

A hand is shown from the bottom, holding a glowing, multi-colored orb of light. The background is a soft-focus sunset over a field of flowers, with a bright sun low on the horizon creating a lens flare effect. The overall color palette is warm, featuring oranges, yellows, and soft purples.

# CATALOGUE

Empowering Green Energy  
through Innovation and Reliability

# Company History

**2022**  
Total installation over 20GW

**2018**  
Top 100 High-tech Innovative Enterprises in Shandong

**2015**  
Education Ministry Award, Shandong Science Progress Award

**2009**  
Solar division set up

**2001**  
"National Torch Program High-tech Enterprise"

**1988**  
Origin from Shandong University Automation Research Institute

**2024**  
Cumulative exports to more than 30 countries in 4 continents

**2020**  
O&M projects over 8GW

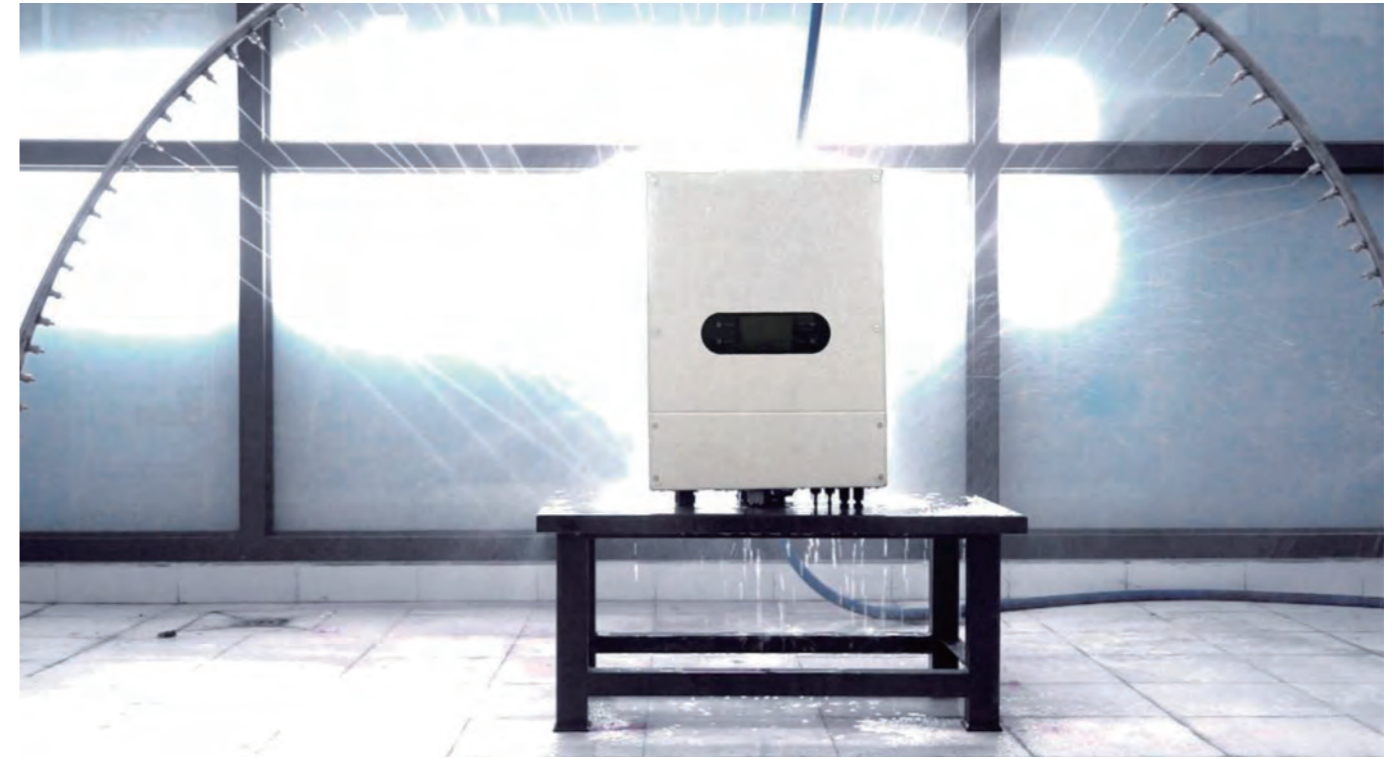
**2016**  
"Front runner" certification  
National Science and Technology Progress Award for solar, first solar inverter manufacturer won this award.

**2011**  
"National Local Joint Engineering Laboratory" set up

**2004**  
National Science and Technology Progress Award for welding

**1993**  
Establishment

## Production Process /Quality Control



**1000+** tests



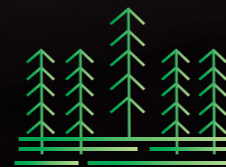
boasts with whole production lines, from the most original SMT circuit board production to the final high temperature aging test. Its full series of automatic production equipment and refined management of whole process inspection make it achieve international leading technical level.



# Production Capacity



**300** Patents



**2,778,000**  
Square feet



**300** R&D Staff



**50%** Automation



**4** R&D Centers



**8** GW Production Capacity



**12** Modern Production Lines



**3** Plants



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## On-grid inverter

# ASP-1.5/2.0/2.7/3.0/3.3/3.6/4.0KTLS



## TLS series

single-phase & single-MPPT

### FEATURES



#### Flexible design

Small size, light weight, support manual installation, reduce user installation and maintenance cost  
Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
DC breaker, easy to maintain and safe to use  
Convection without fan  
Digital DSP control technology



#### Efficient conversion

Transformerless, max. efficiency is up to 98.1%;  
Euro. efficiency is up to 97.6%  
Total current THD <2%



#### Grid friendly

Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function

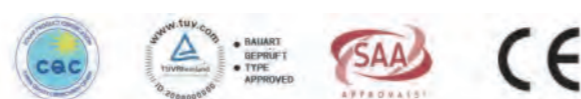
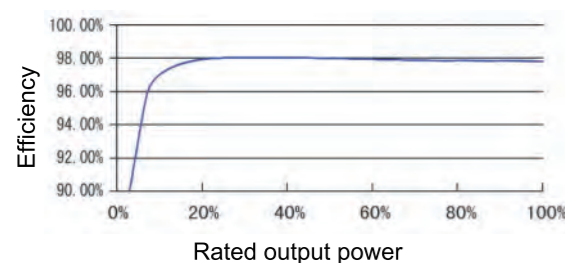


#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE

V<sub>dc</sub>=360V



### TECHNICAL DATA

Model Name	1.5KTLS	2.0KTLS	2.7KTLS	3.0KTLS	3.3KTLS	3.6KTLS	4.0KTLS
<b>Input</b>							
Max. DC input power	3000W	4000W	5400W	6000W	6600W	7200W	8000W
Max. DC input voltage				550V			
Max. DC input current				20A			
MPPT voltage range				40-550V			
Recommended MPPT operating voltage				360V			
Starting voltage				50V			
No.Of MPPT				1			
Max. no. of strings per MPPT				1			
<b>Output</b>							
Rated output power	1500W	2000W	2700W	3000W	3300W	3600W	4000W
Max. output power	1650VA	2200VA	2970VA	3300VA	3630VA	3960VA	4400VA
Max. output current	7.5A	10A	13.5A	15A	15.8A	17.3A	19.2A
Rated grid voltage				220/230/240V			
Grid voltage range				90-290Vac			
Rated grid frequency				50Hz/60Hz			
Grid frequency range				45-55Hz/55-65Hz			
THD				<3% (Under rated power)			
Power factor				>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection				<0.5% (Under rated power)			
<b>System data</b>							
Max. efficiency				98.00%			
Euro. efficiency				97.00%			
Humidity range				0-100% non-condensing			
Cooling type				Natural cooling			
Temperature range				-25~+60°C			
Power consumption at night				<1W			
Max. working altitude				4000m			
Display				LED(optional: LCD)			
Communication interface				WIFI(optional: RS485 or GPRS)			
<b>Protection</b>							
DC reverse-polarity protection				YES			
Short circuit protection				YES			
Output over current protection				YES			
Output over voltage protection				YES			
Insulation resistance monitoring				YES			
Residual current detection				YES			
Surge protection				YES			
Grid monitoring				YES			
Islanding protection				YES			
Temperature protection				YES			
Integrated DC switch				Optional			
<b>Mechanical data</b>							
Dimensions (W*H*D)				295*210*120mm			
Weight				5.5kg			
Protection class				IP66			
<b>Standard</b>							
Safety standard/EMC standard				NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard				IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard				IEC61683, IEC62116, EN50530, IEC60068			

# On-grid Inverter

## ASP-4.6/5/6KTLD-S



### TLS series single-phase & single-MPPT

### FEATURES



Flexible design

Small size, light weight, support manual installation, reduce user installation and maintenance cost  
Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
DC breaker, easy to maintain and safe to use  
Convection without fan  
Digital DSP control technology



Efficient conversion

Transformerless,max. efficiency is up to 98.1%;  
Euro. efficiency is up to 97.6%  
Total current THD <2%



Grid friendly

Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function

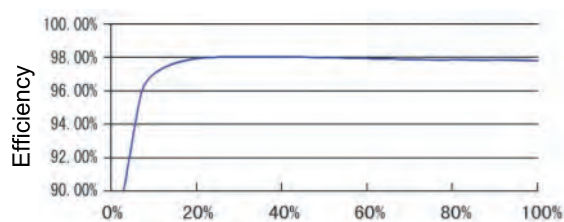


Excellent qualities

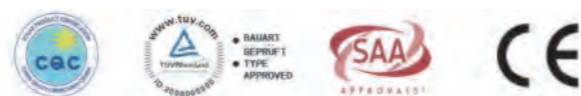
CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE

V<sub>dc</sub>=360V



Rated output power



### TECHNICAL DATA

Model Name	4.6KTLD-S	5KTLD-S	6KTLD-S
<b>Input</b>			
Max. DC input power	6900W	7500W	9000W
Max. DC input voltage	600V		
Max. DC input current	20A		
MPPT voltage range	40-600V		
Recommended MPPT operating voltage	360V		
Starting voltage	50V		
No.Of MPPT	1		
Max. no. of strings per MPPT	1		
<b>Output</b>			
Rated output power	4600W	5000W	6000W
Max. output power	5.06kVA	5.5 kVA	6.6 kVA
Max. output current	23A	25A	27.3A
Rated grid voltage	220/230/240V		
Grid voltage range	90-290 Vac (adjustable)		
Rated grid frequency	50Hz/60Hz		
Grid frequency range	45-55Hz/55-65Hz		
THD	<3% (Under the rated power)		
Power factor	>0.99 (Under the rated power) /Adjustable range: 0.8 leading~0.8 lagging		
DC current injection	<0.5% (Under the rated power)		
<b>System data</b>			
Max. efficiency	98.0%	98.1%	98.1%
Euro. efficiency	97.4%	97.5%	97.5%
Humidity range	0-100% non-condensing		
Cooling type	Natural cooling		
Temperature range	-25~+60°C		
Power consumption at night	< 1W		
Max. working altitude	4000m		
Display	LED(optional: LCD)		
Communication interface	WIFI(optional: RS485 or GPRS)		
<b>Protection</b>			
DC reverse-polarity protection	Yes		
Short circuit protection	Yes		
Output over current protection	Yes		
Output over voltage protection	Yes		
Insulation resistance monitoring	Yes		
Residual current detection	Yes		
Surge protection	Yes		
Grid monitoring	Yes		
Islanding protection	Yes		
Temperature protection	Yes		
Integrated DC switch	Yes		
<b>Mechanical data</b>			
Dimensions (W*H*D)	347*368*167mm		
Weight	9kg		
Protection class	IP66		
<b>Standard</b>			
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)		
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140		
Other standard	IEC61683, IEC62116, EN50530, IEC60068		

# On-grid Inverter

## ASP-4/5/6/8/10KTLD



### TLD series single-phase & dual-MPPT

## FEATURES



### Flexible design

Small size, light weight, support manual installation, reduce user installation and maintenance cost  
Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
DC breaker, easy to maintain and safe to use  
Convection without fan  
Digital DSP control technology



