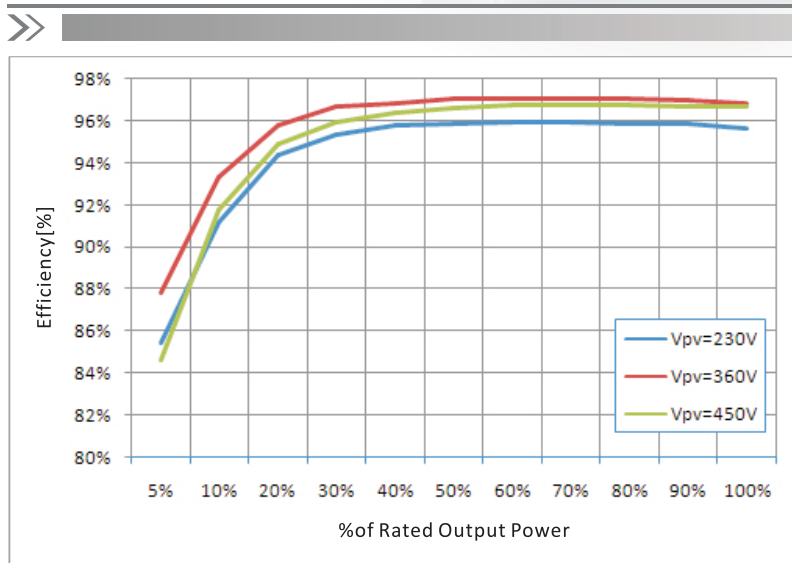


MASSENERGY INVERTER 1-Phase String Inverter

>> 1100TL/1600TL/2200TL/2700TL/3000TL



Efficiency Curve

High-yield

- Max 97.2% efficiency
- Real time precise MPPT algorithm for max harvest
- Wide input voltage operation range

All in one, flexible and economical system solution

- Free site selection due to IP65
- Easy installation and maintenance due to "Plug & Play" connection
- Interface selection – Wi-Fi / RS485 / Dry Relay for more flexible configuration and system monitoring
- 4" LCD display

Low maintenance cost

- Detachable cover for easy installation
- Rust-free Aluminum covers
- Flexible monitoring solution
- Multi function relay can be configured to show various inverter information

Intelligent grid management

- Reactive power capability
- Self power reducer when over frequency
- Remote active/reactive power limit control

MASSENERGY INVERTER 1-Phase String Inverter

1100TL/1600TL/2200TL/2700TL/3000TL

Technical Data		SOFAR 1100TL	SOFAR 1600TL	SOFAR 2200TL	SOFAR 2700TL	SOFAR 3000TL
Input(DC)						
Max.DC Input Power		1100W	1600W	2200W	2700W	3000W
No.of MPPT/String per MPPT		1/1				
Max. input voltage		450V		500V		550V
Start-up input voltage		80V				
Rated input voltage		360V				
Operating voltage range		90-450 V		100-500 V		100-550 V
MPPT voltage range		110-450 V	165-450 V	170-500 V	200-500 V	200-500 V
Max. input MPPT current		10A		13A	13.5A	15A
Output(AC)						
Rated Power		1000W	1500W	2000W	2500W	2900W
Max.AC Power		1000W	1500W	2000W	2500W	2900W
Max.AC Output Current		4.5A	7A	9.5A	11.5A	13A
Rated Grid Voltage		230V				
Grid Voltage Range		180~270 V(According to local standard)				
Rated Frequency		50/60Hz				
Grid frequency Range		44~55 /54~66 Hz(According to local standard)				
THDi		<3%				
Power factor Adjustable Range		0.8 overexcited ... 0.8 underexcited				
Grid connection		Single phase				
Efficiency						
Max.efficiency		97%			97.1%	97.2%
Euro efficiency		95.2%	95.9%	96.1%	96.4%	96.5%
MPPT adaptation efficiency		>99.5%				
Standard						
EMC		EN 61000-6-1,EN 61000-6-2,EN 61000-6-3,EN 61000-6-4				
Safety standards		IEC 62109-1,IEC 62109-2				
Grid standards		AS 4777, VDE V 0124-100, VDE V 0126-1-1, VDE-AR-N 4105, EN50438, G83/2, C10/11, RD1699				
Protection						
Anti-Islanding Protection		Yes				
DC Reverse Polarity Protection		Yes				
Over Temp Protection		Yes				
Leakage Current Protection		Yes				
Over Voltage Protection		Yes				
Over Current Protection		Yes				
Earth Fault Protection		Yes				
Communication						
Standard Communication Mode		wifi+RS485				
Operation Data Storage		25years				
Relay		Yes				
I/O		Yes				
General Date						
DC Switch		optional				
Ambient temperature range		-25°C...+60°C				
Topology		Transformerless				
Cooling		Natural				
Allowable relative humidity range		0...95% no condensing				
Max.operating altitude		2000m				
Noise		<25db@1m				
Degree of Protection(per IEC 60529)		IP65				
Dimension		405*314*135mm				
Weight		11kg		12kg		
Self-consumption at night		<1w				
Display		Graphic display				
Warranty		5 years				

