / 60 (Optional)						
Operating Phase	Single phase						
Rated AC Grid Output Current (A)	4.5/4.3	6.8/6.5	9.1/8.7	11.4/10.9	13.6/13	16.4/15.7	18.2/17.4
Max. AC Output Current (A)	5/4.8	7.5/7.2	10/9.6	12.5/12	15/14.3	18/17.2	20/19.1
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	97.3%	97.3%	97.3%	97.3%	97.5%	97.5%	97.5%
Euro Efficiency	97.1%	97.1%	97.1%	97.1%	97.3%	97.3%	97.3%
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)	280W×272.5H×184D						
Weight (kg)	4.8						
Topology	Transformerless						
Internal Consumption	<1W (Night)						
Running Temperature	-25~65°C, >45°C derating						
Ingress Protection	IP65						
Noise Emission (Typical)	≤35 dB						
Cooling Concept	Natural cooling						
Max. Operating Altitude Without Derating	2000m						
Warranty	5 years						
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150						
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						

Single Phase String Inverter



APEX-P1-3.6/4/4.6/5/6K

-  2 MPP trackers, Max. efficiency up to 97.5%
-  Zero export application, VSG application
-  String intelligent monitoring (optional)
-  Wide output voltage range
-  Anti-PID function (Optional)
-  Low start-up voltage of 80V

Technical Data

Model	APEX-P1-3600	APEX-P1-4000	APEX-P1-4600	APEX-P1-5000	APEX-P1-6000
Input Side					
Max. DC Input Power (kW)	4.7	5.2	5.98	6.5	7.8
Max. DC Input Voltage (V)	550				
Start-up DC Input Voltage (V)	80				
MPPT Operating Range (V)	70~500				
Max. DC Input Current (A)	13+13				
Max. Short Circuit Current (A)	19.5+19.5				
No.of MPP Trackers	2				
No.of Strings per MPP Tracker	1				
Output Side					
Rated Output Power (kW)	3.6	4	4.6	5	6
Max. Active Power (kW)	3.96	4.4	5.06	5.5	6.6
Nominal Output Voltage / Range (V)	L/N/PE 220/230V (Optional)				
Rated Grid Frequency (Hz)	50 / 60 (Optional)				
Operating Phase	Single phase				
Rated AC Grid Output Current (A)	16.4/15.7	18.2/17.4	20.9/20	22.7/21.7	27.3/26.1
Max. AC Output Current (A)	18/17.2	20/19.1	23/22	25/23.9	30/28.7
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	97.3%	97.5%	97.5%	97.5%	97.5%
Euro Efficiency	97.1%	97.3%	97.3%	97.3%	97.3%
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)	330Wx323Hx190D				
Weight (kg)	7.5				
Topology	Transformerless				
Internal Consumption	<1W (Night)				
Running Temperature	-25~65°C, >45°C derating				
Ingress Protection	IP65				
Noise Emission (Typical)	≤35 dB				
Cooling Concept	Natural cooling				
Max. Operating Altitude Without Derating	2000m				
Warranty	5 years				
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150				
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				

Single Phase String Inverter



APEX-P1-7/7.5/8/9/10/10.5K



2 MPP trackers, Max. efficiency up to 97.7%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)



Low start-up voltage of 80V

Technical Data

Model	APEX-P1-7000	APEX-P1-7500	APEX-P1-8000	APEX-P1-9000	APEX-P1-10K	APEX-P1-10.5K
Input Side						
Max. DC Input Power (kW)	9.1	9.8	10.4	11.7	13	13.7
Max. DC Input Voltage (V)	550					
Start-up DC Input Voltage (V)	80					
MPPT Operating Range (V)	70~500					
Max. DC Input Current (A)	13+26			26+26		
Max. Short Circuit Current (A)	19.5+39			39+39		
No. of MPP Trackers	2					
No. of Strings per MPP Tracker	1+2			2		
Output Side						
Rated Output Power (kW)	7	7.5	8	9	10	10.5
Max. Active Power (kW)	7.7	8.25	8.8	9.9	11	11.55
Nominal Output Voltage / Range (V)	L/N/PE 220/230V (Optional)					
Rated Grid Frequency (Hz)	50 / 60 (Optional)					
Operating Phase	Single phase					
Rated AC Grid Output Current (A)	31.8/30.4	34.1/32.6	36.4/34.8	40.9/39.1	45.5/43.5	47.7/45.7
Max. AC Output Current (A)	35/33.5	37.5/35.9	40/38.3	45/43	50/47.8	52.5/50.2
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	97.7%					
Euro Efficiency	97.5%					
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×410H×198.5D					
Weight (kg)	15.7					
Topology	Transformerless					
Internal Consumption	<1W (Night)					
Running Temperature	-25~65°C, >45°C derating					
Ingress Protection	IP65					
Noise Emission (Typical)	≤35 dB					
Cooling Concept	Natural cooling					
Max. Operating Altitude Without Derating	2000m					
Warranty	5 years					
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
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					