### Efficient conversion

Transformerless,max. efficiency is up to 98.1%;  
Euro. efficiency is up to 97.6%  
Total current THD <2%



### Grid friendly

Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function

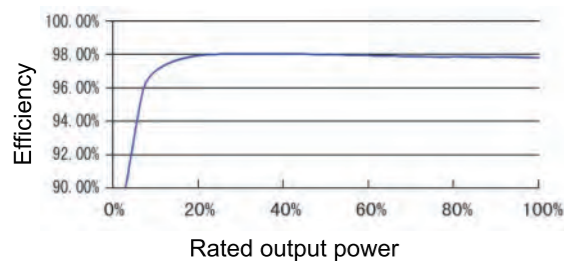


### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

## EFFICIENCY CURVE

V<sub>dc</sub>=360V



## TECHNICAL DATA

Model Name	4KTLD	5KTLD	6KTLD	8KTLD	10KTLD
<b>Input</b>					
Max. DC input power	6000W	7500W		12000W	15000W
Max. DC input voltage	550V				
Max. DC input current	20/20A	20/20A	20/20A	20/26A	20/30A
MPPT voltage range	80-550V				
Recommended MPPT operating voltage	360V				
Starting voltage	50V				
No.Of MPPT	2				
Max. no. of strings per MPPT	1/1		1/2		
<b>Output</b>					
Rated output power	4000W	5000W	6000W	8000W	10000W
Max. output power	4.4 kVA	5.5 kVA	6.6 kVA	8.8 kVA	11 kVA
Max. output current	20A	25A	27.3A	36.4A	45.5A
Rated grid voltage	230V				
Grid voltage range	90~290Vac				
Rated grid frequency	50Hz/60Hz				
Grid frequency range	45~55Hz/55~65Hz				
THD	<2% (Under the rated power)				
Power factor	>0.99 (Under the rated power) /Adjustable range: 0.8 leading~0.8 lagging				
DC current injection	<0.5% (Under the rated power)				
<b>System data</b>					
Max. efficiency	98.1%	98.1%	98.1%	98.1%	98.1%
Euro. efficiency	97.5%	97.5%	97.5%	97.5%	97.6%
Humidity range	0-100% non-condensing				
Cooling type	Natural cooling			Intelligent forced air cooling	
Temperature range	-25~+60°C				
Power consumption at night	< 1W				
Max. working altitude	4000m				
Display	LED(optional: LCD)				
Communication interface	WIFI(optional: RS485 or GPRS)				
<b>Protection</b>					
DC reverse-polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Output over voltage protection	Yes				
Insulation resistance monitoring	Yes				
Residual current detection	Yes				
Surge protection	Yes				
Grid monitoring	Yes				
Islanding protection	Yes				
Temperature protection	Yes				
Integrated DC switch	Yes				
<b>Mechanical data</b>					
Dimensions (W*H*D)	347*368*167mm			347*368*190mm	
Weight	10kg			11kg	
Protection class	IP66				
<b>Standard</b>					
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)				
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140				
Other standard	IEC61683, IEC62116, EN50530, IEC60068				

# On-grid Inverter

## ASP-5/6/8/10KTLC-S



### TLC series Three-phase & single-MPPT

## FEATURES



### Flexible design

Small size, light weight, support manual installation, reduce user installation and maintenance cost  
Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
DC breaker, easy to maintain and safe to use  
Convection without fan  
Digital DSP control technology



### Efficient conversion

Transformerless,max. efficiency is up to 98.1%;  
Euro. efficiency is up to 97.6%  
Total current THD <2%



### Grid friendly

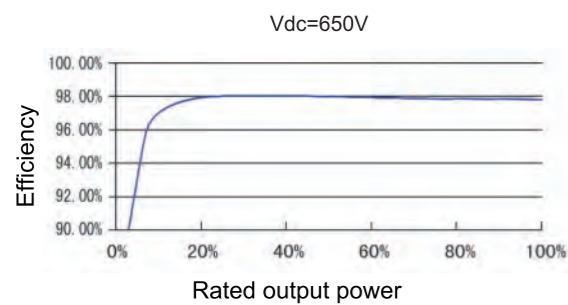
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

## EFFICIENCY CURVE



## TECHNICAL DATA

Model Name	5KTLC-S	6KTLC-S	8KTLC-S	10KTLC-S
<b>Input</b>				
Max. DC input power	6500W	7200W	10400W	13000W
Max. DC input voltage	1100V			
Max. DC input current	20A			
MPPT voltage range	180-1000Vdc			
Recommended MPPT operating voltage	650V			
Starting voltage	180V			
No.Of MPPT	1			
Max. no. of strings per MPPT	1			
<b>Output</b>				
Rated output power	5000W	6000W	8000W	10000W
Max. output power	5.5kVA	6.6kVA	8.8kVA	11kVA
Max. output current	8.5A	10A	13.3A	16.7A
Rated grid voltage	400Vac			
Grid voltage range	310~480Vac			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	45~55Hz/55~65Hz			
THD	< 2% (Under the rated power)			
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	< 0.5% (Under the rated power)			
<b>System data</b>				
Max. efficiency	98.20%	98.20%	98.30%	98.30%
Euro. efficiency	98.10%	98.10%	98.10%	98.10%
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60°C			
Power consumption at night	< 1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	427*429*209mm			
Weight	12kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			

# On-grid Inverter

## ASP-6/8/10/12/15/17KTLC



### TLC series Three-phase & dual-MPPT

#### FEATURES



Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
DC breaker, easy to maintain and safe to use  
Digital DSP control technology



Efficient conversion

Transformerless,max. efficiency is up to 98.7%; Euro. efficiency is up to 98.2%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



Grid friendly

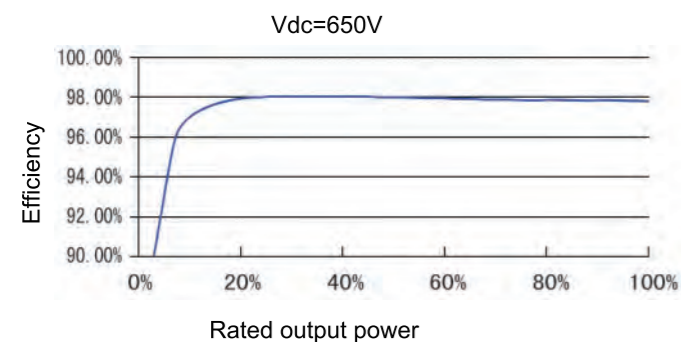
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection



Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	6KTLC	8KTLC	10KTLC	12KTLC	15KTLC	17KTLC
<b>Input</b>						
Max. DC input power	9000W	12000W	15000W	18000W	22500W	25500W
Max. DC input voltage	1100V					
Max. DC input current	20/20A			20/30A		
MPPT voltage range	180-1000V					
Recommended MPPT operating voltage	650V					
Starting voltage	180V					
No.Of MPPT	2			2		
Max. no. of strings per MPPT	1/1			1/2		
<b>Output</b>						
Rated output power	6000W	8000W	10000W	12000W	15000W	17000W
Max. output power	6.6kVA	8.8 kVA	11kVA	13.2kVA	16.5kVA	18.7kVA
Max. output current	10A	13.3A	16.7A	20A	24A	28.3A
Rated grid voltage	400V					
Grid voltage range	310-480Vac					
Rated grid frequency	50Hz/60Hz					
Grid frequency range	45~55Hz/55~65Hz					
THD	<2% (Under the rated power)					
Power factor	>0.99 (Under the rated power) / Adjustable range: 0.8 leading~0.8 lagging					
DC current injection	<0.5% (Under the rated power)					
<b>System data</b>						
Max. efficiency	98.5%	98.5%	98.6%	98.7%	98.7%	98.7%
Euro. efficiency	98%	98%	98.2%	98.1%	98.2%	98.2%
Humidity range	0~100%, non-condensing					
Cooling type	Intelligent forced air cooling					
Temperature range	-25~60°C					
Power consumption at night	<1W					
Max. working altitude	4000m					
Display	LED(optional: LCD)					
Communication interface	WIFI(optional: RS485 or GPRS)					
<b>Protection</b>						
DC reverse-polarity protection	Yes					
Short circuit protection	Yes					
Output over current protection	Yes					
Output over voltage protection	Yes					
Insulation resistance monitoring	Yes					
Residual current detection	Yes					
Surge protection	Yes					
Grid monitoring	Yes					
Islanding protection	Yes					
Temperature protection	Yes					
Integrated DC switch	Yes					
<b>Mechanical data</b>						
Dimensions (W*H*D)	427*450*204mm					
Weight	15kg					
Protection class	IP66					
<b>Standard</b>						
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)					
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140					
Other standard	IEC61683, IEC62116, EN50530, IEC60068					

# On-grid Inverter

## ASP-20/23/25/28/30KTLC



### TLC series Three-phase & dual-MPPT

#### FEATURES



Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
Intelligent forced air cooling  
DC breaker, easy to maintain and safe to use  
Digital DSP control technology



Efficient conversion

Transformerless,max. efficiency is up to 98.8%; Euro. efficiency is up to 98.2%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



Grid friendly

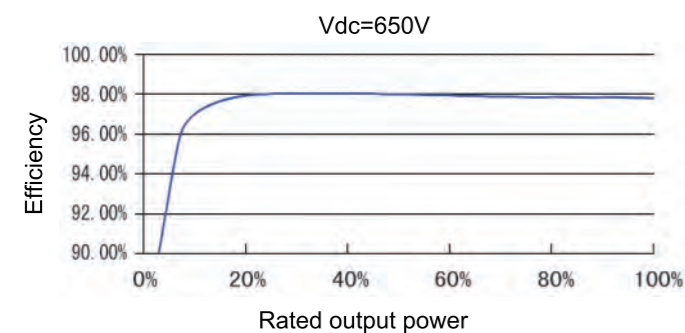
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection



Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	20KTLC	23KTLC	25KTLC	28KTLC	30KTLC
<b>Input</b>					
Max. DC input power	30000W	34500W	37500W	42000W	45000W
Max. DC input voltage			1100V		
Max. DC input current	30/30A		40/30A	40/40A	40/40A
MPPT voltage range	180-1000V				
Recommended MPPT operating voltage	650V				
Starting voltage	180V				
No.Of MPPT	2				
Max. no. of strings per MPPT	2/2				
<b>Output</b>					
Rated output power	20000W	23000W	25000W	28000W	30000W
Max. output power	22kVA	25.3kVA	27.5kVA	30.8kVA	33kVA
Max. output current	32A	36.5A	41A	45A	48A
Rated grid voltage	400V				
Grid voltage range	310-480Vac				
Rated grid frequency	50Hz/60Hz				
Grid frequency range	45~55Hz/55~65Hz				
THD	<2% (Under the rated power)				
Power factor	>0.99 (Under the rated power) / Adjustable range: 0.8 leading~0.8 lagging				
DC current injection	<0.5% (Under the rated power)				
<b>System data</b>					
Max. efficiency	98.8%				
Euro. efficiency	98.2%				
Humidity range	0~100%, non-condensing				
Cooling type	Intelligent forced air cooling				
Temperature range	-25~+60°C				
Power consumption at night	<1W				
Max. working altitude	4000m				
Display	LED(optional: LCD)				
Communication interface	WIFI(optional: RS485 or GPRS)				
<b>Protection</b>					
DC reverse-polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Output over voltage protection	Yes				
Insulation resistance monitoring	Yes				
Residual current detection	Yes				
Surge protection	Yes				
Grid monitoring	Yes				
Islanding protection	Yes				
Temperature protection	Yes				
Integrated DC switch	Yes				
<b>Mechanical data</b>					
Dimensions (W*H*D)	427*450*204mm				
Weight	18kg				
Protection class	IP66				
<b>Standard</b>					
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)				
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140				
Other standard	IEC61683, IEC62116, EN50530, IEC60068				