MASSENERGY INVERTER 1-Phase String Inverter

3000TLM / 3680TLM / 4000TLM / 4600TLM / 5000TLM



High-yield

- Max 97.6% efficiency
- Real time precise MPPT algorithm for max harvest
- Wide input voltage operation range from 100V to 550V
- Two MPP.trackers for flexible pv panel installation

Low maintenance cost

- Rust-free Aluminum covers
- Flexible monitoring solution
- Multi function relay can be configured to show various inverter information

All in one,flexible and economical system solution

- Free site selection due to IP65
- Easy installation and maintenance due to "Plug & Play" connection
- Interface selection – Wi-Fi / RS485 / Dry Relay for more flexible configuration and system monitoring
- 4"LCD display

Intelligent grid management

- Reactive power adjustable
- Self power reducer when over frequency
- Remote active/reactive power limit control

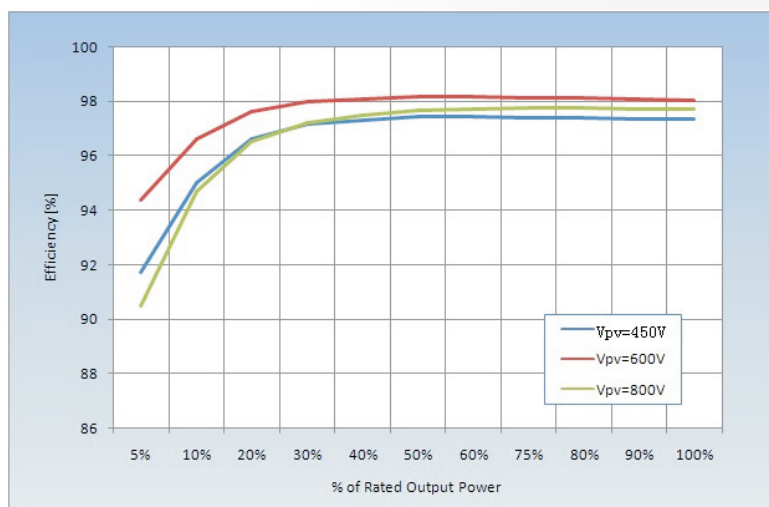
MASSENERGY INVERTER 1-Phase String Inverter

>> 3000TLM /3680TLM/4000TLM/4600TLM/5000TLM

Technical Data		SOFAR 3000TLM	SOFAR 3680TLM	SOFAR 4000TLM	SOFAR 4600TLM	SOFAR 5000TLM
Input(DC)						
Max.Input power	3100W	3800W	4160W	4800W	5200W	
Max DC power for single MPPT	2000(200V-500V)	2400(200V-500V)	2600(200V-500V)	3000(200V-500V)		
Number of independent MPPT	2					
Number of DC inputs	1 for each MPPT					
Max. input voltage	600V					
Start-up input voltage	100V(+/-5v)					
Rated input voltage	360					
Operating input volt range	100V-550V					
MPPT voltage range	160V-500V	165V-500V			175V-500V	
Max. input MPPT current	10A/10A	12A/12A	13A/13A	15A/15A		
Input short circuit current for each MPPT	12A	14A	16A	18A		
Output(AC)						
Rated power(@230V,50Hz)	3000VA	3680VA	4000VA	4600VA	5000VA	
Max. AC power	3000VA	3680VA	4000VA	4600VA	5000VA	
Nominal AC voltage	L/N/PE, 220,230,240					
Nominal AC voltage range	180V- 270V					
Grid frequency range	44~55Hz /54~66Hz					
Active power adjustable range	0~100%					
Max. output current	13A	16A	17.5A	20A	22A	
THDi	<3%					
Power factor	1 (adjustable +/-0.8)					
Performance						
Max.efficiency	97.6%					
Weighted eff. (EU/CEC)	97.1%/97.3%					
Self-consumption at night	<1W					
Feed-in start power	20W					
MPPT efficiency	>99.5%					
Protection						
DC reverse polarity protection	Yes					
DC switch	optional					
Protection class /overvoltage category	I/III					
Input/output SPD(II)						
Safety protection	Anti islanding, RCMU, Ground fault monitoring					
Certification	CE, CGC, AS4777,AS3100,VDE4105,C10-C11,G83/G59 (more available on request)					
Communication						
Power management unit	According to certification and request					
Standard Communication Mode	Wifi+RS485					
Operation Data Storage	25years					
General data						
Ambient temperature range	-25°C...+60°C					
Topology	Transformerless					
Degree of protection	IP65					
Allowable relative humidity range	0...95% no condensing					
Max.operating altitude	2000m					
Noise	<25dB					
Weight	18kg			19kg		
Cooling	Natural					
Dimension	344 *478 *170mm					
Warrantv	5 years					

