

MV Grid-connected PV Inverter for 1500 Vdc System

SPI4400K-B-HUD/T2
SPI4800K-B-HUD/T2
SPI5000K-B-HUD/T2

Product Features

High Integration

- 1500Vdc liquid-cooled PV inverter integration.
- 20~35kV inverter & step-up system.
- Intelligent substation control unit for fast comms.

Stable and Reliable

- Smart liquid & air cooling for reliability.
- 24h AC/DC insulation check.
- 20-ft container for stable structure.

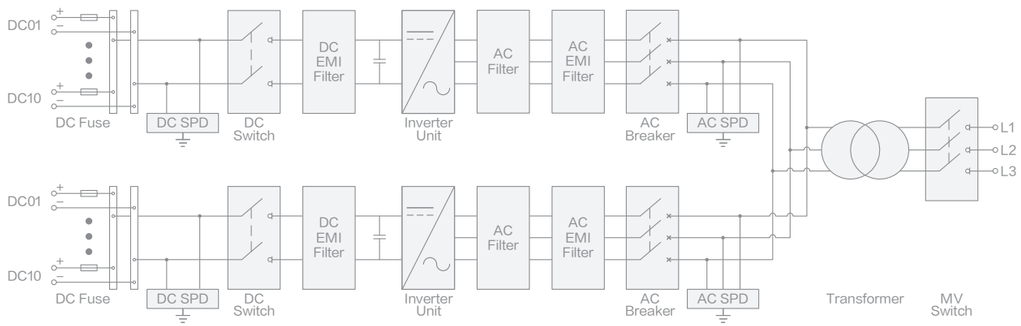
Lean Intelligence

- Unified interface for quick setup.
- Data collection & fiber net for smart op.
- AC-DC Terminal Temp. Detect. & Prot.

Investment Savings

- Inverter-transformer integration cuts costs.
- 100MW with only 20 integrated units
- Night SVG reduces station costs.

Circuit Diagram



Technical Specifications

Product Model	SPI4400K-B-HUD/T2	SPI4800K-B-HUD/T2	SPI5000K-B-HUD/T2
DC Input (PV)			
Max. PV input voltage	1500Vdc		
Startup input voltage	905Vdc		
MPP voltage range	895~1500Vdc		
No. of MPP inputs	2		
No. of DC inputs	2 × (8~11) optional		
Max. PV input current	2 × 2759A	2 × 3010A	2 × 3135A
AC Output (On-grid)			
Rated AC output power	4400kW	4800kW	5000kW
Max. Apparent Power	4840kVA	5280kVA	5500kVA
Rated voltage range	20~35kV		
Nominal grid frequency	50Hz/60Hz		
Power factor at nominal power	>0.99 (Rated power)		
Adjustable power factor	0.8 leading~0.8 lagging		
THDi	<3% (Rated power)		
Inverter Efficiency			
Max. efficiency	99.0%		
European efficiency	98.7%		
Transformer			
Transformer cooling type	ONAN		
Transformer vector	Dy11/Yd11		
Transformer rated power	4400kVA	4800kVA	5000kVA
Transformer max. power	4840kVA	5280kVA	5500kVA
Protection & Function			
LV/HVRT Function	Yes		
Fault Recording Function	Yes		
Online Upgrade Function	Yes		
PID Restoration Function	Yes		
Q at night function	Yes		
Box Support Monitoring Unit	Yes		
General data			
Dimensions (W × H × D)*	6000 × 3100 × 3200mm		
Weight*	15T		
Inverter Protection Level	IP65		
Inverter Cooling Method	Intelligent Liquid-air Hybrid Cooling		
Transformer Cooling Method	ONAN		
Max. Operating Altitude	2000m (>2000m customized)		
Operating Temperature	-35℃ ~60℃		
Operating Humidity	0~100% (non-condensing)		
Auxiliary power supply	5kVA (max. 40kVA optional)		
Display	LED,Mobile APP		
Communication	Ethernet/RS485		
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, NB/T32004-2018,GB/T19964-2024		

*Data under laboratory test conditions
■ Specifications are subject to change without prior notice