# On-grid Inverter

## ASP-30/33/36/40KTLC-Pro



### Pro series Three-phase & multi-MPPT

#### FEATURES



Flexible design



Efficient conversion



Grid friendly



Excellent qualities

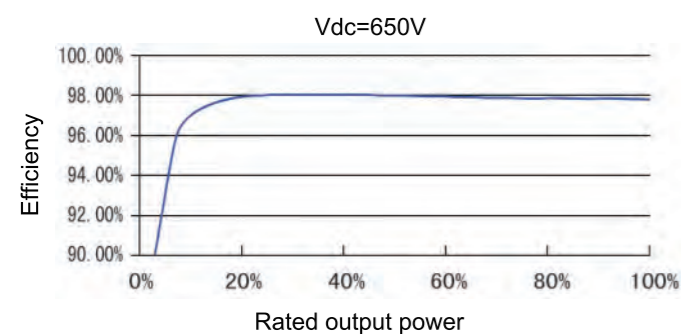
Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
Intelligent forced air cooling  
DC breaker, easy to maintain and safe to use  
Digital DSP control technology

Transformerless,max. efficiency is up to 98.8%;  
Euro. efficiency is up to 98.2%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization

Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	30KTLC-Pro	33KTLC-Pro	36KTLC-Pro	40KTLC-Pro
<b>Input</b>				
Max. DC input power	45000W	49500W	54000W	60000W
Max. DC input voltage	1100V			
Max. DC input current	40/40/20A			
MPPT voltage range	200-1000Vdc			
Recommended MPPT operating voltage	650V			
Starting voltage	180V			
No.Of MPPT	3			
Max. no. of strings per MPPT	2/2/1			
<b>Output</b>				
Rated output power	30000W	33000W	36000W	40000W
Max. output power	33kVA	36.3kVA	39.6kVA	44kVA
Max. output current	48A	53A	56A	66A
Rated grid voltage	400Vac			
Grid voltage range	310~480Vac			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	45~55Hz/55~65Hz			
THD	< 2% (Under the rated power)			
Power factor	> 0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	< 0.5% (Under the rated power)			
<b>System data</b>				
Max. efficiency	98.60%	98.60%	98.60%	98.70%
Euro. efficiency	98.10%	98.10%	98.10%	98.10%
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60°C			
Power consumption at night	< 1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	460*476*228.5mm			
Weight	23kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			

# On-grid Inverter

## ASP-30/33/36/40KTLC-Plus



### PLUS series Three-phase & multi-MPPT

#### FEATURES



Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
Intelligent forced air cooling  
DC breaker, easy to maintain and safe to use  
Digital DSP control technology



Efficient conversion

Transformerless,max. efficiency is up to 98.8%; Euro. efficiency is up to 98.2%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



Grid friendly

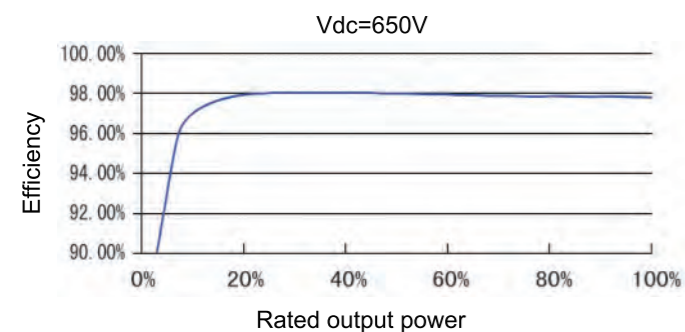
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection



Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	30KTLC-Plus	33KTLC-Plus	36KTLC-Plus	40KTLC-Plus
<b>Input</b>				
Max. DC input power	45000W	49500W	54000W	60000W
Max. DC input voltage	1100V			
Max. DC input current	40/40/20A		40/40/20/20A	40/40/20/20A
MPPT voltage range	200-1000V			
Recommended MPPT operating voltage	650V			
Starting voltage	180V			
No.Of MPPT	3		4	
Max. no. of strings per MPPT	2/2/1		2/2/1/1	
<b>Output</b>				
Rated output power	30000W	33000W	36000W	40000W
Max. output power	33kVA	36.3kVA	39.6kVA	44kVA
Max. output current	48A	53A	56A	65A
Rated grid voltage	400Vac			
Grid voltage range	310-480Vac			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	45-55Hz/55-65Hz			
THD	<2% (Under rated power)			
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	<0.5% (Under rated power)			
<b>System data</b>				
Max. efficiency	98.60%	98.60%	98.60%	98.60%
Euro. efficiency	98.10%	98.10%	98.10%	98.20%
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60°C			
Power consumption at night	<1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	610*564*218mm			
Weight	37kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			

# On-grid Inverter

## ASP-45/50/60KTLC-Plus



### PLUS series Three-phase & multi-MPPT

#### FEATURES



Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi (optional)  
Intelligent forced air cooling  
DC breaker, easy to maintain and safe to use  
Digital DSP control technology



Efficient conversion

Transformerless, max. efficiency is up to 98.7%; Euro. efficiency is up to 98.2%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



Grid friendly

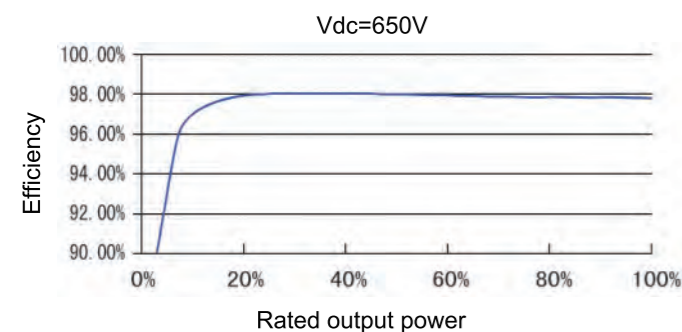
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection



Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	45KTLC-Plus	50KTLC-Plus	60KTLC-Plus
<b>Input</b>			
Max. DC input power	67500W	75000W	90000W
Max. DC input voltage	1100V		
Max. DC input current	40/40/20/20A		45/20/45/20A
MPPT voltage range	200-1000V		
Recommended MPPT operating voltage	650V		
Starting voltage	180V		
No.Of MPPT	4		
Max. no. of strings per MPPT	2/2/1/1		3/1/3/1
<b>Output</b>			
Rated output power	45000W	50000W	60000W
Max. output power	49.5kVA	55kVA	66kVA
Max. output current	72A	80A	96A
Rated grid voltage	400Vac		
Grid voltage range	310-480Vac		
Rated grid frequency	50Hz/60Hz		
Grid frequency range	45-55Hz/55-65Hz		
THD	< 2% (Under rated power)		
Power factor	> 0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging		
DC current injection	< 0.5% (Under rated power)		
<b>System data</b>			
Max. efficiency	98.60%	98.60%	98.70%
Euro. efficiency	98.20%	98.20%	98.20%
Humidity range	0-100% non-condensing		
Cooling type	Intelligent forced air cooling		
Temperature range	-25~+60°C		
Power consumption at night	< 1W		
Max. working altitude	4000m		
Display	LED(optional: LCD)		
Communication interface	WIFI(optional: RS485 or GPRS)		
<b>Protection</b>			
DC reverse-polarity protection	Yes		
Short circuit protection	Yes		
Output over current protection	Yes		
Output over voltage protection	Yes		
Insulation resistance monitoring	Yes		
Residual current detection	Yes		
Surge protection	Yes		
Grid monitoring	Yes		
Islanding protection	Yes		
Temperature protection	Yes		
Integrated DC switch	Yes		
<b>Mechanical data</b>			
Dimensions (W*H*D)	610*564*218mm		
Weight	37kg		
Protection class	IP66		
<b>Standard</b>			
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)		
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140		
Other standard	IEC61683, IEC62116, EN50530, IEC60068		

# On-grid Inverter

## ASP-50/60KTLC,70/75KTLC-HV



### TLC series Three-phase & multi-MPPT

#### FEATURES



Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional) DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



Efficient conversion

Transformerless,max. efficiency is up to 99%; Euro. efficiency is up to 98.5%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



Grid friendly

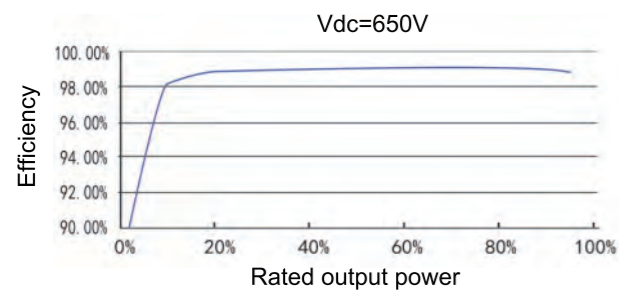
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	50KTLC	60KTLC	70KTLC-HV	75KTLC-HV
<b>Input</b>				
Max. DC input power	65000W	78000W	91000W	97500W
Max. DC input voltage	1100V			
Max. DC input current	45/45/45A			
MPPT voltage range	250-1100V			
Recommended MPPT operating voltage	650V		740V	
Starting voltage	300V			
No.Of MPPT	3			
Max. no. of strings per MPPT	4		4	
<b>Output</b>				
Rated output power	50000W	60000W	70000W	75000W
Max. output power	55kVA	66kVA	77kVA	82.5kVA
Max. output current	80A	96A	89A	95A
Rated grid voltage	400V		500V	
Grid voltage range	310~480Vac		422~550Vac	
Rated grid frequency	50Hz/60Hz			
Grid frequency range	45~55Hz/55~65Hz			
THD	< 2% (Under the rated power)			
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	< 0.5% (Under the rated power)			
<b>System data</b>				
Max. efficiency	98.7%	98.9%	99%	
Euro. efficiency	98.3%	98.5%	98.5%	
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60°C			
Power consumption at night	< 1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	282*681*660mm			
Weight	47kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			

# On-grid Inverter

## ASP-70/80KTLC-Plus



# Plus series

## Three-phase & multi-MPPT

### FEATURES



#### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional) DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



#### Efficient conversion

Transformerless,max. efficiency is up to 99.02%; Euro. efficiency is up to 98.51%  
Total current THD <3%  
Three-level SVPWM control technology, increase DC voltage utilization



#### Grid friendly

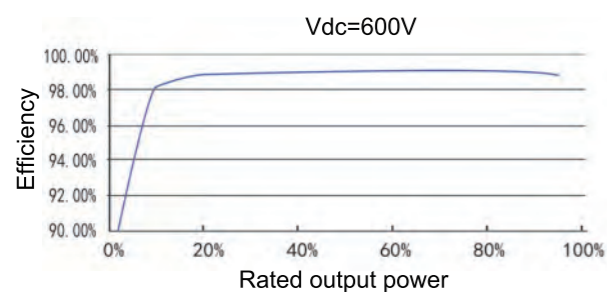
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE



### TECHNICAL DATA

Model Name	70KTLC-Plus	80KTLC-Plus
<b>Input</b>		
Max. DC input power	105kW	120kW
Max. DC input voltage	1100V	
Max. DC input current	45A*4	
MPPT voltage range	180~1000V	
Recommended MPPT operating voltage	550-850V	
Starting voltage	180V	
No.Of MPPT	4	
Max. no. of strings per MPPT	3	
<b>Output</b>		
Rated output power	70kW	80kW
Max. output power	77kVA	88kVA
Max. output current	113A	127A
Rated grid voltage	400V	
Grid voltage range	310-480Vac	
Rated grid frequency	50Hz/60Hz	
Grid frequency range	45-55Hz/55-65Hz	
THD	<2% (Under rated power)	
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging	
DC current injection	<0.5% (Under rated power)	
<b>System data</b>		
Max. efficiency	98.7%	99.7%
Euro. efficiency	98.1%	98.2%
Humidity range	0-100% non-condensing	
Cooling type	Intelligent forced air cooling	
Temperature range	-25~+60°C	
Power consumption at night	≤1W	
Max. working altitude	5000m (frequency-decreasing above 4000m)	
Display	LED, Bluetooth+APP(optional:LCD)	
Communication interface	WIFI(optional: RS485 or GPRS)	
<b>Protection</b>		
DC reverse-polarity protection	Yes	
Short circuit protection	Yes	
Output over current protection	Yes	
Output over voltage protection	Yes	
Insulation resistance monitoring	Yes	
Residual current detection	Yes	
Surge protection	Yes	
Grid monitoring	Yes	
Islanding protection	Yes	
Temperature protection	Yes	
Integrated DC switch	Yes	
<b>Mechanical data</b>		
Dimensions (W*H*D)	733*586*262mm	
Weight	50kg	
Protection class	IP66	
<b>Standard</b>		
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)	
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140	
Other standard	IEC61683, IEC62116, EN50530, IEC60068	