MASSENERGY INVERTER 3-Phase String Inverter

10000TL/15000TL/17000TL/20000TL



Efficiency Curve

High-yield

- Max 98.2% efficiency
- Real time precise MPPT algorithm for max harvest
- Wide input voltage operation range from 250V to 960V

All in one, flexible and economical system solution

- DC switch (option)
- DC surge protection device (option)
- AC surge protection device (option)
- Built-in PV Combiner (option)
- Power management unit
- Optimum selection for big PV plants, commercial buildings...

Low maintenance cost

- Detachable cover for easy installation
- Rust-free aluminum covers
- Flexible monitoring solution
- Multi function relay can be configured to show various inverter information

Intelligent grid management

- LVRT support
- Reactive power adjustable
- Self power reducer when over frequency
- Remote active/reactive power limit control

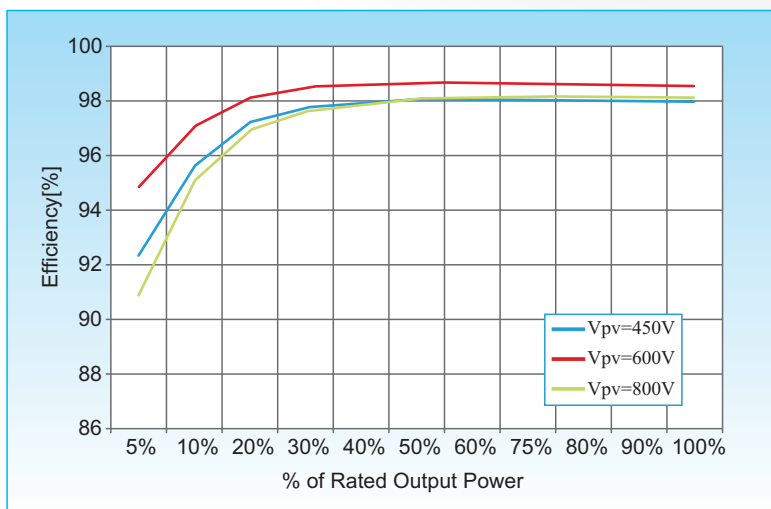
MASSENERGY INVERTER 3-Phase String Inverter