Three Phase String Inverter



APEX-P3-4/5/6/7/8/10/12K



2 MPP trackers, Max. efficiency up to 98.3%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

Technical Data

Model	APEX-P3-4000	APEX-P3-5000	APEX-P3-6000	APEX-P3-7000	APEX-P3-8000	APEX-P3-10K	APEX-P3-12K
Input Side							
Max. DC Input Power (kW)	5.2	6.5	7.8	9.1	10.4	13	15.6
Max. DC Input Voltage (V)	1000						
Start-up DC Input Voltage (V)	140						
MPPT Operating Range (V)	120~850						
Max. DC Input Current (A)	13+13						
Max. Short Circuit Current (A)	19.5+19.5						
No. of MPP Trackers	2						
No. of Strings per MPP Tracker	1						
Output Side							
Rated Output Power (kW)	4	5	6	7	8	10	12
Max. Active Power (kW)	4.4	5.5	6.6	7.7	8.8	11	13.2
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V						
Rated Grid Frequency (Hz)	50 / 60 (Optional)						
Operating Phase	Three phase						
Rated AC Grid Output Current (A)	6.1/5.8	7.6/7.2	9.1/8.7	10.6/10.1	12.1/11.6	15.2/14.5	18.2/17.4
Max. AC Output Current (A)	6.7/6.4	8.3/8	10/9.6	11.7/11.1	13.3/12.8	16.7/15.9	20/19.1
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	98.3%						
Euro Efficiency	97.5%						
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)	330Wx457Hx185D						330x457x205
Weight (kg)	10						11
Topology	Transformerless						
Internal Consumption	<1W (Night)						
Running Temperature	-25~65°C, >45°C derating						
Ingress Protection	IP65						
Noise Emission (Typical)	≤30 dB						
Cooling Concept	Natural cooling						
Max. Operating Altitude Without Derating	2000m						
Warranty	5 years						
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150						
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						

Three Phase String Inverter



APEX-P3-4/5/6/7/8/10/12K-G



2 MPP trackers, Max. efficiency up to 98.3%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

Technical Data

Model	APEX-P3-4000-G	APEX-P3-5000-G	APEX-P3-6000-G	APEX-P3-7000-G	APEX-P3-8000-G	APEX-P3-10K-G	APEX-P3-12K-G
Input Side							
Max. DC Input Power (kW)	5.2	6.5	7.8	9.1	10.4	13	15.6
Max. DC Input Voltage (V)	1000						
Start-up DC Input Voltage (V)	140						
MPPT Operating Range (V)	120~850						200~850
Max. DC Input Current (A)	20+20						
Max. Short Circuit Current (A)	30+30						
No. of MPP Trackers	2						
No. of Strings per MPP Tracker	1						
Output Side							
Rated Output Power (kW)	4	5	6	7	8	10	12
Max. Active Power (kW)	4.4	5.5	6.6	7.7	8.8	11	13.2
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V						
Rated Grid Frequency (Hz)	50 / 60 (Optional)						
Operating Phase	Three phase						
Rated AC Grid Output Current (A)	6.1/5.8	7.6/7.2	9.1/8.7	10.6/10.1	12.1/11.6	15.2/14.5	18.2/17.4
Max. AC Output Current (A)	6.7/6.4	8.3/8	10/9.6	11.7/11.1	13.3/12.8	16.7/15.9	20/19.1
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	98.3%						
Euro Efficiency	97.5%						
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						330×457×205
Weight (kg)	10						11
Topology	Transformerless						
Internal Consumption	<1W (Night)						
Running Temperature	-25~65°C, >45°C derating						
Ingress Protection	IP65						
Noise Emission (Typical)	≤30 dB						
Cooling Concept	Natural cooling						
Max. Operating Altitude Without Derating	2000m						
Warranty	5 years						
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150						
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						

Three Phase String Inverter



APEX-P3-15/17K

- M

2 MPP trackers, Max. efficiency up to 98.5%
- F

Zero export application, VSG application
- S

String intelligent monitoring (optional)
- V

Wide output voltage range
- P

Anti-PID function (Optional)

Technical Data

Model	APEX-P3-15K	APEX-P3-17K
Input Side		
Max. DC Input Power (kW)	19.5	22.1
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+26	
Max. Short Circuit Current (A)	19.5+39	
No. of MPP Trackers	2	
No. of Strings per MPP Tracker	1+2	
Output Side		
Rated Output Power (kW)	15	17
Max. Active Power (kW)	16.5	18.7
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V	
Rated Grid Frequency (Hz)	50 / 60 (Optional)	
Operating Phase	Three phase	
Rated AC Grid Output Current (A)	22.7/21.7	25.8/24.6
Max. AC Output Current (A)	25/23.9	28.3/27.1
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	98.5%	
Euro Efficiency	97.5%	
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)	333W×472H×202D	
Weight (kg)	15	
Topology	Transformerless	
Internal Consumption	<1W (Night)	
Running Temperature	-25~65°C, >45°C derating	
Ingress Protection	IP65	
Noise Emission (Typical)	≤40 dB	
Cooling Concept	Smart cooling	
Max. Operating Altitude Without Derating	2000m	
Warranty	5 years	
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150	
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	

Three Phase String Inverter



APEX-P3-18/20/25K



2 MPP trackers, Max. efficiency up to 98.6%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

Technical Data

Model	APEX-P3-18K	APEX-P3-20K	APEX-P3-25K	APEX-P3-18K	APEX-P3-20K	APEX-P3-25K
Input Side						
Max. DC Input Power (kW)	23.4	26	32.5	23.4	26	32.5
Max. DC Input Voltage (V)	1000					
Start-up DC Input Voltage (V)	250					
MPPT Operating Range (V)	200~850					
Max. DC Input Current (A)	32+32			26+26		
Max. Short Circuit Current (A)	48+48			39+39		
No. of MPP Trackers	2					
No. of Strings per MPP Tracker	3			2		
Output Side						
Rated Output Power (kW)	18	20	25	18	20	25
Max. Active Power (kW)	19.8	22	27.5	19.8	22	27.5
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V					
Rated Grid Frequency (Hz)	50 / 60 (Optional)					
Operating Phase	Three phase					
Rated AC Grid Output Current (A)	27.3/26.1	30.3/29	37.9/36.2	27.3/26.1	30.3/29	37.9/36.2
Max. AC Output Current (A)	30/28.7	33.3/31.9	41.7/39.8	30/28.7	33.3/31.9	41.7/39.8
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)	330W×508H×206D			362W×527H×220D		
Weight (kg)	20.8			20		
Topology	Transformerless					
Internal Consumption	<1W (Night)					
Running Temperature	-25~65°C, >45°C derating					
Ingress Protection	IP65					
Noise Emission (Typical)	≤40 dB					
Cooling Concept	Smart cooling					
Max. Operating Altitude Without Derating	2000m					
Warranty	5 years					
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
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					