## On-grid inverter

# ASP-70/80/90/100/110/120KTLC-Pro



## Pro series

Three-phase & multi-MPPT

### FEATURES



#### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional) DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box & DC lightning protection, reduce system cost for users



#### Efficient conversion

Transformerless, max. efficiency is up to 99%; Euro. efficiency is up to 98.5%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



#### Grid friendly

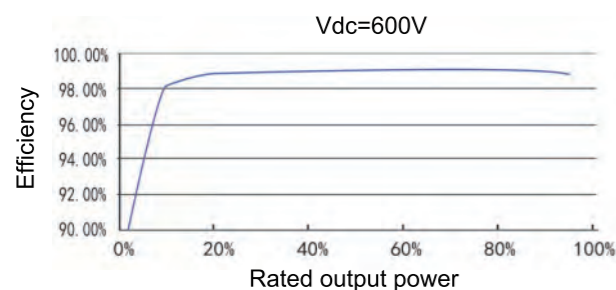
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE



### TECHNICAL DATA

Model Name	70KTLC-Pro	80KTLC-Pro	90KTLC-Pro	100KTLC-Pro	110KTLC-Pro	120KTLC-Pro
<b>Input</b>						
Max. DC input power	105kW	120kW	135kW	150kW	165kW	180kW
Max. DC input voltage	1100V					
Max. DC input current	40/40/20/40/40/20A		40/40/20/20/40/40/20/20A			
MPPT voltage range	200-1000V					
Recommended MPPT operating voltage	600V					
Starting voltage	180V					
No.Of MPPT	6			8		
Max. no. of strings per MPPT	2/2/1/2/2/1		2/2/1/1/2/2/1/1			
<b>Output</b>						
Rated output power	70kW	80kW	90kW	100kW	110kW	120kW
Max. output power	77kW	88kW	99kW	110kW	121kW	132kW
Max. output current	112A	128A	144A	160A	176A	191A
Rated grid voltage	400Vac					
Grid voltage range	310-480Vac					
Rated grid frequency	50Hz/60Hz					
Grid frequency range	45-55Hz/55-65Hz					
THD	< 2% (Under rated power)					
Power factor	> 0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging					
DC current injection	< 0.5% (Under rated power)					
<b>System data</b>						
Max. efficiency	98.60%	98.60%	98.60%	98.60%	98.70%	98.70%
Euro. efficiency	98.10%	98.10%	98.10%	98.10%	98.10%	98.20%
Humidity range	0-100% non-condensing					
Cooling type	Intelligent forced air cooling					
Temperature range	-25~+60°C					
Power consumption at night	< 1W					
Max. working altitude	4000m					
Display	LED(optional: LCD)					
Communication interface	WIFI(optional: RS485 or GPRS)					
<b>Protection</b>						
DC reverse-polarity protection	Yes					
Short circuit protection	Yes					
Output over current protection	Yes					
Output over voltage protection	Yes					
Insulation resistance monitoring	Yes					
Residual current detection	Yes					
Surge protection	Yes					
Grid monitoring	Yes					
Islanding protection	Yes					
Temperature protection	Yes					
Integrated DC switch	Yes					
<b>Mechanical data</b>						
Dimensions (W*H*D)	1160*611*286mm					
Weight	92kg					
Protection class	IP66					
<b>Standard</b>						
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)					
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140					
Other standard	IEC61683, IEC62116, EN50530, IEC60068					

# On-grid Inverter

## ASP-80/90/100/110/125KTLC



### TLC series Three-phase & multi-MPPT

### FEATURES



#### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional)  
DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



#### Efficient conversion

Transformerless,max. efficiency is up to 98.9%; Euro. efficiency is up to 98.2%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



#### Grid friendly

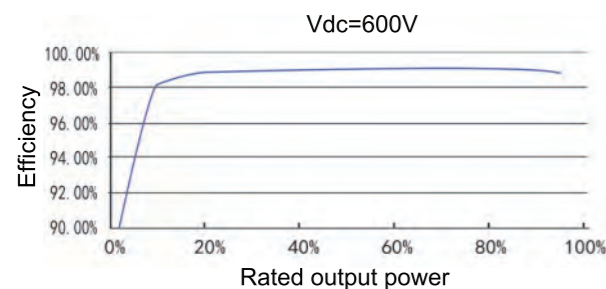
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE



### TECHNICAL DATA

Model Name	80KTLC	90KTLC	100KTLC	110KTLC	125KTLC
<b>Input</b>					
Max. DC input power	120kW	135kW	150kW	165kW	187.5kW
Max. DC input voltage	1100V				
Max. DC input current	30A*8	30A*9	30A*10	30A*10	30A*10
MPPT voltage range	200~1000V				
Recommended MPPT operating voltage	600V				
Starting voltage	300V				
No.Of MPPT	8	9	10	10	10
Max. no. of strings per MPPT	2				
<b>Output</b>					
Rated output power	80kW	90kW	100kW	110kW	125kW
Max. output power	88kVA	99kVA	110kVA	121kVA	137.5kVA
Max. output current	127A	142.9A	158.8A	174.6A	199.3A
Rated grid voltage	400V				
Grid voltage range	310~480Vac				
Rated grid frequency	50Hz/60Hz				
Grid frequency range	45~55Hz/55~65Hz				
THD	< 2% (Under the rated power)				
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging				
DC current injection	< 0.5% (Under the rated power)				
<b>System data</b>					
Max. efficiency	98.6%	98.6%	98.7%	98.7%	98.9%
Euro. efficiency	98.1%	98.1%	98.1%	98.1%	98.2%
Humidity range	0-100% non-condensing				
Cooling type	Intelligent forced air cooling				
Temperature range	-25~+60°C				
Power consumption at night	< 1W				
Max. working altitude	4000m				
Display	LED(optional: LCD)				
Communication interface	WIFI(optional: RS485 or GPRS)				
<b>Protection</b>					
DC reverse-polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Output over voltage protection	Yes				
Insulation resistance monitoring	Yes				
Residual current detection	Yes				
Surge protection	Yes				
Grid monitoring	Yes				
Islanding protection	Yes				
Temperature protection	Yes				
Integrated DC switch	Yes				
<b>Mechanical data</b>					
Dimensions (W*H*D)	1050*620*333mm				
Weight	85kg				
Protection class	IP66				
<b>Standard</b>					
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)				
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140				
Other standard	IEC61683, IEC62116, EN50530, IEC60068				

# On-grid Inverter

## ASP-100/125/136K-HV



### TLC series Three-phase & multi-MPPT

## FEATURES



### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional)  
DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



### Efficient conversion

Transformerless,max. efficiency is up to 98.9%; Euro. efficiency is up to 98.4%  
Total current THD <2%  
Three-level SVPWM control technology, increase DC voltage utilization



### Grid friendly

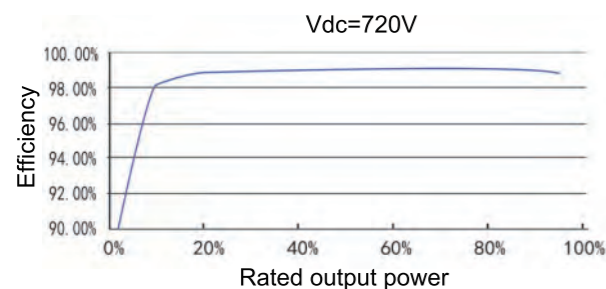
LVVRT HVVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

## EFFICIENCY CURVE



## TECHNICAL DATA

Model Name	100K-HV	125K-HV	136K-HV
<b>Input</b>			
Max. DC input power	150kW	187.5kW	204kW
Max. DC input voltage	1100V		
Max. DC input current	30A*10		
MPPT voltage range	200~1000V		
Recommended MPPT operating voltage	720V		
Starting voltage	300V		
No.Of MPPT	10		
Max. no. of strings per MPPT	2		
<b>Output</b>			
Rated output power	100kW	125kW	136kW
Max. output power	110kVA	138kVA	150kVA
Max. output current	127A	158.8A	172.6A
Rated grid voltage	500V		
Grid voltage range	422~550Vac		
Rated grid frequency	50Hz/60Hz		
Grid frequency range	45~55Hz/55~65Hz		
THD	< 2% (Under the rated power)		
Power factor	> 0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging		
DC current injection	< 0.5% (Under the rated power)		
<b>System data</b>			
Max. efficiency	98.9%	98.9%	98.9%
Euro. efficiency	98.3%	98.4%	98.4%
Humidity range	0-100% non-condensing		
Cooling type	Intelligent forced air cooling		
Temperature range	-25~+60°C		
Power consumption at night	< 1W		
Max. working altitude	4000m		
Display	LED(optional: LCD)		
Communication interface	WIFI(optional: RS485 or GPRS)		
<b>Protection</b>			
DC reverse-polarity protection	Yes		
Short circuit protection	Yes		
Output over current protection	Yes		
Output over voltage protection	Yes		
Insulation resistance monitoring	Yes		
Residual current detection	Yes		
Surge protection	Yes		
Grid monitoring	Yes		
Islanding protection	Yes		
Temperature protection	Yes		
Integrated DC switch	Yes		
<b>Mechanical data</b>			
Dimensions (W*H*D)	1050*620*333mm		
Weight	85kg		
Protection class	IP66		
<b>Standard</b>			
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)		
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140		
Other standard	IEC61683, IEC62116, EN50530, IEC60068		

# On-grid Inverter

## ASP-150/160KTLC-Pro



### Pro series Three-phase & multi-MPPT

### FEATURES



#### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional) DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



#### Efficient conversion

Transformerless,max. efficiency is up to 99.02%; Euro. efficiency is up to 98.51%  
Total current THD <3%  
Three-level SVPWM control technology, increase DC voltage utilization



#### Grid friendly

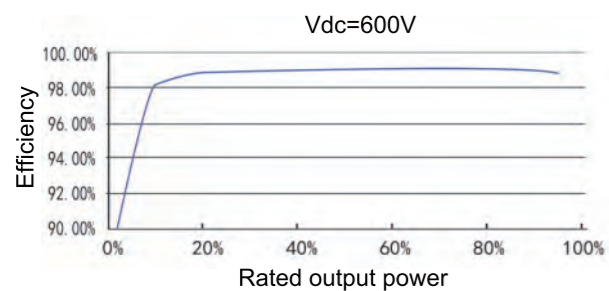
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE



