



Photovoltaic Inverter

Optimal design for Best PV System

Green Technology! Eco-friendly! Photovoltaic Inverter with LS Industrial Systems

Stepping closer to customers to secure a more comfortable and happier life...

A photovoltaic inverter is not only a clean energy free from environmental · noise pollutions and radiation leak but also an infinite energy resource that will not be exhausted.

As a new alternative energy, it is becoming the new growth engine of LS Industrial Systems.

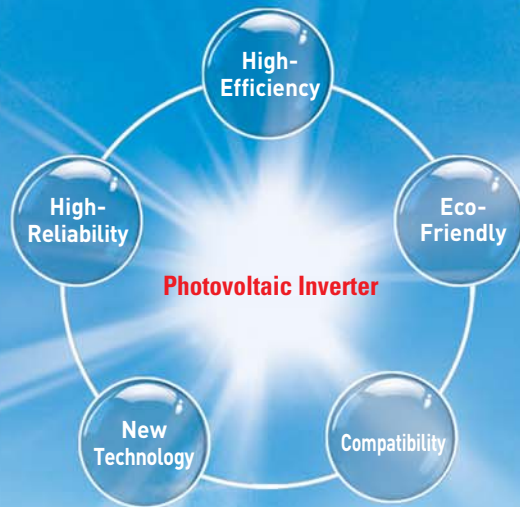


Benefits of Photovoltaic Energy! High-Efficiency · Low Distortion through an Optimal Current Control

LS Industrial Systems, leading the industrial electricity · automation sector of Korea based on the up-to-date technology development, is introducing Solarvert Series that realizes the high-efficiency · Low distortion through the optimal current control based on its experiences and technologies related to the photovoltaic field.

Benefits of Photovoltaic Energy! Photovoltaic Inverter with LS!





More compact stronger and more reliable

LS Industrial Systems is implementing 6-Sigma activity for the world's top quality control, targeting a zero defect rate and is built with a global standard product testing and assessment system to ensure the reliability of the product.

☛ On-grid Simulator (AC Power Source)

In connection with the output, it tests the situations that may be generated at an actual system to verify the protection function.

☛ Temperature · Humidity Chamber

It determines the performance and malfunctioning at high/low temperature and high-humidity conditions.

☛ Solar Cell Simulator (Active Power Load)




It tests the performance of photovoltaic inverter by calculating the solar radiation data and controlling the input power in real time.



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Specification >>





		Specification				
Model		LSP-S003L	LSP-S004L(JP) ¹⁾	LSP-T030LT	LSP-T050LT	
Image						
Electric Feature	Phase	1 Phase	1 Phase	3 Phase	3 Phase	
	Operating Method	Grid Tied Type	Grid Tied Type	Grid Tied Type	Grid Tied Type	
	Topology	Transformerless	Transformerless	Transformer	Transformer	
	Input (DC)	Max. Power	3kW	4kW	30kW	50kW
		MPPT Range	150~600Vdc	100~370Vdc	370~800Vdc	370~800Vdc
		Max. Voltage	600Vdc	370Vdc	900Vdc	900Vdc
		Max. Current	15A	16A	80A	133A
	Output (DC)	Rated Power	3kW	4kW	30kW	50kW
		Rated Voltage	193~242Vac	190~214Vac	380Vac	380Vac
		Rated Current	15A	20A	46A	76A
		Frequency	60Hz	50/60Hz	60Hz	60Hz
		Current Distortion	3% less	3% less	3% less	3% less
		Control Method	PWM	PWM	PWM	PWM
		Power Factor	99% more	99% more	99% more	99% more
Max. Efficiency (Euro. Efficiency)		94.5% (92.5%)	95.5% (JIS C 8961 94.5%)	96% more (94% more)	96% more (94% more)	
System Feature	Dimension (W X H X D)	340×458×217	470×280×137	750×1700×800 ²⁾	750×1700×800 ²⁾	
	Weight (kg)	18.7	14.1	530	670	
	Cooling	Air Cooling	Natural Convection	Air Cooling	Air Cooling	
	Enclosure	IP54	IP20	IP21	IP21	
	Communication	RS-485	RS-485	RS-485	RS-485	
	Temperature	-20°C ~ 50°C	-10°C ~ 40°C	-10°C ~ 50°C	-10°C ~ 50°C	
Protection		Input under/over voltage, Grid under/over voltage, Input/output over current, Grid frequency fault, System overheat, etc.				

1) LSP-S004(JP) is customized for Japan market.

2) The height is except the wheels

3) Product image and specification can be changed to improve the performance.