Three Phase String Inverter



APEX-P3-30/33/35/36K



2 MPP trackers, Max. efficiency up to 98.6%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

Technical Data

Model	APEX-P3-30K	APEX-P3-33K	APEX-P3-35K	APEX-P3-36K
Input Side				
Max. DC Input Power (kW)	39	42.9	45.5	46.8
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			
No. of MPP Trackers	2			
No. of Strings per MPP Tracker	3			
Output Side				
Rated Output Power (kW)	30	33	35	36
Max. Active Power (kW)	33	36.3	38.5	39.6
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V			
Rated Grid Frequency (Hz)	50 / 60 (Optional)			
Operating Phase	Three phase			
Rated AC Grid Output Current (A)	45.5/43.5	50/47.8	53/50.7	54.5/52.2
Max. AC Output Current (A)	50/47.9	55/52.6	58.3/55.8	60/57.4
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)	362Wx577Hx215D			
Weight (kg)	25.5			
Topology	Transformerless			
Internal Consumption	<1W (Night)			
Running Temperature	-25~65°C, >45°C derating			
Ingress Protection	IP65			
Noise Emission (Typical)	≤50 dB			
Cooling Concept	Smart cooling			
Max. Operating Altitude Without Derating	2000m			
Warranty	5 years			
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150			
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			

Three Phase String Inverter



APEX-P3-30/33/35/40/50/60K



Max. 4 MPP trackers, Max. efficiency up to 98.7%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

Technical Data

Model	APEX-P3-30K	APEX-P3-33K	APEX-P3-35K	APEX-P3-40K	APEX-P3-50K	APEX-P3-60K
Input Side						
Max. DC Input Power (kW)	39	42.9	45.5	52	65	78
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		
Max. Short Circuit Current (A)	60+60	60+60+60		60+60+60+60		
No. of MPP Trackers	2	3		4		
No. of Strings per MPP Tracker	3					
Output Side						
Rated Output Power (kW)	30	33	35	40	50	60
Max. Active Power (kW)	33	36.3	38.5	44	55	66
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V					
Rated Grid Frequency (Hz)	50 / 60 (Optional)					
Operating Phase	Three phase					
Rated AC Grid Output Current (A)	45.5/43.5	50/47.8	53/50.7	60.6/58	75.8/72.5	90.9/87
Max. AC Output Current (A)	50/47.9	55/52.6	58.3/55.8	66.7/63.8	83.3/79.7	100/95.7
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	98.7%					
Euro Efficiency	98%					
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					
Weight (kg)	44.5					
Topology	Transformerless					
Internal Consumption	<1W (Night)					
Running Temperature	-25~65°C, >45°C derating					
Ingress Protection	IP65					
Noise Emission (Typical)	≤50 dB					
Cooling Concept	Smart cooling					
Max. Operating Altitude Without Derating	2000m					
Warranty	5 years					
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
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					

Three Phase String Inverter



APEX-P3-60/70/75/80K

-  4 MPP trackers, Max. efficiency up to 98.7%
-  Zero export application, VSG application
-  String intelligent monitoring (optional)
-  Wide output voltage range
-  Anti-PID function (Optional)
-  Type II DC/AC SPD

Technical Data

Model	APEX-P3-60K	APEX-P3-70K	APEX-P3-75K	APEX-P3-80K
Input Side				
Max. DC Input Power (kW)	78	91	97.5	104
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			
Max. Short Circuit Current (A)	60+60+60+60			
No. of MPP Trackers	4			
No. of Strings per MPP Tracker	3	4		
Output Side				
Rated Output Power (kW)	60	70	75	80
Max. Active Power (kW)	66	77	82.5	88
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V			
Rated Grid Frequency (Hz)	50 / 60 (Optional)			
Operating Phase	Three phase			
Rated AC Grid Output Current (A)	90.9/87	106.1/101.5	113.6/108.7	121.2/115.9
Max. AC Output Current (A)	100/95.7	116.7/111.6	125/119.6	133.3/127.5
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	98.7%			
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)	700W×575H×297D			
Weight (kg)	60			
Topology	Transformerless			
Internal Consumption	<1W (Night)			
Running Temperature	-25~65°C, >45°C derating			
Ingress Protection	IP65			
Noise Emission (Typical)	≤50 dB	≤55 dB		
Cooling Concept	Smart cooling			
Max. Operating Altitude Without Derating	2000m			
Warranty	5 years			
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150			
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			

Three Phase String Inverter



APEX-P3-70/75/80/90/100/110K

-  Max.6 MPP trackers,Max. efficiency up to 98.8%
-  Zero export application, VSG application
-  String intelligent monitoring (optional)
-  Wide output voltage range
-  Anti-PID function (Optional)
-  Type II DC/AC SPD

Technical Data

Model	APEX-P3-70K	APEX-P3-75K	APEX-P3-80K	APEX-P3-90K	APEX-P3-100K	APEX-P3-110K
Input Side						
Max. DC Input Power (kW)	91	97.5	104	135	150	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		
Max. Short Circuit Current (A)	60+60+60+60			60+60+60+60+60+60		
No.of MPP Trackers	4			6		
No.of Strings per MPP Tracker	4					
Output Side						
Rated Output Power (kW)	70	75	80	90	100	110
Max. Active Power (kW)	77	82.5	88	99	110	121
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V					
Rated Grid Frequency (Hz)	50 / 60 (Optional)					
Operating Phase	Three phase					
Rated AC Grid Output Current (A)	106.1/101.5	113.6/108.7	121.2/115.9	136.4/130.4	151.5/144.9	166.7/159.4
Max. AC Output Current (A)	116.7/111.6	125/119.6	133.3/127.5	150/143.5	166.7/159.4	183.3/175.4
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	98.8%					
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)	838W×568H×324D					838W×568H×346D
Weight (kg)	81					
Topology	Transformerless					
Internal Consumption	<1W (Night)					
Running Temperature	-25~65°C, >45°C derating					
Ingress Protection	IP65					
Noise Emission (Typical)	≤55 dB					
Cooling Concept	Smart cooling					
Max. Operating Altitude Without Derating	2000m					
Warranty	5 years					
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
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					

