

DAB Dual Full-Bridge Topology
Off-Grid/Grid-Tied Integrated
Multifunctional Smart Micro-Inverter



APLV-1400/1600/2000, EFFICIENCY EXCEEDING 97%+

FUNCTIONS

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- High-precision MPPT PV Fast Charging**
Real-time capture of maximum power point, ultra-high conversion efficiency of over 97%+.
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- Grid AC Reverse Charging**
A fixed working time mode can be set to store energy during the day and supply power at night.
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- Grid-connected Inverter Output**
Suitable for single crystal/polycrystalline/thin film modules, with peak efficiency exceeding 97%+.
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- Battery grid-connected inverter output**
Support multi-machine parallel expansion; intelligent anti-islanding protection, timing output setting.
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- High-Efficiency Off-grid Inverter Output**
No grid dependence, self-built independent microgrid, and off-grid inverter output for load use.
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- LAN high-speed anti-backflow control**
The anti-backflow control adopts the internal LAN control mode, and the high-speed control prevents the backflow output.

TUYA Monitoring System



FEATURES

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- The latest DAB full-bridge topology technology is adopted to achieve high power density and flexible energy management capabilities, which can effectively improve power generation efficiency (peak efficiency is as high as over 98%).
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- All-round protection functions: overvoltage and undervoltage protection, overfrequency and underfrequency protection, overload protection, and anti-islanding function.
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- The mobile phone remote monitoring function can realize the functions of turning on and off the inverter, adjusting the output power, data analysis, power statistics, etc.
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- Built-in high-precision MPPT can quickly capture and locate the optimal operating point of the I-V curve, with a maximum power tracking efficiency of up to 99.9%.
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- Built-in temperature detection ensures stable operation in extreme temperature environments, and the AI intelligent temperature control management function effectively improves safety and service life.
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- The anti-backflow control function adopts the internal LAN high-speed anti-backflow control. In the same LAN, one anti-backflow meter can control 9 inverters.

MODEL	APLV-1400	APLV-1600	APLV-2000
On-Grid parameters			
Max solar panel input power	4×430W	4×500W	4×625W
Rated output power	1400W	1600W	2000W
Rated output current	6.1A	7A	8.7A
Starting Voltage	>22V d.c.		
MPPT operating voltage range	16-60V		
Nominal output voltage	230V a.c (184~264VAC)		
Maximum output efficiency	97%+		
CEC peak efficiency	98.5%		
Nominal output frequency	50Hz/47.5~51.5Hz 60Hz/57.5~61.5Hz		
Total harmonic distortion	<3%		

Off-Grid parameters			
Max input power	1400W	1600W	2000W
Maximum DC input current	61A	70A	87A
Rated output power	1400W	1600W	2000W
Rated output current	6.1A	7A	8.7A
Operating voltage range	24-60V d.c		
Inverter starting voltage	>24V d.c.		
Nominal output voltage	230V a.c (184~264VAC)		
Maximum output efficiency	97%+		
CEC peak efficiency	98.5%		
Nominal output frequency	50Hz/47.5~51.5Hz 60Hz/57.5~61.5Hz		
Total harmonic distortion	<5%		

PV charging parameters		AC reverse charging parameters	
PV maximum charging current	60A	Maximum charging current	8.7A
PV charging input voltage range	16~60V d.c	Rated AC charging power	2000W
PV charging output voltage range	16~60V d.c	AC charging voltage	230V a.c
Maximum tracking efficiency	99.5%	AC charging with maximum efficiency	97.5%
CEC Peak Efficiency	99.0%	AC charging frequency/range	50/60Hz
Solar Charging SOC	Learning intelligent algorithm	AC charging SOC	Learning intelligent algorithm

Mechanical data	
Ambient temperature range	-40~+65℃
Enclosure protection grade	Ip67
Size	300*260*42mm
Communication Mode	Wi-Fi
Monitoring system	Smart Life
General function control	ON/OFF, output power adjustment 0~100%
Output power factor	>0.99 default/0.8 leading ... 0.8 lagging
Isolation Type	Full isolation