Specification							
Model	LSRP-S004L LSRP-S005L LSRP-S006L	LSRP-T010L LSRP-T013L LSRP-T017L LSRP-T020L	LSRP-T100LT LSRP-T160LT	LSRP-T500L LSRP-T630L	LSRP-T10HL LSRP-T13HL		
Image							
Electric Feature	Phase	1 Phase	3 Phase	3 Phase	3 Phase	3 Phase	
	Operating Method	Grid Tied Type	Grid Tied Type	Grid Tied Type	Grid Tied Type	Grid Tied Type	
	Topology	Transformerless	Transformerless	Transformer	Transformerless	Transformerless	
	Input (DC)	Max. Power	4.9 / 5.4 / 6kW	11 / 13.6 / 18.1 / 21.2kW	115 / 184kW	575 / 725kW	2 X 575 / 2 X 725kW
		MPPT Range	351~710Vdc 348~710Vdc 349~710Vdc	380~850Vdc 420~850Vdc 460~850Vdc 480~850Vdc	460~800Vdc	460~850Vdc	460~850Vdc
		Max. Voltage	880Vdc	1000Vdc	850Vdc	950Vdc	950Vdc
		Max. Current	13 / 14.5 / 16A	29 / 30 / 37 / 41A	240 / 375A	1000 / 1300A	2 X 1000 / 2 X 1300kW
	Output (DC)	Rated Power	3.75 / 4.2 / 4.6kW	10 / 12.4 / 16.5 / 19.2kW	100 / 160kW	500 / 630kW	1000 / 1300kW
		Rated Voltage	210~250Vac	400Vac + N	400Vac + N	315Vac	315Vac + N
		Rated Current	17.9 / 20 / 22A	18 / 18 / 29 / 29A	158 / 232A	920 / 1220A	2 X 920 / 2 X 1220A
		Frequency	47.5~52.5Hz	50~60Hz	50~60Hz	50~60Hz	50~60Hz
		Current Distortion	t.b.d.	2.5% less	3% less	3% less	3% less
		Control Method	PWM	PWM	PWM	PWM	PWM
		Power Factor	100%	95% more	90% more	90% more	90% more
		Max. Efficiency (Euro. Efficiency)	97.3% [96.8%] 97.4% [96.9%] 97.4% [96.9%]	98.0% [97.4%] 98.0% [97.5%] 98.0% [97.8%] 98.2% [97.8%]	96% more (95% more) With transformer	98.1% more (97.6% more) Without transformer	98.1% more (97.6% more) Without transformer
System Feature	Dimension (W X H X D)	320 X 720 X 250	535 X 601 X 277	1200 X 2000 X 600	2800 X 2000 X 600 ⁻¹⁾ 2800 X 2190 X 600 ⁻¹⁾	3020 X 3560 X 5400	
	Weight (kg)	27 / 28 / 28	39	860 / 920	1800 ⁻²⁾	3600	
	Cooling	Natural Convection	Natural Convection	Air Cooling	Liquid Cooling	Liquid Cooling	
	Enclosure (Option)	IP66	IP65	IP21 (IP54) / IP21	IP43 (IP54) / IP54	IP54	
	Communication	RS485	RS-485, EtherNet, USB	RS-485, EtherNet, USB	RS-485, EtherNet, USB	RS-485, EtherNet, USB	
	Temperature	-20°C ~ 60°C	-25°C ~ 55°C	-10°C ~ 45°C -10°C ~ 40°C	-10°C ~ 50°C -10°C ~ 45°C	-10°C ~ 50°C	
Certificates & Standards	CE, DK5940	CE, VDE0126, DK5940, EN50438, RD1663, RD661	CE, DK5940, RD1663	CE	CE		
	UL, CSA in preparation						
	EN61000, EN60529						
Protection	Input under/over voltage, Grid under/over voltage, Input/output over current, Grid frequency fault, System overheat, etc.						

1) Additional cooling unit : 600/2000mm + 200/800mm + 160mm

2) Additional cooling unit : 400 kg

3) Product image and specification can be changed to improve the performance

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Features / Model Name >>

Features



Maximum Power Point Tracking(MPPT) Control

It performs a follow-up control of the maximum output point so that 『Solar Cell』 can generate the maximum power.



High-Efficiency & Low Distortion

It realizes the high-efficiency and low distortion through the optimal current control, using a high-performance IGBT.



Compact & Light Weight

It is designed to be compact and light-weighted and it is easy to install and operate.



HMI(Human Machine Interface)

Various data of photovoltaic system can be easily displayed on the LCD screen.
*This is for LSP-T030LT/LSP-T050LT models.



Remote Monitoring

Remote monitoring and communication (RS485) enables to check the operating status of inverter and various data.



Model Name

LS(R)P - **T** **020** **L** **M**

LS Photovoltaic Inverter		Symbol	Rated Power	Symbol	Rated Power	Symbol	Product Type
S	Single Phase	003	3kW	024	24kW	INDOOR	For Indoor
T	Three Phase	004	4kW	100	100kW	OUTDOOR	For Indoor/Outdoor
		005	5kW	160	160kW	M	Mini-Central type
		006	6kW	250	250kW		
		008	8kW	333	333kW		
		010	10kW	500	500kW		
		013	13kW	630	630kW		
		017	17kW	10H	1000kW		
		020	20kW	13H	1300kW		