Hybrid Inverter



APEX-E-P1-3.6/5/6/7.6/8KL

-  Colorful touch LCD, IP65 protection degree
-  DC couple and AC couple to retrofit existing solar system
-  Max.16 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
-  Max.charging/discharging current of 190A
-  6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

Technical Data

Model	APEX-E -P1-3.6KL	APEX-E -P1-5KL	APEX-E -P1-6KL	APEX-E -P1-7.6KL	APEX-E -P1-8KL
Battery Input Data					
Battery Type	Lead-acid or Li-Ion				
Battery Voltage Range (V)	40~60				
Max. Charging Current (A)	90	120	135	190	190
Max. Discharging Current (A)	90	120	135	190	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)	4680	6500	7800	9880	10400
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			200-425	
PV Input Current (A)	13+13			26+26	
Max. PV I _{SC} (A)	17+17			34+34	
No.of MPP Trackers	2				
No.of Strings per MPP Tracker	1		2		
AC Output Data					
Rated AC Output and UPS Power (W)	3600	5000	6000	7600	8000
Max. AC Output Power (W)	3690	5500	6600	8360	8800
AC Output Rated Current (A)	16.4/15.7	22.7/21.7	27.3/26.1	34.5/33	36.4/34.8
Max. AC Current (A)	18/17.2	25/23.9	30/28.7	38/36.3	40/38.3
Max. Continuous AC Passthrough (A)	35		40	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; L/N/PE 220/230Vac (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	99.90%				
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				
Output Over Voltage Protection	DC Type II/AC Type III				
Certifications and Standards					
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (°C)	-40~60°C, >45°C derating				
Cooling	Natural cooling				
Noise (dB)	<30 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	24				
Size (mm)	330W x 580H x 232D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				

Three Phase Hybrid Inverter



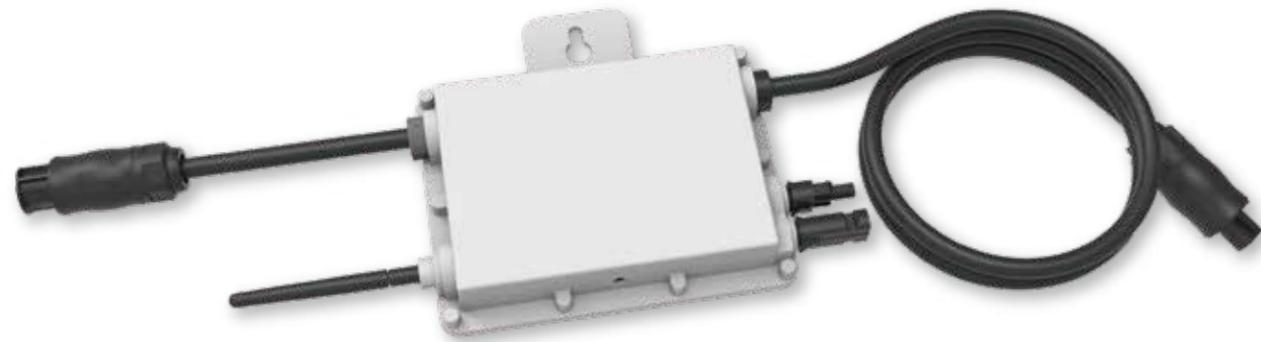
APEX-E-P3-5/6/8/10/12KL

- 100** 100% unbalanced output, each phase; Max. output up to **50%** rated power
- DC** DC couple and AC couple to retrofit existing solar system
- 10** Max.10 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 240** Max.charging/discharging current of 240A
- 48** 48V low voltage battery, transformer isolation design
- 6** 6 time periods for battery charging/discharging
- Support** Support storing energy from diesel generator

Technical Data

Model	APEX-E-P3-5KL	APEX-E-P3-6KL	APEX-E-P3-8KL	APEX-E-P3-10KL	APEX-E-P3-12KL
Battery Input Data					
Battery Type	Lead-acid or Li-Ion				
Battery Voltage Range (V)	40~60				
Max. Charging Current (A)	120	150	190	210	240
Max. Discharging Current (A)	120	150	190	210	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)	6500	7800	10400	13000	15600
Rated PV Input Voltage (V)	550 (160~800)				
Start-up Voltage (V)	160				
MPPT Voltage Range (V)	200-650				
Full Load DC Voltage Range (V)	350-650				
PV Input Current (A)	13+13			26+13	
Max. PV I _{SC} (A)	17+17			34+17	
No.of MPP Trackers	2				
No.of Strings per MPP Tracker	1		2+1		
AC Output Data					
Rated AC Output and UPS Power (W)	5000	6000	8000	10000	12000
Max. AC Output Power (W)	5500	6600	8800	11000	13200
AC Output Rated Current (A)	7.6/7.2	9.1/8.7	12.1/11.6	15.2/14.5	18.2/17.4
Max. AC Current (A)	11.4/10.9	13.6/13	18.2/17.4	22.7/21.7	27.3/26.1
Max. Continuous AC Passthrough (A)	45				
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; 3L/N/PE 220/380, 230/400Vac				
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	99.90%				
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				
Output Over Voltage Protection	DC Type II/AC Type III				
Certifications and Standards					
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (°C)	-40~60°C, >45°C derating				
Cooling	Smart cooling				
Noise (dB)	<45 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	33.6				
Size (mm)	422W x 699.3H x 279D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				