### TECHNICAL DATA

Model Name	150KTLC-Pro	160KTLC-Pro
<b>Input</b>		
Max. DC input power	225kW	240kW
Max. DC input voltage	1100V	
Max. DC input current	45A*8	
MPPT voltage range	180~1000V	
Recommended MPPT operating voltage	550-850V	
Starting voltage	180V	
No.Of MPPT	8	
Max. no. of strings per MPPT	3	
<b>Output</b>		
Rated output power	150kW	160kW
Max. output power	165kVA	176kVA
Max. output current	251A	267A
Rated grid voltage	400V	
Grid voltage range	310-480Vac	
Rated grid frequency	50Hz/60Hz	
Grid frequency range	45-55Hz/55-65Hz	
THD	< 2% (Under rated power)	
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging	
DC current injection	<0.5% (Under rated power)	
<b>System data</b>		
Max. efficiency	98.7%	98.7%
Euro. efficiency	98.1%	98.1%
Humidity range	0-100% non-condensing	
Cooling type	Intelligent forced air cooling	
Temperature range	-25~+60°C	
Power consumption at night	≤1W	
Max. working altitude	5000m (frequency-decreasing above 4000m)	
Display	LED, Bluetooth+APP(optional:LCD)	
Communication interface	WIFI(optional: RS485 or GPRS)	
<b>Protection</b>		
DC reverse-polarity protection	Yes	
Short circuit protection	Yes	
Output over current protection	Yes	
Output over voltage protection	Yes	
Insulation resistance monitoring	Yes	
Residual current detection	Yes	
Surge protection	Yes	
Grid monitoring	Yes	
Islanding protection	Yes	
Temperature protection	Yes	
Integrated DC switch	Yes	
<b>Mechanical data</b>		
Dimensions (W*H*D)	1246*717*298mm	
Weight	95kg	
Protection class	IP66	
<b>Standard</b>		
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)	
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140	
Other standard	IEC61683, IEC62116, EN50530, IEC60068	

# On-grid Inverter

## ASP-225/320K-EHV



### TLC series Three-phase & multi-MPPT

### FEATURES



#### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional) DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



#### Efficient conversion

Transformerless,max. efficiency is up to 99.02%; Euro. efficiency is up to 98.51%  
Total current THD <3%  
Three-level SVPWM control technology, increase DC voltage utilization



#### Grid friendly

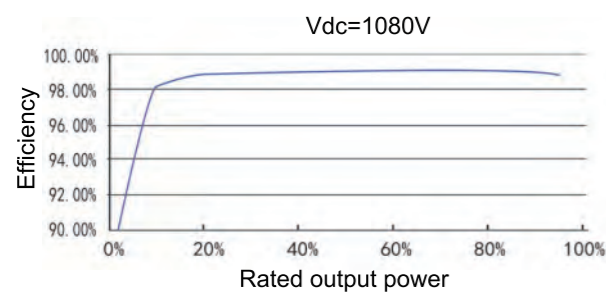
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE



### TECHNICAL DATA

Model Name	225K-EHV	320K-EHV
<b>Input</b>		
Max. DC input power	337.5kW	480kW
Max. DC input voltage	1500V	
Max. DC input current	40A*12	40A*12 (Optional: 30A*14/30A*16)
MPPT voltage range	500~1500V	
Recommended MPPT operating voltage	1080V	
Starting voltage	550V	
No.Of MPPT	12	12 (Optional: 14/16)
Max. no. of strings per MPPT	2	

<b>Output</b>		
Rated output power	225kW	320kW
Max. output power	247.5kVA	352kVA
Max. output current	178.7A	254A
Rated grid voltage	800V	
Grid voltage range	640-920Vac	
Rated grid frequency	50Hz/60Hz	
Grid frequency range	45-55Hz/55-65Hz	
THD	< 3% (Under rated power)	
Power factor	> 0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging	
DC current injection	< 0.5% (Under rated power)	

<b>System data</b>		
Max. efficiency	99.02%	99.02%
Euro. efficiency	98.51%	98.52%
Humidity range	0-100% non-condensing	
Cooling type	Intelligent forced air cooling	
Temperature range	-30~+60°C	
Power consumption at night	≤2W	
Max. working altitude	5000m (frequency-decreasing above 4000m)	
Display	LED, Bluetooth+APP(optional:LCD)	
Communication interface	WIFI(optional: RS485 or GPRS)	

<b>Protection</b>		
DC reverse-polarity protection	Yes	
Short circuit protection	Yes	
Output over current protection	Yes	
Output over voltage protection	Yes	
Insulation resistance monitoring	Yes	
Residual current detection	Yes	
Surge protection	Yes	
Grid monitoring	Yes	
Islanding protection	Yes	
Temperature protection	Yes	
Integrated DC switch	Yes	

<b>Mechanical data</b>		
Dimensions (W*H*D)	1008*700*351mm	1136*870*361mm
Weight	96kg	116kg
Protection class	IP66	

<b>Standard</b>		
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)	
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140	
Other standard	IEC61683, IEC62116, EN50530, IEC60068	

## On-grid inverter

# ASP-8/10/12/15KTLC-LV



## TLC-LV series

Three-phase & dual-MPPT

### FEATURES



#### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional)  
DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box & DC lightning protection, reduce system cost for users



#### Efficient conversion

Transformerless, max. efficiency is up to 99.02%;  
Euro. efficiency is up to 98.51%  
Total current THD <3%  
Three-level SVPWM control technology, increase DC voltage utilization



#### Grid friendly

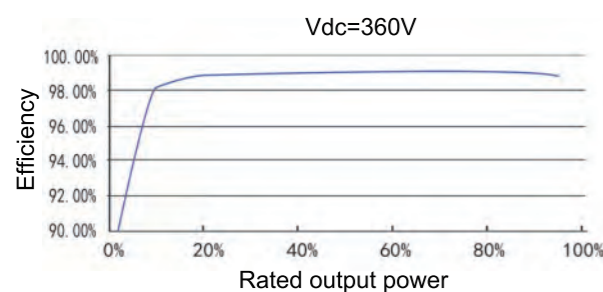
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



#### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

### EFFICIENCY CURVE



### TECHNICAL DATA

Model Name	8KTLC-LV	10KTLC-LV	12KTLC-LV	15KTLC-LV
<b>Input</b>				
Max. DC input power	12000W	15000W	18000W	22500W
Max. DC input voltage	1000V			
Max. DC input current	40A/40A			
MPPT voltage range	180-1000V			
Recommended MPPT operating voltage	360V			
Starting voltage	180V			
No.Of MPPT	2			
Max. no. of strings per MPPT	2			
<b>Output</b>				
Rated output power	8000W	10000W	12000W	15000W
Max. output power	8.8kVA	11kVA	13.2kVA	16.5kVA
Max. output current	23A	30A	34.6A	43.3A
Rated grid voltage	3/(N)/PE, 220V			
Grid voltage range	170-265Vac			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	47.5-52.5Hz/57.5-62.5Hz			
THD	<3% (Under rated power)			
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	<0.5% (Under rated power)			
<b>System data</b>				
Max. efficiency	98.50%	98.60%	98.70%	98.70%
Euro. efficiency	98.00%	98.10%	98.10%	98.20%
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60°C			
Power consumption at night	<1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	427*439*212mm			
Weight	18kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			

## On-grid inverter

# ASP-18/20/25/30KTLC-LV



## TLC-LV series

### Three-phase & multi-MPPT

## FEATURES



### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional)  
DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box & DC lightning protection, reduce system cost for users



### Efficient conversion

Transformerless, max. efficiency is up to 99.02%;  
Euro. efficiency is up to 98.51%  
Total current THD <3%  
Three-level SVPWM control technology, increase DC voltage utilization



### Grid friendly

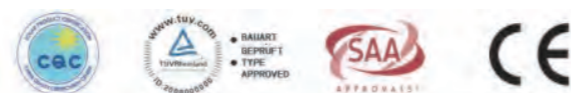
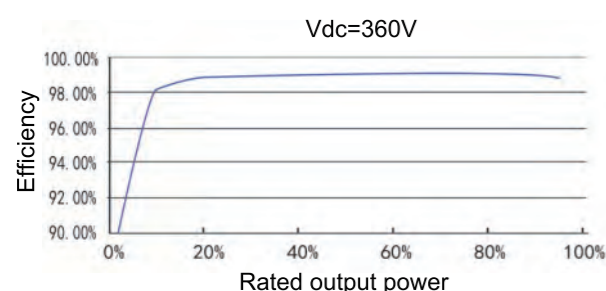
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

## EFFICIENCY CURVE



## TECHNICAL DATA

Model Name	18KTLC-LV	20KTLC-LV	25KTLC-LV	30KTLC-LV
<b>Input</b>				
Max. DC input power	27000W	30000W	37500W	45000W
Max. DC input voltage	1000V			
Max. DC input current	40/40/20/20A			
MPPT voltage range	180-1000V			
Recommended MPPT operating voltage	360V			
Starting voltage	180V			
No.Of MPPT	4			
Max. no. of strings per MPPT	2			
<b>Output</b>				
Rated output power	18000W	20000W	25000W	30000W
Max. output power	19.8kVA	22kVA	27.5kVA	33kVA
Max. output current	51.9A	57.7A	72.1A	86.6A
Rated grid voltage	3(N)/PE, 220V			
Grid voltage range	170-265Vac			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	47.5-52.5Hz/57.5-62.5Hz			
THD	< 3% (Under rated power)			
Power factor	> 0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	< 0.5% (Under rated power)			
<b>System data</b>				
Max. efficiency	98.70%	98.70%	98.70%	98.70%
Euro. efficiency	98.20%	98.10%	98.20%	98.20%
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60°C			
Power consumption at night	< 1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	610*564*218mm			
Weight	39kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			

# On-grid inverter

## ASP-36/40/50/60KTLC-LV



### TLC-LV series Three-phase & multi-MPPT

#### FEATURES



##### Flexible design

Multi-communication interface: RS485, GPRS(optional), Wifi(optional) DC breaker, easy to maintain and safe to use  
Integrated functions of combiner box& DC lightning protection, reduce system cost for users



##### Efficient conversion

Transformerless,max. efficiency is up to 99.02%; Euro. efficiency is up to 98.51%  
Total current THD <3%  
Three-level SVPWM control technology, increase DC voltage utilization



##### Grid friendly

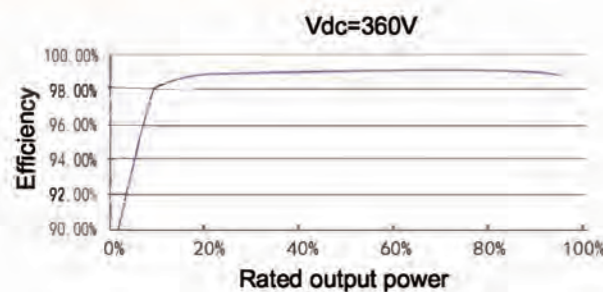
LVRT HVRT function  
Adjustable reactive power, power factor from 0.8 leading to 0.8 lagging  
Active and passive anti-islanding protection  
Continuously adjustable active power (0-100%) function



##### Excellent qualities

CQC Gold Sun Certification, TUV Certification, SAA Certification, CE Certification

#### EFFICIENCY CURVE



#### TECHNICAL DATA

Model Name	36KTLC-LV	40KTLC-LV	50KTLC-LV	60KTLC-LV
<b>Input</b>				
Max. DC input power	54000W	60000W	75000W	90000W
Max. DC input voltage	1000V			
Max. DC input current	40/40/20/40/40/20A		40/40/20/20/40/40/20/20A	
MPPT voltage range	180-1000V			
Recommended MPPT operating voltage	360V			
Starting voltage	180V			
No.Of MPPT	6		8	
Max. no. of strings per MPPT	2			
<b>Output</b>				
Rated output power	36000W	40000W	50000W	60000W
Max. output power	39.6kVA	44kVA	55kVA	66kVA
Max. output current	103.9A	115.4A	144.3A	173.2A
Rated grid voltage	3(N)/PE, 220V			
Grid voltage range	170-265Vac			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	47.5-52.5Hz/57.5-62.5Hz			
THD	<3% (Under rated power)			
Power factor	>0.99 (Under rated power) / Adjustable range: 0.8 leading-0.8 lagging			
DC current injection	<0.5% (Under rated power)			
<b>System data</b>				
Max. efficiency	98.70%	98.70%	98.80%	98.80%
Euro. efficiency	98.10%	98.20%	98.20%	98.30%
Humidity range	0-100% non-condensing			
Cooling type	Intelligent forced air cooling			
Temperature range	-25~+60 °C			
Power consumption at night	<1W			
Max. working altitude	4000m			
Display	LED(optional: LCD)			
Communication interface	WIFI(optional: RS485 or GPRS)			
<b>Protection</b>				
DC reverse-polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Output over voltage protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Grid monitoring	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
<b>Mechanical data</b>				
Dimensions (W*H*D)	1160*611*286mm			
Weight	90kg			
Protection class	IP66			
<b>Standard</b>				
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)			
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140			
Other standard	IEC61683, IEC62116, EN50530, IEC60068			





