Green Innovators of Innovation

www.lsis.biz

Photovoltaic Inverter

Optimal design for Best PV System

LS IS

Green Technology! Eco-friendly! Photovoltaic Inverter with LSIS

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 LSIS.

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

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

More Compact · Stronger · More Reliable

LSIS 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 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.

On-grid Simulator | Temperature · Humidity Chamber | Solar Cell Simulator

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Specification >>

			LSP-S003LM	LSP-S004L(JP)	LSRP-T010L / LSRP-T013L LSRP-T017L / LSRP-T020L
Electric Feature	Phase		1 Phase	1 Phase	3 Phase
	Operating Method		Grid Tied Type	Grid Tied Type	Grid Tied Type
	Topology		Transformer-less	Transformer-less	Transformer-less
	Input (DC)	Max. Power	3kW	4kW	11 / 13.6 / 18.1 / 21.2kW
		MPPT Range	150~600Vdc	100~370Vdc	380~850Vdc / 420~850Vdc 445~850Vdc / 480~850Vdc
		Max. Voltage	600Vdc	370Vdc	1000Vdc
		Max. Current	15A	16A	29 / 30 / 38.5 / 41A
		No. of DC-connections	3	2	4 / 4 / 6 / 6
	Output (AC)	Rated Power	3kW	4kW	10 / 12.4 / 16.5 / 19.2kW
		Rated Voltage	193~242Vac	190~214Vac	400Vac + N
		Rated Current	15A	20A	18 / 18 / 29 / 29A
		Frequency	50/60Hz	50/60Hz	50~60Hz
		Current Distortion	3% less	3% less	2.5% less
		Control Method	PWM	PWM	PWM
		Power Factor	99% more	99% more	95% more
		Max. Efficiency (Euro. Efficiency)	94.5% (92.5%)	95.5% (JIS C 8961 94.5%)	98.0% (97.4%) / 98.0% (97.5%) 98.0% (97.8%) / 98.2% (97.8%)
System Feature		Dimension (W X H X D)	340×458×217	470×280×137	535×601×277
		Weight (kg)	18.7	14.1	39
		Cooling	Air Cooling	Natural Convection	Natural Convection
		Enclosure	IP54	IP20	IP65
		Communication	RS-485	RS-485	RS-485
		Temperature	-20℃ ~ 50℃	-10℃ ~ 40℃	-25℃ ~ 55℃
Certificates & Standards			KEMCO(Korea Only)	JET(Japan Only)	CE, VDE0126, DK5940, EN50438, RD1663, RD661
Protection			Input under/over voltage, Grid under/over voltage, Input/output over current, Grid frequency fault, System overheat, etc.		

The product image and specification can be changed to improve the performance without notice.

			LSP-T030LT LSP-T050LT	LSRP-T100LT	LSRP-T500L LSRP-T630L	LSRP-T10HL LSRP-T13HL
Electric Feature	Phase		3 Phase	3 Phase	3 Phase	3 Phase
	Operating Method		Grid Tied Type	Grid Tied Type	Grid Tied Type	Grid Tied Type
	Topology		Transformer	Transformer	External Transformer	External Transformer
	Input (DC)	Max. Power	30 / 50kW	115kW	575 / 725kW	2×575 / 2×725kW
		MPPT Range	370~800Vdc	460~800Vdc	460~850Vdc	460~850Vdc
		Max. Voltage	900Vdc	850Vdc	950Vdc	950Vdc
		Max. Current	80 / 133A	240A	1000 / 1300A	2×1000 / 2×1300A
		No. of DC-connections	2 / 2	1	12 / 16	12 / 16
	Output (AC)	Rated Power	30/50 kW	100kW	500 / 630kW	1000 / 1300kW
		Rated Voltage	380/400Vac	400Vac + N	315Vac + N	315Vac + N
		Rated Current	46/76A	158A	920 / 1220A	2X920 / 2X1220A
		Frequency	50/60Hz	50~60Hz	50~60Hz	50~60Hz
		Current Distortion	3% less	3% less	3% less	3% less
		Control Method	PWM	PWM	PWM	PWM
		Power Factor	99% more	90% more	90% more	90% more
		Max. Efficiency (Euro. Efficiency)	96% more (94% more)	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)	750×1700×800 (Wheel is excluded)	1200×2000×600	2800 X 2000 X 600 / 2800 X 2190 X 600 Additional Cooling Unit : 600 X 2000+200[1] X 800+160[2]	[2800 X 2000 X 600] X 2 / [2800 X 2190 X 600] X 2 Additional Cooling Unit : 600 X 2000+200[1] X 800+160[2]
		Weight (kg)	530/670	860	1800	3600
		Cooling	Air Cooling	Air Cooling	Liquid Cooling	Liquid Cooling
		Enclosure	IP21	IP21	IP43 or IP54(Option) / IP54	IP54
		Communication	RS-485	RS-485, USB	RS-485, USB	RS-485, USB
		Temperature	-10℃ ~ 50℃	-10℃~ 45℃	-20℃~ 50℃	-20℃ ~ 50℃
Certificates & Standards			CE, ENEL in preparation	CE (DK5940, RD1663 in preparation)	CE	CE
Protection			Input under/over voltage, Grid under/over voltage, Input/output over current, Grid frequency fault, System overheat, etc.			