Microinverter



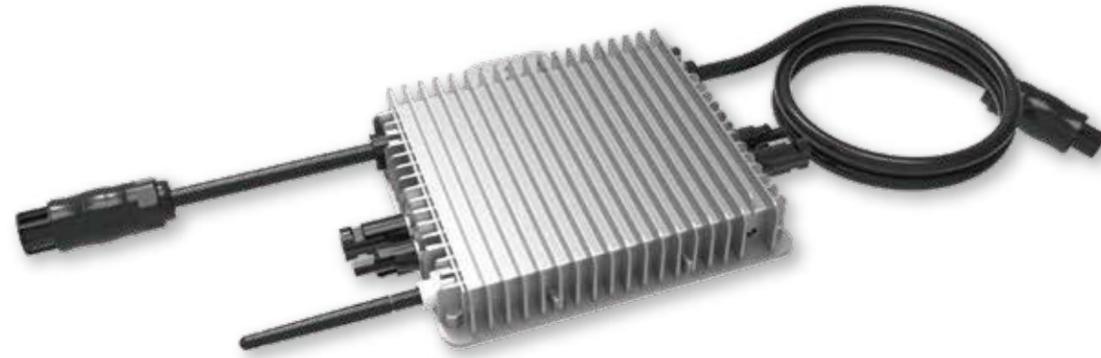
APEX-M-300 /500

- R
Support reactive power compensation
- IP67
IP67 protection degree, 10 years warranty
- 1
1 MPP tracker, module level monitoring
- PLC, Zigbee or WIFI
PLC, Zigbee or WIFI communication
- Rapid shutdown
Rapid shutdown function

Technical Data

Model	APEX-M-300		APEX-M-500	
Input Data (DC)				
Recommended input Power (STC)	210~400W (1 Piece)		210~600W (1 Piece)	
Maximum input DC Voltage	60V			
MPPT Voltage Range	25~55V			
Full Load DC Voltage Range (V)	24.5~55V		40~55V	
Max. DC Short Circuit Current	19.5A			
Max. input Current	13A			
No.of MPP Trackers	1			
No.of Strings per MPP Tracker	1			
Output Data (AC)				
Rated output Power	300W		500W	
Rated output Current	1.4A	1.3A	2.3A	2.2A
Nominal Voltage / Range (this may vary with grid standards)	220V/0.85Un-1.1Un	230V/0.85Un-1.1Un	220V/0.85Un-1.1Un	230V/0.85Un-1.1Un
Nominal Frequency / Range	50 / 60Hz			
Extended Frequency / Range	45~55Hz / 55~65Hz			
Power Factor	>0.99			
Maximum units per branch	17		10	
Efficiency				
CEC Weighted Efficiency	95%			
Peak Inverter Efficiency	96.5%			
Static MPPT Efficiency	99%			
Night Time Power Consumption	50mW			
Mechanical Data				
Ambient Temperature Range	-40~65°C			
Size (mm)	189Wx184Hx31.5D (Without mounting bracket and cable)			
Weight (kg)	2.15			
Cooling	Natural cooling			
Enclosure Environmental Rating	IP67			
Features				
Compatibility	Compatible with 60~72 cell PV modules			
Communication	Power line / WIFI / Zigbee			
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150			
Safety EMC / Standard	UL 1741, IEC62109-1/-2, IEC61000-6-1, IEC61000-6-3, IEC61000-3-2, IEC61000-3-3			
Warranty	10 years			

Microinverter



APEX-M-600/800/1000

R Support reactive power compensation

IP67 protection degree, 10 years warranty

2 MPP tracker, module level monitoring

PLC, Zigbee or WIFI communication

Power Rapid shutdown function

Technical Data

Model	APEX-M-600		APEX-M-800		APEX-M-1000	
Input Data (DC)						
Recommended input Power (STC)	210~400W (2 Pieces)		210~500W (2 Pieces)		210~600W (2 Pieces)	
Maximum input DC Voltage	60V					
MPPT Voltage Range	25~55V					
Full Load DC Voltage Range (V)	24.5~55V		33~55V		40~55V	
Max. DC Short Circuit Current	2×19.5A					
Max. input Current	2×13A					
No.of MPP Trackers	2					
No.of Strings per MPP Tracker	1					
Output Data (AC)						
Rated output Power	600W		800W		1000W	
Rated output Current	2.7A	2.6A	3.6A	3.5A	4.5A	4.4A
Nominal Voltage / Range (this may vary with grid standards)	220V/ 0.85Un-1.1Un	230V/ 0.85Un-1.1Un	220V/ 0.85Un-1.1Un	230V/ 0.85Un-1.1Un	220V/ 0.85Un-1.1Un	230V/ 0.85Un-1.1Un
Nominal Frequency / Range	50 / 60Hz					
Extended Frequency / Range	45~55Hz / 55~65Hz					
Power Factor	>0.99					
Maximum units per branch	8		6		5	
Efficiency						
CEC Weighted Efficiency	95%					
Peak Inverter Efficiency	96.5%					
Static MPPT Efficiency	99%					
Night Time Power Consumption	50mW					
Mechanical Data						
Ambient Temperature Range	-40~65°C					
Size (mm)	212W×230H×40D (Without mounting bracket and cable)					
Weight (kg)	3.15					
Cooling	Natural cooling					
Enclosure Environmental Rating	IP67					
Features						
Compatibility	Compatible with 60~72 cell PV modules					
Communication	Power line / WIFI / Zigbee					
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
Safety EMC / Standard	UL 1741, IEC62109-1/-2, IEC61000-6-1, IEC61000-6-3, IEC61000-3-2, IEC61000-3-3					
Warranty	10 years					