# Hybrid Inverter

## AEP-3KS/3K6S/4KS/4K6S/5KS/6KS48P

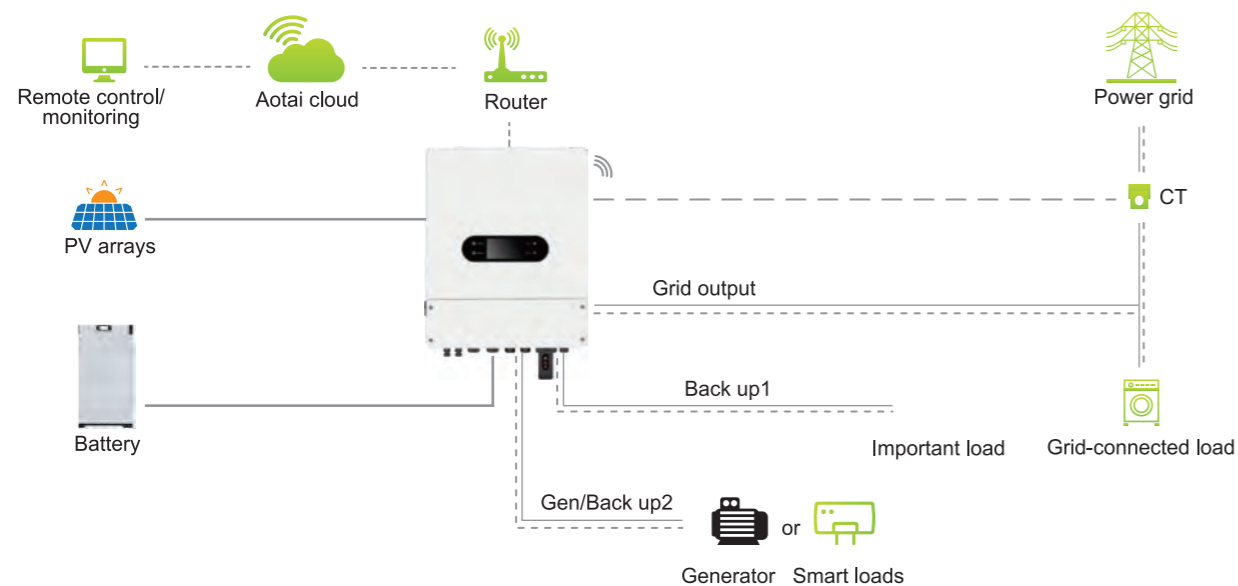


### AEP series

#### Single-phase

-  Up-to-120A current of battery charge and discharge
-  Off-grid peak power of twice of rated power within 15 seconds
-  Switching as uninterruptible power supply within 10ms
-  Supporting lead-acid batteries and lithium batteries and matching economical solutions for different markets

### Smart Energy Solutions



### TECHNICAL DATA

Model Name	AEP-3KS48P	AEP-3K6S48P	AEP-4KS48P	AEP-4K6S48P	AEP-5KS48P	AEP-6KS48P
<b>Battery input data</b>						
Battery Type	Lithium or lead acid battery					
Rated battery voltage	48V					
Maximum charging voltage	≤60 (Configurable)					
Maximum charge/discharge current	75A	90A	100A	110A	120A	120A
<b>PV input data</b>						
Maximum DC input power	6kW	7.2kW	8kW	9.2kW	10kW	12kW
Maximum DC input voltage	500V					
MPPT Operating voltage range	150~450V					
Starting voltage	125V					
Maximum input current	18A	18/18A	18/18A	18/18A	18/18A	18/18A
MPPT number	1	2	2	2	2	2
<b>AC output parameters (On-Grid)</b>						
Maximum output apparent power	3300W	3960W	4400W	5000W	5500W	6000W
Rated output voltage	220/230V					
Rated output frequency	50/60Hz					
Max output current	15A	18A	20A	22A	25A	27A
Output power factor	1 (-0.8 leading~+0.8 lagging)					
<b>AC output parameters(Off-Grid)</b>						
Rated output apparent power	3000W	3600W	4000W	4600W	5000W	6000W
Maximum output apparent power	>200%, 15sec					
Rated output voltage	230V					
Rated output frequency	50/60Hz					
Max output current	14A	16A	18A	21A	23A	27A
<b>Efficiency</b>						
Max efficiency	97.6%					
Max efficiency	94.5%					
Europe efficiency	97%					
<b>Protection</b>						
PV input reverse polarity protection	Yes					
PV insulation resistance detection	Yes					
Residual current detection	Yes					
Output over current protection	Yes					
Output short circuit protection	Yes					
Output over voltage protection	Yes					
<b>Basic data</b>						
Operation temperature	-25°C~60°C (frequency-decreasing above 45°C)					
Storage temperature	-30~65°C					
Relative humidity	0~95%					
Working altitude	≤4000m (frequency-decreasing above 2000m)					
Cooling	Natural cooling					
Noise	<55db					
Weight	20kg					
Dimensions (W*H*D)	198*427*554mm					
Protection class	IP66					
Topology	HF isolation (Battery side)					
<b>Standard</b>						
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)					
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140					
Other standard	IEC61683, IEC62116, EN50530, IEC60068					





# Hybrid Inverter

## AEP-7KS/7K6S/8KS48P

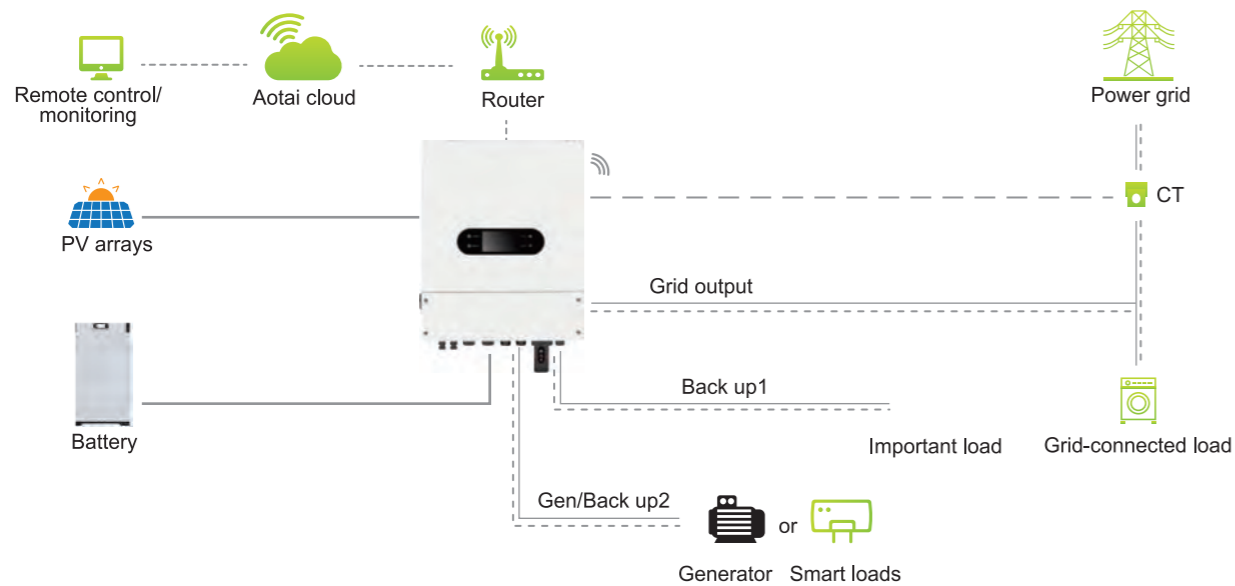


### AEP series

#### Single-phase

-  Up-to-120A current of battery charge and discharge
-  Off-grid peak power of twice of rated power within 15 seconds
-  Switching as uninterruptible power supply within 10ms
-  Supporting lead-acid batteries and lithium batteries and matching economical solutions for different markets

### Smart Energy Solutions



## TECHNICAL DATA

Model Name	AEP-7KS48P	AEP-7K6S48P	AEP-8KS48P
<b>Battery input data</b>			
Battery Type	Lithium or lead acid battery		
Rated battery voltage	48V		
Maximum charging voltage	≤60 (Configurable)		
Maximum charge/discharge current	175A	190A	190A
<b>PV input data</b>			
Maximum DC input power	14000W	15200W	16000W
Maximum DC input voltage	500V		
MPPT Operating voltage range	150~450V		
Starting voltage	125V		
Maximum input current	30/18A	30/18A	30/18A
MPPT number	2	2	2
<b>AC output parameters (On-Grid)</b>			
Maximum output apparent power	7700W	8360W	8800W
Rated output voltage	220/230V		
Rated output frequency	50/60Hz		
Max output current	35A	38A	40A
Output power factor	~1 (-0.8 leading~+0.8 lagging)		
<b>AC output parameters(Off-Grid)</b>			
Rated output apparent power	7000W	7600W	8000W
Maximum output apparent power	>200%, 15sec		
Rated output voltage	220/230V		
Rated output frequency	50/60Hz		
Max output current	35A	38A	40A
<b>Efficiency</b>			
Max efficiency	98%		
Max efficiency	94.5%		
Europe efficiency	97.5%		
<b>Protection</b>			
PV input reverse polarity protection	Yes		
PV insulation resistance detection	Yes		
Residual current detection	Yes		
Output over current protection	Yes		
Output short circuit protection	Yes		
Output over voltage protection	Yes		
<b>Basic data</b>			
Operation temperature	-25°C~60°C (frequency-decreasing above 45°C)		
Storage temperature	-30~65°C		
Relative humidity	0~95%		
Working altitude	≤4000m (frequency-decreasing above 2000m)		
Cooling	Intelligent forced air cooling		
Noise	<55db		
Weight	21.5kg		
Dimensions (W*H*D)	198*427*554mm		
Protection class	IP66		
Topology	HF isolation (Battery side)		
<b>Standard</b>			
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)		
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140		
Other standard	IEC61683, IEC62116, EN50530, IEC60068		





# Hybrid Inverter

## AEP-5/6/7/8/10/12KS48P3

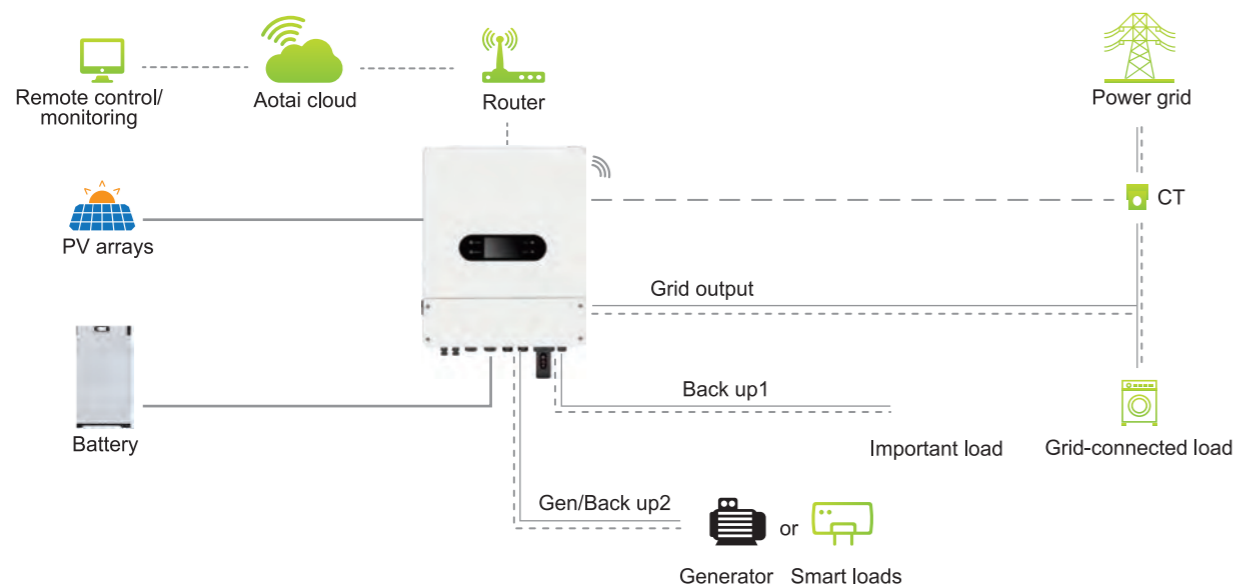


### AEP series

#### Three-phase

-  Up-to-36A maximum input current
-  Off-grid peak power of 200% overload within 15 seconds
-  Adaptable to 18A modules and able to match mainstream highcurrent modules in the market
-  200% of photovoltaic over-proportion ratio for connecting more modules to ensure off-grid applications and fully charge battery;