1) Base for water connections disappearing or removable 2) Control of cooling

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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	Phase
S	Single Phase
T	Three Phase

Symbol	Rated Power	Symbol	Rated Power
003	3kW	024	24kW
004	4kW	100	100kW
005	5kW	160	160kW
006	6kW	250	250kW
008	8kW	333	333kW
010	10kW	500	500kW
013	12.4kW	630	630kW
017	16.5kW	10H	1000kW
020	19.2kW	13H	1300kW

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

Symbol	Product Type
INDOOR	For Indoor
OUTDOOR	For Indoor/Outdoor
M	Mini-Central type

Monitoring System >>

Well-balanced system operation and strengthening maintenance,

LSIS leads them through the new exclusive monitoring system technique in 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.

Construction Objective

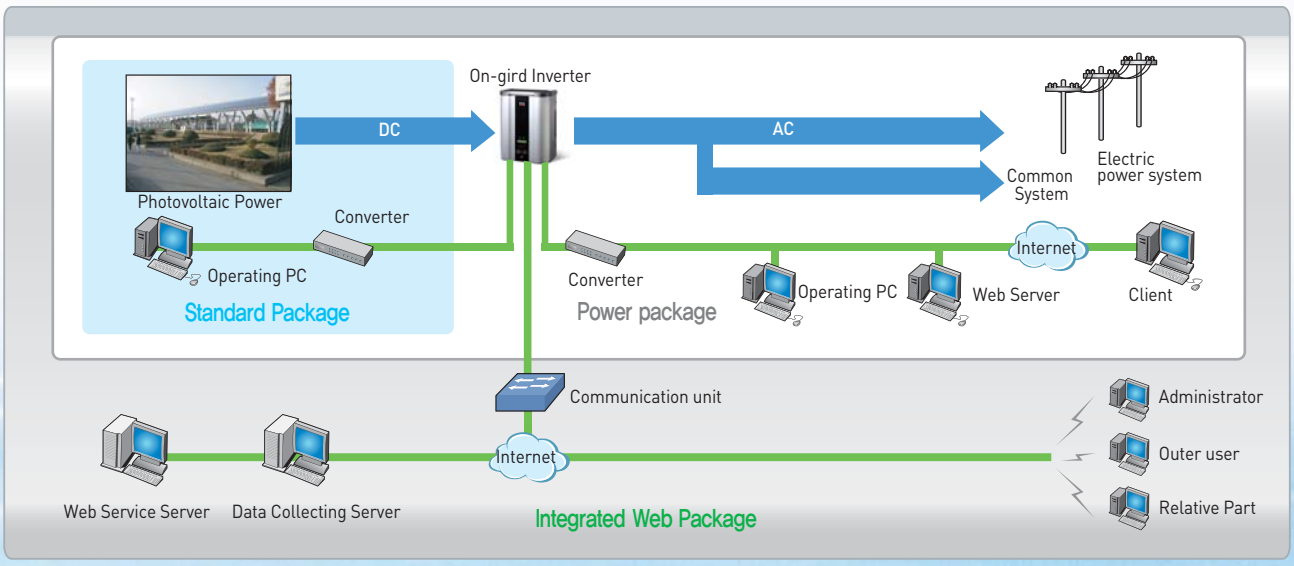
- Monitoring the generating condition
- Monitoring the operating condition
- Recording daily, monthly, yearly
- Analyzing the cause and raising an alarm signal when fault happens

Photovoltaic Power Integrated Web Monitoring System

Contraction strategy

- Monitoring correct and consistent gross generation
- Offering user friendly environment to make it easy to analyze, save, and all relative information
- Easy access and changing of data through exclusive program
- Supporting web viewer
- Security function to block access of non-permitted users

System Configuration



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Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance.
  Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

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