Microinverter



APEX-M-1300/1600 /2000

- R
Support reactive power compensation
- IP67
IP67 protection degree, 10 years warranty
- 4
4 MPP tracker, module level monitoring
- PLC
PLC, Zigbee or WIFI communication
- ⏻
Rapid shutdown function
- 13
Max. DC input current of 13A, adapt to 600WPV module

Technical Data

Model	APEX-M-1300		APEX-M-1600		APEX-M-2000	
Input Data (DC)						
Recommended input Power (STC)	210~400W (4 Pieces)		210~500W (4 Pieces)		210~600W (4 Pieces)	
Maximum input DC Voltage	60V					
MPPT Voltage Range	25~55V					
Full Load DC Voltage Range (V)	26.5~55V		33~55V		40~55V	
Max. DC Short Circuit Current	4×19.5A					
Max. input Current	4×13A					
No.of MPP Trackers	4					
No.of Strings per MPP Tracker	1					
Output Data (AC)						
Rated output Power	1300W		1600W		2000W	
Rated output Current	5.9A	5.7A	7.3A	7A	9.1A	8.7A
Nominal Voltage / Range (this may vary with grid standards)	220V/ 0.85Un-1.1Un	230V/ 0.85Un-1.1Un	220V/ 0.85Un-1.1Un	230V/ 0.85Un-1.1Un	220V/ 0.85Un-1.1Un	230V/ 0.85Un-1.1Un
Nominal Frequency / Range	50 / 60Hz					
Extended Frequency / Range	45~55Hz / 55~65Hz					
Power Factor	>0.99					
Maximum units per branch	4		4		3	
Efficiency						
CEC Weighted Efficiency	95%					
Peak Inverter Efficiency	96.5%					
Static MPPT Efficiency	99%					
Night Time Power Consumption	50mW					
Mechanical Data						
Ambient Temperature Range	-40~65°C					
Size (mm)	267W×300H×42D (Without mounting bracket and cable)					
Weight (kg)	5.2					
Cooling	Natural cooling					
Enclosure Environmental Rating	IP67					
Features						
Compatibility	Compatible with 60~72 cell PV modules					
Communication	Power line / WIFI / Zigbee					
Grid Connection Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
Safety EMC / Standard	UL 1741, IEC62109-1/-2, IEC61000-6-1, IEC61000-6-3, IEC61000-3-2, IEC61000-3-3					
Warranty	10 years					

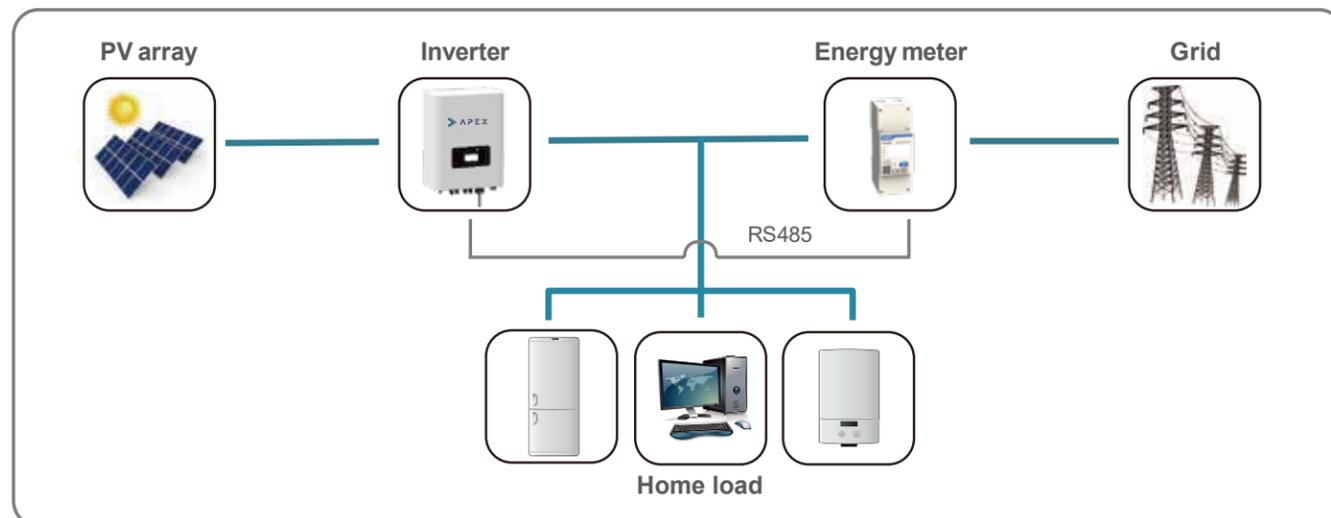
Energy Meter



Technical Data

Model	CHNT DDSU666	CHNT DTSU666	EASTRON SDM 230 Modbus	EASTRON SDM 630-Modbus V2	EASTRON SDM 630 MCT
Battery Data					
Max. direct current measurement (A)	60	80	100	100	1-9999A (with CT)
Direct Voltage measurement between phases	/	176-458V	/	147-480V	50-950V
					50-550V
Direct measurement between phase and neutral	176~264V	100-265V	176~276V	85~480V	20-550V
Accuracy Class					
Active power	Class1				
Reactive power	Class2				
Power Supply					
Power consumption	≤1W / 8VA	≤1.5W / 6VA	≤2W / 10VA	≤2W / 10VA	≤2W / 10VA
AC power supply input voltage	176-264V	100-265V	176-276V	85-480V	85-275V / 120-380V
AC power supply input frequency	50/60Hz		50Hz	50/60Hz ±2%	50/60Hz ±2%
Generation Specifications					
Dimensions (L/H/W) in mm	36x85x66	100x72x66	36x99x63	72x100x66	72x94.5x65
Weight (kg)	0.21	0.44	0.21	0.42	0.29
Mounting options	DIN Rail				
Degree of protection	IP51				
Display	LCD				
Communication interface	RS485				
Max. number of devices to connect	32				
Regulated working temperature range	-25°C~+55°C	-10°C~+45°C	-25°C~+55°C		
Limited working temperature range	-40°C~+70°C	25°C~+75°C	/		
Humidity	≤75%		0~95%, non-Condensing		
Warranty	1.5 years				

Typical Application Diagram





- ◆ Built-in Zigbee, PLC and WIFI modular.
- ◆ Suitable for single-phase and three-phase applications.
- ◆ Enables remotely monitoring and management.