>> 10000TL / 15000TL / 17000TL / 20000TL

Technical Data	SOFAR 10000TL	SOFAR 15000TL	SOFAR 17000TL	SOFAR 20000TL
Input(DC)				
Max.Input power	10400W	15600W	17700W	20800W
Max DC power for single MPPT	6750(450V-850V)	10500(500V-850V)	10500(500V-850V)	12000(500V-850V)
Number of independent MPPT	2			
Number of DC inputs	2 for each MPPT		3 for each MPPT	
Max. input voltage	1000V			
Start-up input voltage	350V (+/-1V)			
Rated input voltage	600			
Operating input volt range	250V-960V			
MPPT voltage range	350V-850V	370V-850V	420V-850V	430V-850V
Max. input MPPT current	15A/15A	21A/21A	21A/21A	24A/24A
Input short circuit current for each MPPT	20A	27A	27A	30A
Output(AC)				
Rated power(@230V,50Hz)	10000VA	15000VA	17000VA	20000VA
Max. AC power	10000VA	15000VA	17000VA	20000VA
Nominal AC voltage	3/N/PE,220/380 3/N/PE,230/400 3/N/PE,240/415			
Nominal AC voltage range	184V-276V			
Grid frequency range	50Hz,+/-5Hz			
Active power adjustable range	0~100%			
Max. output current	15A	22A	25A	29A
THDi	<3%			
Power factor	1(Adjustable +/-0.8)			
Performance				
Max efficiency	98.2%			
Weighted eff. (EU/CEC)	97.6%/97.8%	97.9%/98%	97.9%/98%	98%/98.1%
Self-consumption at night	<1W			
Feed-in start power	45W			
MPPT efficiency	>99.5%			
Protection				
DC reverse polarity protection	Yes			
DC/AC switch	Optional			
Protection class /overvoltage category	I/III			
Input/output SPD(II)	Optional			
Safety protection	Anti islanding, RCMU, Ground fault monitoring			
Certification	CE, CGC, AS4777,AS3100,VDE4105,C10-C11,G59 (more available on request)			
Communication				
Power management unit	According to certification and request			
Standard Communication Mode	RS485, Wifi(option), Multi-function relay			
Operation Data Storage	25years			
General data				
Ambient temperature range	-25°C...+60°C			
Topology	Transformerless			
Degree of protection	IP65			
Allowable relative humidity range	0...95% no condensing			
Max.operating altitude	2000m			
Noise	<45dB			
Weight	45kg	45kg	48kg	48kg
Cooling	Natural	Fan	Fan	Fan
Dimension	707*492*240mm			
Warranty	5 years			

MASSENERGY INVERTER 3-Phase String Inverter

33000TL/40000TL



Efficiency Curve

High-yield

- Max 98.7% efficiency
- Real time precise MPPT algorithm for max harvest
- Wide input voltage operation range from 250V to 960V

All in one, flexible and economical system solution

- DC switch (option)
- DC surge protection device (option)
- AC surge protection device (option)
- Built-in PV Combiner
- Power management unit
- Optimum selection for big PV plants, commercial buildings...

Low maintenance cost

- Detachable cover for easy installation
- Rust-free aluminum covers
- Flexible monitoring solution
- Multi function relay can be configured to show various inverter information

Intelligent grid management

- ZVRT support
- Reactive power adjustable
- Self power reducer when over frequency
- Remote active/reactive power limit control

MASSENERGY INVERTER 3-Phase String Inverter

>> 33000TL/40000TL

Technical Data

SOFAR
33000TL

SOFAR
40000TL

Input(DC)

Max.Input power	34000W	40000W
Max DC power for single MPPT	17000W(480V-800V)	20000W(570V-800V)
Number of independent MPPT	2	
Number of DC inputs	4 for each MPPT	
Max. input voltage	1000V	
Start-up input voltage	350V (+/-1V)	
Rated input voltage	600V	700V
Operating input voltage range	250V-960V	
MPPT voltage range	480V-800V	570V-800V
Max. input MPPT current	70A(35A/35A)	
Max. input current per string	12A	

Output(AC)

Rated power(@230V,50Hz)	30000W	36000W
Max. AC power	33000VA	39800VA
Nominal AC voltage	3/N/PE,3/PE,230/400Vac	3/N/PE,3/PE,277/480Vac
AC voltage range	310Vac-480Vac	422Vac-528Vac
Grid frequency range	50Hz/60Hz,+/-5Hz	
Active power adjustable range	0~100%	
Max. output current	48A	
THDi	<3%	
Power factor	1(Adjustable +/-0.8)	

Performance

Max efficiency	98.6%	98.7%
European weighted efficiency	98.3%	98.4%
Self-consumption at night	<1W	
Feed-in start power	45W	
MPPT efficiency	>99.5%	

Protection

DC reverse polarity protection	Yes
DC/AC switch	Yes
Protection class /overvoltage category	I/III
Input/output SPD(II)	Optional
Safety protection	Anti islanding, RCMU, Ground fault monitoring
Certification	CE,CGC,ZVRT,AS4777,AS3100,VDE4105,C10-C11,G59(more available on request)

Communication

Power management unit	According to certification and request
Standard Communication Mode	RS485, Wifi(option), Multi-function relay
Operation Data Storage	25years

General data

Ambient temperature range	-25°C...+60°C
Topology	Transformerless
Degree of protection	IP65
Allowable relative humidity range	0...95% no condensing
Max.operating altitude	3000m
Noise	<30dB
Weight	55kg
Cooling	Natural
Dimension	773*564*258mm
Warranty	5 years



AS4777 G83/2 G59/3

CE, CQC, IEC, VDE-AR-N4105 / VDE- 0126, EMC, C10/11, EN50438, RD1669