1	Grid Connection	2	Topology
L	Grid-Connected	T	Transformer
A	Stand-Alone	-	Transformerless

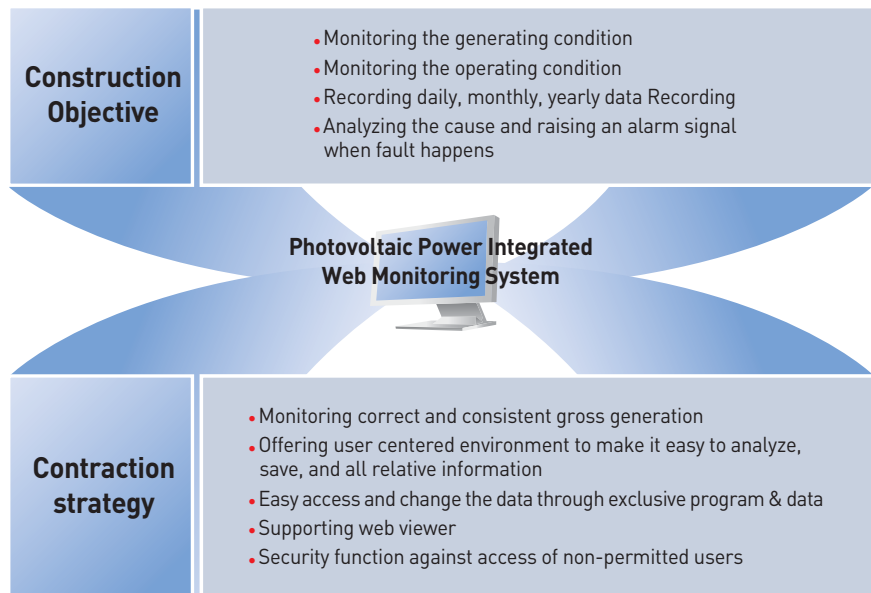
Monitoring System >>

Well-balanced system operation and strengthening maintenance,

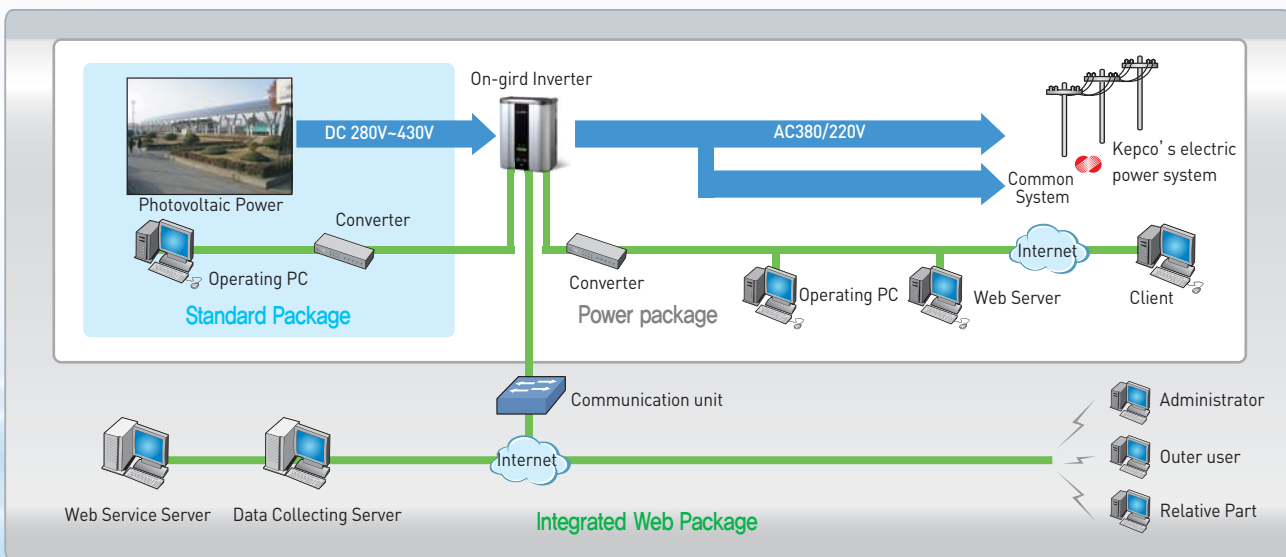
LS Industrial Systems leads them through the new exclusive monitoring system technique in the part of industrial IT.

Integrated Web Monitoring System (Web Package)

- ▣ This system supports monitoring photovoltaic system's outputs and operating conditions, analyzable recording daily, monthly, and yearly to help efficient operation of photovoltaic power system.
- ▣ Especially, the web based monitoring function and secondary operation server make possible maintain & repair shortly without coming to the field for users.



System Configuration



Green Innovators of Innovation



Safety Instructions

- Read the "Installation & Maintenance Manual" before using the product safely.
- The products included in the catalogue can be discontinued or changed without a prior notice, so please check before its purchase.
- Do not disassemble or repair the product for the maintenance and repair safety, and contact the expert.

LS Industrial Systems Co., Ltd.

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Specifications in this catalog are subject to change without notice due to continuous product development and improvement.