- ◆ OLED display and buttons, easy operation.
- ◆ Compact design and light in weight.



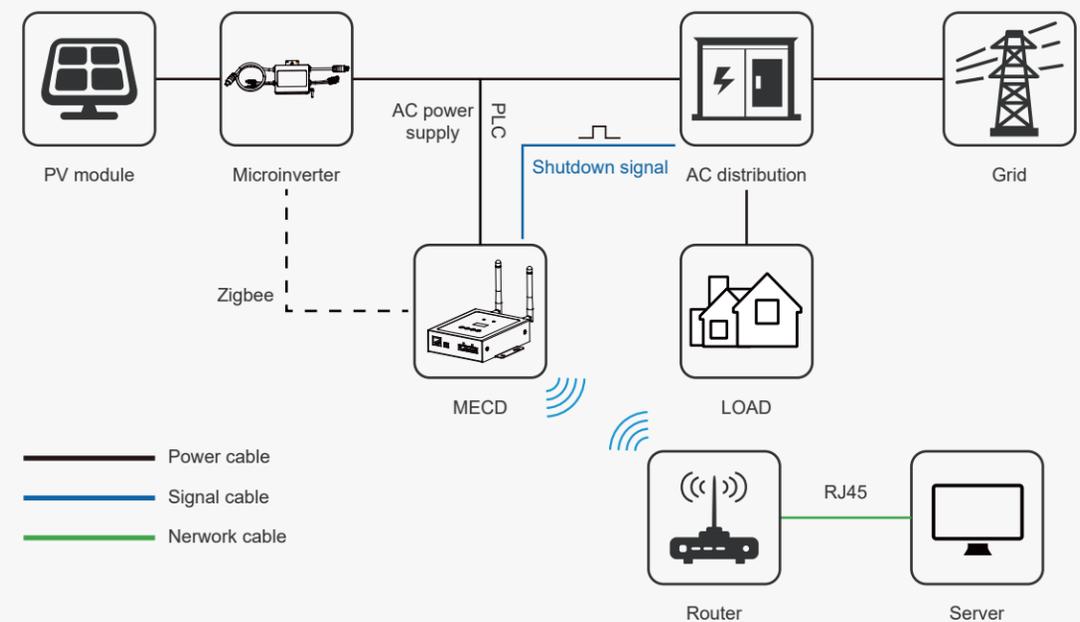
- ◆ Support quick shutdown remotely.
- ◆ Robust design, 3 years warranty.

The MEC communication gateway collects and delivers modular performance data in real time, for comprehensive monitor and manage of your solar system, optimizing the performance of your solar system. With built-in quick shutdown application, the MEC is able to control the microinverter connected shutdown immediately when the dry contact is activated.

Technical Data

Model	MECD
Communication interface	
Communication method	Zigbee, PLC
Max. number of inverters connected	5、 10、 20、 32 (Max.)
Communication to router	WIFI
WIFI wireless security	WEP, WPA2-PSK
RS485	Reserved
Max. distance (free space)	PLC 300m; Zigbee 100m (Max. straight-line distance)
Power Supply	
AC power supply	100 to 240V AC, 50/60Hz
Power consumption	5W typical, 10W Maximum
Mechanical Data	
Dimensions (L/H/W) in mm	133.6×132×35.5 mm
Weight (kg)	0.3
Operation temperature range	-20~+50°C
Mounting method	Wall-mounted
Display	OLED and LED indicators
Features	
Grid type	Single phase / three phase
Digital Input	Control device connection
Other	
Compliance	IEC60950, IEC61000-6-2, FCC Part15 Class B / Class C
Warranty	3 years

Typical Application



Stick Logger



GPRS / WIFI / 4G / Ethernet

Monitor your system anywhere in the world.

- ◆ External light indicator, logging status at a glance;
- ◆ Plug & play, pick power within inverter, no external power needed, easy to install;
- ◆ Independent from inverter to protect parts inside inverter, eliminate potential problems;
- ◆ 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.

Technical Data

Product Model	LSG-3	LSG-4	LSW-3	LS4G-3	LSE-3
Remote Communication Interface	GPRS	GPRS	WiFi	4G	LAN
Working Frequency	GSM850 / EGSM900 / DCS1800 / PCS 1900MHz	GSM850 / EGSM900 / DCS1800 / PCS 1900MHz	2.142GHz~2.484GHz	704MHZ-960MHZ 1710MHZ-2690MHZ	Adaptive Network; 10M / 100M
Satellite Positioning	/	GPS / Beidou < 15m	/	/	/
Antenna	External GPRS Stick Antenna	External GPRS Stick Antenna	External WiFi Stick Antenna	External 4G Stick Antenna	/
Data Interface	RS485 / RS232 / TTL				
Working Voltage	DC4.7V~DC15V				
Working Power	3W	3W	1.5W	5W	1W
SIM Card	Chip Card / MicroSIM	Chip Card / MicroSIM	/	MicroSIM	/
Memory	2M Flash (2M-16M Optional)				
Working Temperature	-40℃~+85℃				
Working Humidity	< 90% (No Condensing)				
No.of Connections	One				
Serial Communication Rate	bps (1200-115200bps Configurable)				
Data Acquisition Interval	Default 5min (1-15min Configurable)				
User Configuration	AT+InstructionSet				
	Remote Server				
	Bluetooth		APP / Web	Local Serial Port	Web
Firmware Upgrade	Remote Upgrade				
Others	Real-time Control, Data resuming				

Stick logger supports GPRS,WIFI, 4G, Ethernet and other communication modes. Its bluetooth function enables localdebugging configuration to collect operation and power generation data from inverters. It pairs with solarman professional platform toenable remote PV system monitoring and to realize distributed power stationmanagement with lower cost and higher efficiency.