### Smart Energy Solutions



## TECHNICAL DATA

Model Name	AEP-5KS48P3	AEP-6KS48P3	AEP-7KS48P3	AEP-8KS48P3	AEP-10KS48P3	AEP-12KS48P3
<b>Battery input data</b>						
Battery Type	Lithium or lead acid battery					
Rated battery voltage	48V					
Maximum charging voltage	≤60 (Configurable)					
Maximum charge/discharge current	120A	125A	150A	190A	210A	250A
<b>PV input data</b>						
Maximum DC input power	10000W	12000W	14000W	16000W	20000W	24000W
Maximum DC input voltage	1000V					
MPPT Operating voltage range	200~800V					
Starting voltage	150V					
Maximum input current	18A	18A	18A	18/18A	36/18A	36/18A
MPPT number	1	1	1	2	2	2
<b>AC output parameters (On-Grid)</b>						
Maximum output apparent power	5500W	6600W	7700W	8800W	11000W	13200W
Rated output voltage	380/400V					
Rated output frequency	50/60Hz					
Max output current	8.3A	10A	11.6A	13.3A	16.7A	20A
Output power factor	1 (-0.8 leading~+0.8 lagging)					
<b>AC output parameters(Off-Grid)</b>						
Rated output apparent power	5500W	6600W	7700W	8000W	10000W	12000W
Maximum output apparent power	>200%,15sec					
Rated output voltage	380/400V					
Rated output frequency	50/60Hz					
Max output current	8.3A	10A	11.6A	13.3A	16.7A	20A
<b>Efficiency</b>						
Max efficiency	98%					
Max efficiency	94.5%					
Europe efficiency	97.5%					
<b>Protection</b>						
PV input reverse polarity protection	Yes					
PV insulation resistance detection	Yes					
Residual current detection	Yes					
Output over current protection	Yes					
Output short circuit protection	Yes					
Output over voltage protection	Yes					
<b>Basic data</b>						
Operation temperature	-25°C~60°C (frequency-decreasing above 45°C)					
Storage temperature	-30~65°C					
Relative humidity	0~95%					
Working altitude	≤4000m (frequency-decreasing above 2000m)					
Cooling	Intelligent forced air cooling					
Noise	<55db					
Weight	38kg					
Dimensions (W*H*D)	475*683*256mm					
Protection class	IP66					
Topology	HF isolation(Battery side)					
<b>Standard</b>						
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)					
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140					
Other standard	IEC61683, IEC62116, EN50530, IEC60068					

# Off-grid Inverter





## AIP-3K6S24/5K5S48/6K2S48/8KS48/10K48/11K48P1B



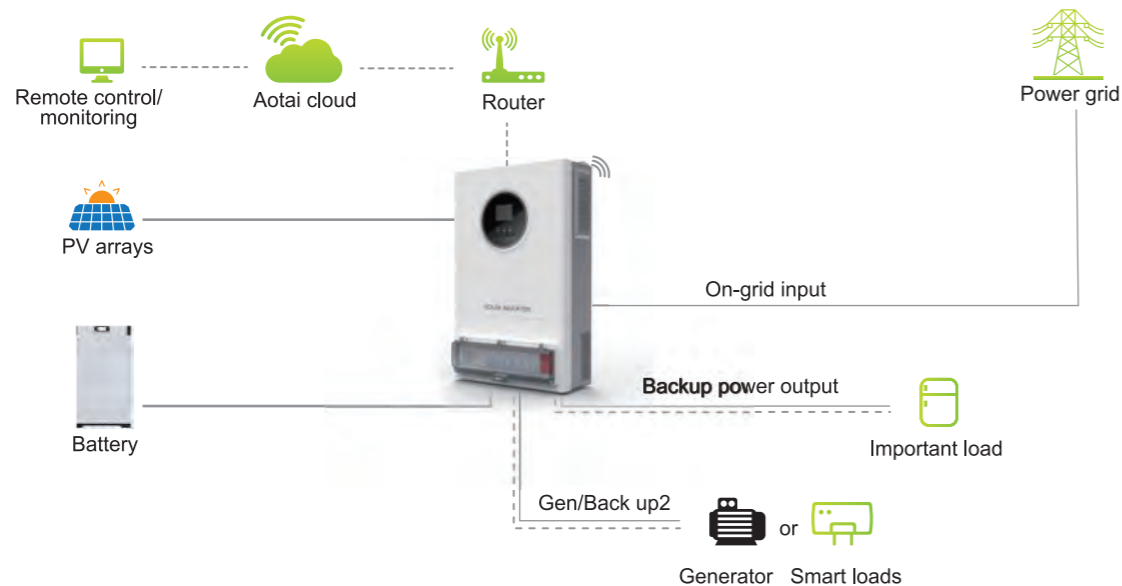
# AIP series

## Single-phase

AC and DC are equipped with secondary lightning protection, which makes lightning protection safer;  
 High current safety switch to prevent short circuit and surge danger;  
 Priority of AC power or photovoltaic can be set;  
 Dual load output interface;

-  Embedded in the distribution box design, more convenient to operate;
-  Grid access automatic reclosing switch to improve power supply reliability;
-  Possess photovoltaic and city power joint load function;
-  Achieve up to 16 units in parallel;

## Smart Energy Solutions



## TECHNICAL DATA

Model Name	3K6S24P1B	5K5S48P1B	6K2S48P1B	8KS48P1B	10K48P1B	11K48P1B
Rated power	3600W	5500W	6200W	8000W	10000W	11000W
Parallel function	Support, up to 16 units can be connected					
<b>AC input data</b>						
Input format	L+N+PE					
Input rated voltage	220/230/240VAC					
Input voltage range	90-280VAC±3V (Normal Mode), 170-280VAC±3V (UPS Mode)					
Input frequency range	50/60Hz(Adaptive)					
<b>Output</b>						
Rated power	3600W	5500W	6200W	8000W	10000W	11000W
Peak power	7200W	11000W	12400W	16000W	20000W	22000W
Output voltage	220/230/240VAC±5%					
Output frequency	50/60Hz±0.1%					
Output waveform	Pure sine wave					
Switching time (settable)	10ms for computer equipment 10ms, 20ms for home appliances					
Maximum output current	16A	25A	28A	36A	45A	50A
Overload capacity	Battery Mode: 21s@105%-150% Load 11s@150%-200% Load 400ms@>200% Load.					
<b>Battery</b>						
Rated voltage	24VDC		48VDC			
Constant voltage charging voltage (settable)	28.2VDC		56.4VDC			
Floating charging voltage (settable)	27VDC		54VDC			
<b>PV charging and AC charging</b>						
Charging method	MPPT			MPPT*2		
Maximum input power	4200VA	5500VA	6200VA	2*4000VA	2*5000VA	2*5500VA
MPPT tracking range	60-500Vdc			90-500Vdc		
Optimal Vmp voltage	300-400Vdc					
Maximum PV input voltage	500Vdc					
Maximum PV input current	18A			18A/18A		
Maximum PV charging current	100A	100A	120A	150A	150A	150A
Maximum AC charging current	60A	80A	100A	120A	150A	150A
Maximum charging current	100A	100A	120A	150A	150A	150A
<b>Protection</b>						
PV input reverse polarity protection	Yes					
PV insulation resistance detection	Yes					
Residual current detection	Yes					
Output over current protection	Yes					
Output short circuit protection	Yes					
Output over voltage protection	Yes					
<b>Other parameters</b>						
LCD display	Display operation mode/load/input/output, etc.					
RS232	Baud rate 2400					
Expansion slot communication interface	Lithium battery BMS communication card, WIFI card, dry contact card, etc.					
Operating temperature	-10-50 C					
Environmental humidity	20%-95% (No condensation)					
Storage temperature	-15-60 C					
Altitude	The altitude for full load operation should not exceed 1000m; output will be derated above 1000m; the maximum operating altitude shall not exceed 4000m					
Noise	≤50db					
Width*Height*Depth (mm)	314*487*142mm			500*570*148mm		
Standards and certifications	EN-IEC 60335-1, EN-IEC 60335-2-29, IEC 62109-1					
<b>Standard</b>						
Safety standard/EMC standard	NB/T32004-2018, IEC62109, IEC61000, IS16169 & IS16221(BIS)					
Grid-connected standard	IEC61727, EN50549-1, VDE-4105, NRS-097-2-1, OVE-Richtlinie R25, UNE217001/2, Ordinance No.140					
Other standard	IEC61683, IEC62116, EN50530, IEC60068					

## Monitoring - Information Collector

# GPRS/Wifi/NET RTU GPRS 4G/Wifi RTU-USB



## PRODUCT INTRODUCTION

Information collector is used for data collection and monitoring of solar inverters, combiner box and environment monitor in PV power stations. This device has RS485/Ethernet, and USB data communication interface. This makes it compatible with many equipments and reduce system cost.

## TECHNICAL DATA

Model Name	GPRS/Wifi/NET RTU	GPRS4G/Wifi RTU-USB
<b>Communication</b>		
Inverter communication	RS485	
PC communication	-	
Server	GPRS/ WiFi/ Ethernet	GPRS/ WiFi
<b>Max. number of connections</b>		
RS485 terminal	32	1
<b>Max. communication range</b>		
RS485	1200m	0m
Ethernet	-/-/ 100m	-
Wireless (open field)	unlimited/ 20m/ -	unlimited/ 20m
<b>Power supply</b>		
Power module	AC220V to DC12V	DC12V
Input voltage	DC12V	DC12V
Power consumption	1W(avg)/ 3W( max)	
<b>Environmental conditions</b>		
Ambient temperature	-20°C ~+60°C	
Humidity	0~100%,non-condensing	
<b>Other data</b>		
Dimensions (WxHxD)	145*72*28mm	52*104*34mm
Weight	390g	100g
Protection class	IP20	IP65(After installation)
Installation	Wall bracket Tabletop	On the inverter
Language	China,English	China,English