Smart PV Management Platform

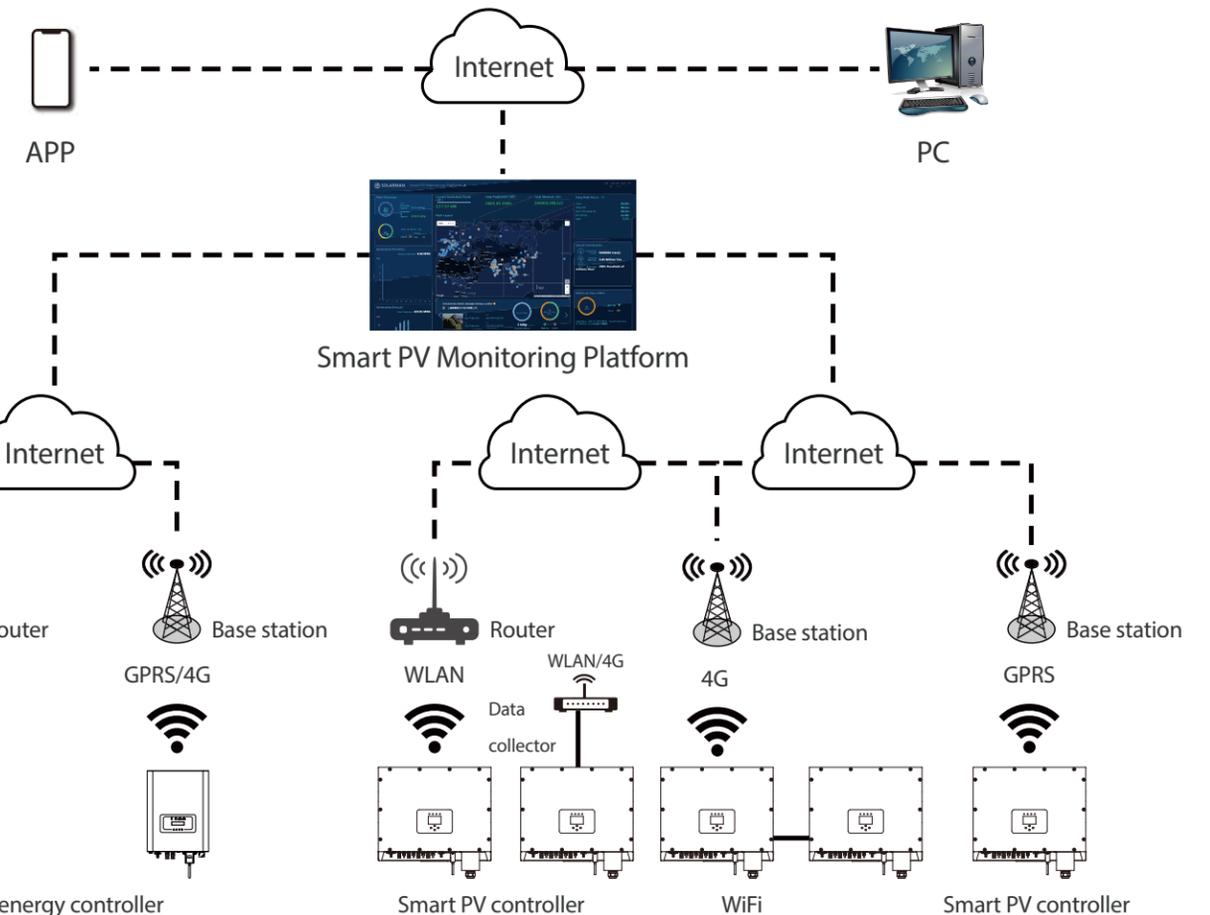


Efficiency

- Open station supports one-click installation and registration;
- Problem support one-click dispatch and navigation.

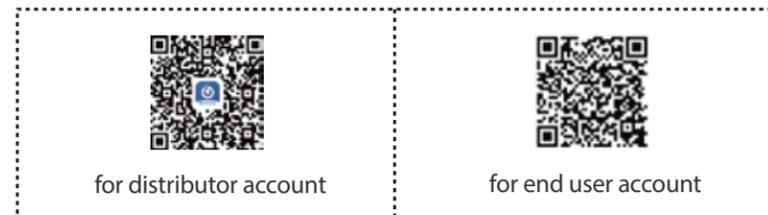
Safe

- Safe operation, traceable logs, etc;
- Support full lifecycle data storage to ensure data security and reliability.



apex solar residential monitoring solution takes great care to ensure that your PV system is in excellent operation throughout its entire life-cycle. This monitoring solution offers you detailed information of your power generating plant including Today energy, Monthly energy, yearly energy, total energy etc, through wireless communication with your router to the internet by a smartwifi plug. User can easily access to the monitoring page via PC web or phone APP.

Maximum your energy output while minimizing your costs. Scan the QR code to build your power station !





- ▶ 5KW
- ▶ Germany
- ▶ APEX-5K



- ▶ 20KW
- ▶ Netherlands
- ▶ APEX-10K



- ▶ 50KW
- ▶ poland
- ▶ APEX-25K

Project cases



- ▶ 200KW
- ▶ London
- ▶ APEX-50K



- ▶ 200KW
- ▶ Vietnam
- ▶ APEX-50K