## Monitoring – ATSolar APP

### ATSolar APP



### FEATURES

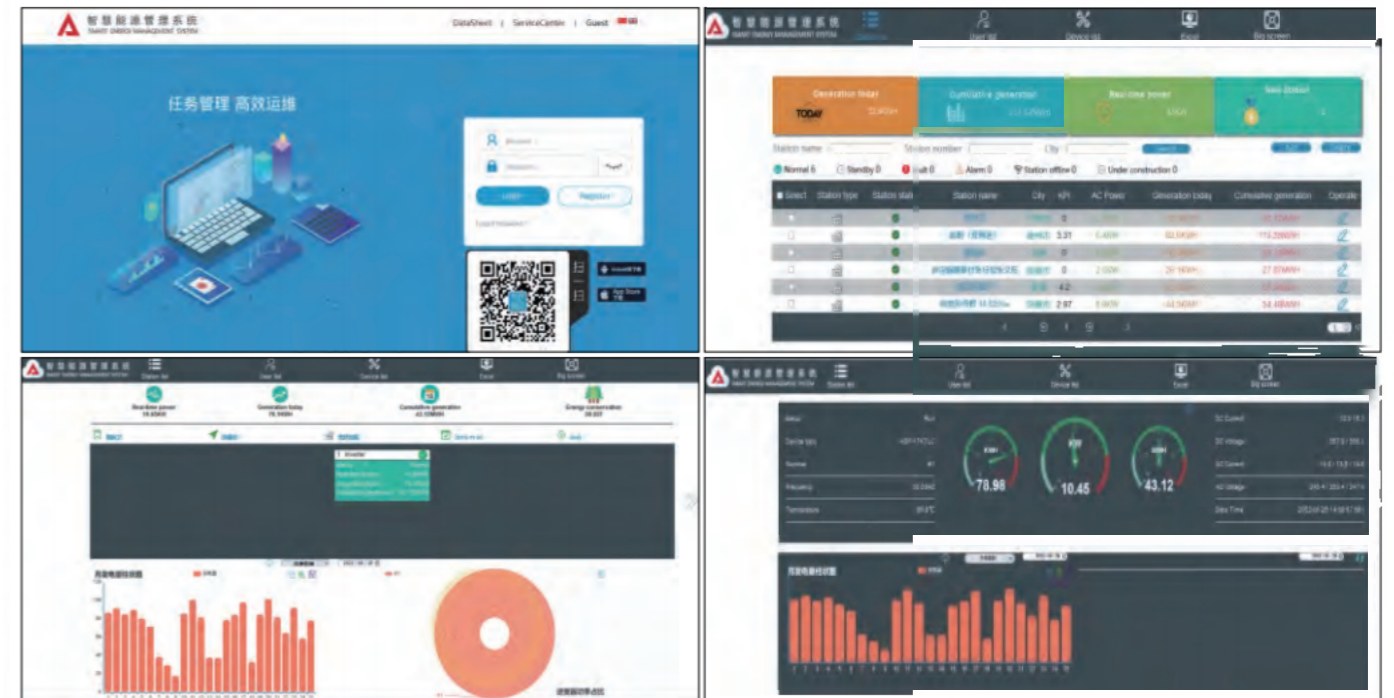
- Delicate interface, precise data, easy to operate, download and install, real-time monitoring, data synchronism
- 24-hour monitoring
- Real-time update of weather forecast
- Rich data output interfaces, support Android, IOS
- Low maintenance cost
- Periodic refresh of dynamic information
- Power station information sharing function

### PRODUCT INTRODUCTION

ATSolarAPP is intelligent terminal for PV power station monitoring and management person. It help user master PV power station running status at anytime and anywhere, realize remote data monitoring of PV power station, ensure convenient management and monitoring timeliness. System displays PV power station running data by visual table, includes power station power generation, benefit, CO2 emission reduction benefit, equipment running status, equipment real-time data, history data query, power generation comparison, equipment performance comparison. As fashion and intelligent application, it can let user demonstrate his PV power station at any occasion, user has intuitive feeling, enhance user confidence.

## Monitoring-Remote Monitoring System

### AT Solar Info PV Power Station Monitoring System



### FEATURES



#### Inverter management

Nobody monitoring needs 7X24h stable running. Manage grid-connected inverter, add data of newly communication net connected inverter to management system by add function, also can move current inverter data output of management system by delete function.



#### Real-time system monitoring

Information monitoring function real-time monitor system, display system running parameter, know system running status precisely by displayed information.



#### Precise data statistic

This function can make statistic history data of inverter on a certain time range, and output by Excel format. Information collection and management of combiner box, DC distribution cabinet, inverter, transformer, etc.



#### Detailed history tracking

Take out system data in a certain time duration, and display in curve type, user can know system running efficiency.



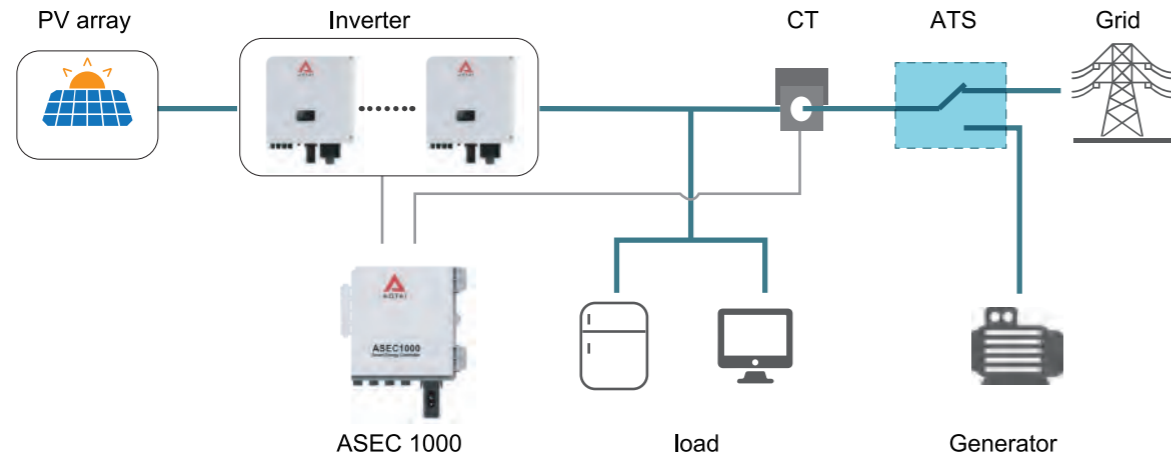
#### Precise design

Friendly interface, easy to operate integrated power station monitoring, running, management, provide better operation experience.

### PRODUCT INTRODUCTION

This system includes inverter, communication network and upper computer, has advantages like high real-time lines, high reliability, simple wiring and remote monitoring and management. With communication technology, auto-control technology, computer technology, to realize PV power station monitoring, running and management functions, provide economic reliable and safe solution for PV power station intelligent, automating, unmanned management. This APP suits for all kinds of PV power station, provides PV integrated monitoring and running program, realize complete real-time monitoring, control and management for PV power station.

# ASEC 1000 Smart Energy Controller



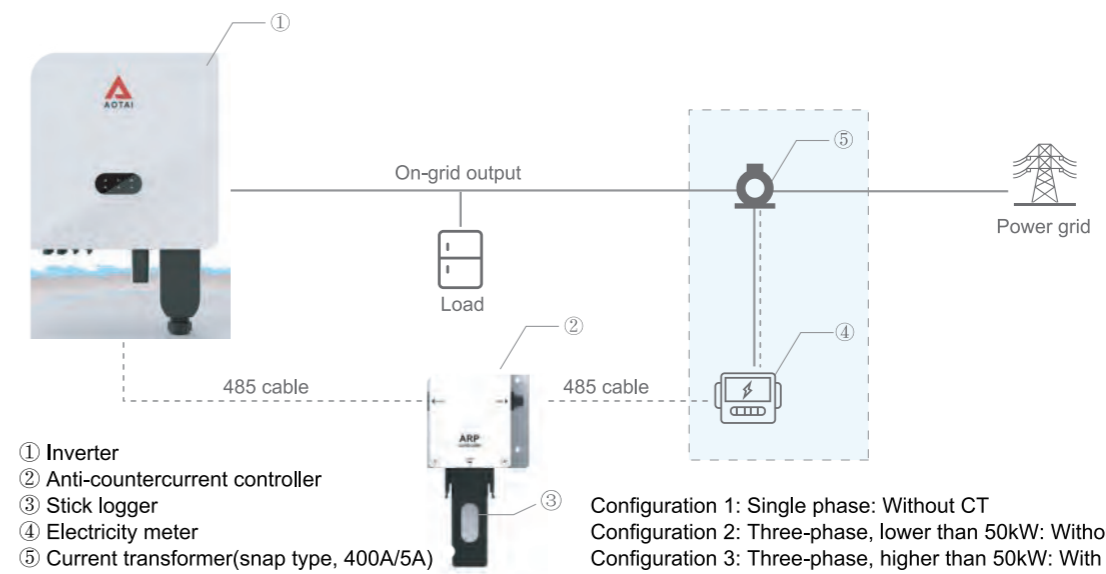
## PRODUCT INTRODUCTION

The smart energy controller enjoys the advantages of being more efficient, more accurate, and more affordable. Around the intelligent real-time monitoring (voltage and current of power grid, scheduling of active power and reactive power), intelligent real-time alarming, intelligent real-time control (The energy generated by PV is efficiently used for the load through the intelligent algorithm to reduce the burden of the power grid and can prevent the countercurrent to the generator much faster) of PV power station and other functions, it also provides an anti-countercurrent controller that can more efficiently take advantage of PV power generated locally. It provides a series of solutions with the digital-based profession and intelligent-based creation, prescribes the correct medicine for pain spots and difficulties existing in the traditional operation and maintenance, to realize intelligent management of operation and maintenance, further improve the safe running level of the power station, and achieve significant reducing cost and improving efficiency. The smart energy controller acts as a guardian with high technology, which can precisely monitor the data of components and equipment of PV power station in real-time, break through the detection method of traditional manual operation and maintenance, to turn the operation and maintenance of the power station into more convenient and efficient. Meanwhile, the power station is protected to run safely and stably. Following the increasingly prominent role played by digital operation and maintenance to the PV power station, the application of smart energy controller will assist in the increase of power generating efficiency and economic benefits of the PV power station.

## TECHNICAL DATA

Model Name	ASEC 1000		
<b>AC output</b>		<b>General data</b>	
Rated voltage	400V, 3/N/PE	IP rating	IP65
Range of input voltage	320V~480V (L to L)	Power consumption of itself	<10W
Range of input frequency	50Hz	Dimension (mm)	420*320*131mm
<b>Communication</b>		Weight	4kg
Communication of inverter	RS485/Wireless 485	AC connection	Quick connector terminals
Communication interface	RS485/Wireless 485	Display	LCD, 128*64
Max. number of communication inverters	32	CT connection	Plug terminals
Max. Communication distance	1000m	CT specification	Optional (5A)
Monitoring method	WIFI/4G/Net	<b>Features</b>	
<b>General data</b>		Protection against faults	Yes
Ambient temperature	-25°C~+60°C	Remote upgrade	Yes
Relative humidity	5%-95%	Control time	10s
		Power precision	3%

# ARP Controller



## PRODUCT INTRODUCTION

ARP Controller is an anti-countercurrent (reverse power) protection device used to conduct the special control to the power generating power of the inverter, also known as an anti-countercurrent controller. When the power-generating power of the PV inverter system is higher than the consumption power of local loads, the excess electrical power may counter-flow to the power grid. This will cause damage to the system and equipment. The anti-countercurrent controller plays a role in cooperating with the electricity meter in limiting and controlling the active power of the inverter, preventing the countercurrent from occurring, and protecting the system against damage when the current counter flows. This device needs to cooperate with the inverter and special electricity meter to monitor and control the system, which can effectively protect the system and equipment. This product can achieve anti-countercurrent effecting through simple installation and usage. In addition, it can be set according to the threshold value allowed by the power grid company, turning up and turning down the countercurrent power to set the maximum power point to feed to the power grid.

## TECHNICAL DATA

Model Name	ARP Controller	
<b>Communication</b>		
Communication of inverter		RS485
Monitoring method		WIFI/4G/Net
<b>General data</b>		
Ambient temperature		-25°C~+60°C
Relative humidity		5%~95%
IP rating		IP65
Power consumption of itself		<5W
Dimension (LxWxH)		130*120*70mm
Weight		<500g
AC connection		Quick connector terminals

# Projects Reference





**35** MW

 China



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**1 MW**

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 China


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**10 KW**

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 Pakistan

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**2 MW**

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 China


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**5 KW**

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 Pakistan

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**10 KW**

 Pakistan



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**10 KW**

 Pakistan



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**5 KW**

 Argentina



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**5 KW**

 Argentina



**5 KW**

 Storage, Vietnam



**10 KW**

 Pakistan



**30 MW**

 China



**20 MW**

 Pakistan



**6 MW**

 China



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**34** MW

 China

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**200** KW

 Singapore

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**800** KW

 Pakistan

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## After-sales Service



128 COUNTRIES

# Service guarantee —Service system

