



Solar Pump Inverter_SPI Series _0.75K-18.5K_Datasheet

V 2.0

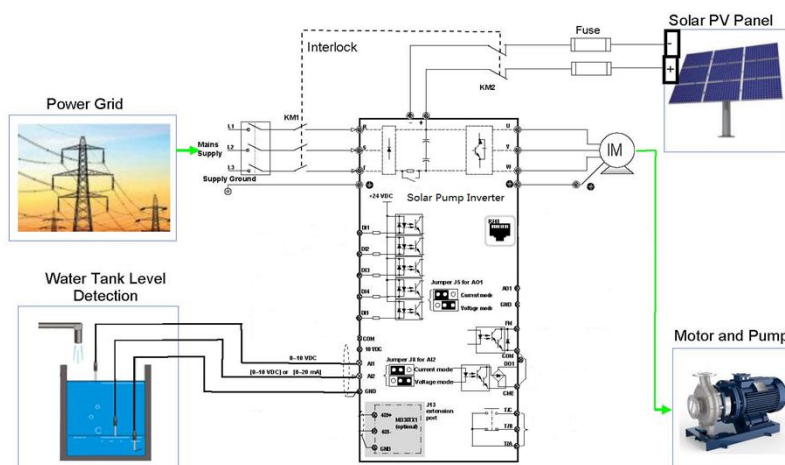
Model : Sunwins SPIS - 0.75K / 1.5K / 2.2K / 3.7K
Sunwins SPIT - 0.75K / 1.5K / 2.2K / 3.7K / 5.5K / 7.5K / 11K / 15K / 18.5K

Main Feature Advantages

- ◆ Supports solar PV input and compatible with AC power input (1 phase or 3 phase)
- ◆ Self-adaptive solar MPPT maximum power point tracking technology with 99% efficiency
- ◆ Plug and play system design within 30 minutes for fast simple maintenance
- ◆ Compatible with IEC standard 3 phase asynchronous motors
- ◆ Smart digital control with multi-function active protections
- ◆ Soft start feature to prevent water hammer and increase system life
- ◆ Smart IGBT module integrated to simplify system design and improve reliability
- ◆ Configurable various parameters via button and LCD screen
- ◆ Battery-free for most applications without battery maintenance needed
- ◆ Standard RS485 interface for each solar pump controller
- ◆ IP54 for outdoor installation, with SPD and breaker junction box



System Topology Block Diagram



SPIS Series: 1 Phase Solar Pump Inverter

Model Type	SPIS Series			
Type Number	SPIS-0.75K	SPIS-1.5K	SPIS-2.2K	SPIS-3.7K
Compatible AC Input Condition				
AC Grid Input Condition	Optional, Can be connected under special intelock system			
Input Voltage Phase (VAC)	1 Phase			
Input Voltage Range (VAC)	170 - 264			
Input Frequency (Hz)	50/60, +/- 5%			
Input Power Capacity (KVA)	1.5	3	4	7
AC Output / Water Pump Load Data				
Output Voltage Phase	3 Phase			
Output Voltage (VAC)	200 - 240, , +/- 15%			
Output Frequency (Hz)	0 - 500			
Output Current (A)	4	7	10	13
Pump Motor Power Rating (KW)	0.75	1.5	2.2	3.7
Pump Motor Power Rating (HP)	1	2	3	5
Solar PV Input Data				
PV Panel Class Recommend	Poly Silicon, Mono Silicon			
PV Open Circuit Voltage (Vdc)	400			
PV Input Start-up Voltage (Vdc)	180			
MPPT Operating Voltage (Vdc)	220 - 350			
MPPT Tracking Speed Time (s)	0 - 60, adjustable, 0.2 default			
MPPT Tracking Efficiency	> 99%			
MPPT Channel Number (pcs)	1 Channel			
Standby Power Consumption (W)	5	8	12	18
Recommend Solar Power (Wp)	0.9	1.8	2.5	4.5
Monitoring System				
Monitoring Parameters	Output voltage, Current , frequency, power, torque, bus voltage, state parameters			
Local Monitoring, LCD	Embedded, handset color display monitor			
Remote Monitoring	RS485,Modbus, I/O Card optional			
Safety & EMC				
Certification	CE,GB,RoHS, ISO9001, ISO14001			
Safety Standards	LVD 2006/95/EC ; IEC/EN 62109-1/2 ; IEC/EN 62040 ; IEC/EN 61800-5-1 ; IEC/EN 61800-2/3:2004;			
EMC Standards	EMC 2004/108/EC ; EN 55022 ; EN 55024 ; IEC 61000-6-2/4 ; IEC 61000-3-2/3 ;			
Over / Under Voltage Protection	Intergated			
Start-up / Shutdown Voltage Protection	Intergated			
Dry-run Motor Protection	Intergated			
Ground Fault Detection	Intergated			
SPD Protection for PV String	Intergated			
AC Output Breaker	Intergated			
Under Load Protection	Intergated, by detection current threshold			
Motor Thermal Protection	Intergated, pre-warning coefficient adjustable			
Auto-Start/Stop	Intergated, based on water tank level detection, 3-electrode stick optional			
Auto Restart	Intergated, based on water tank level detection, 3-electrode stick optional			

Environmental & Packing Data				
Relative Humidity	0 to 95%, non-condensing			
Altitude (m)	up to 2000, derating 5% power per 500m plus			
Operating Temperature (°C)	-20 to 60			
Storage Temperature (°C)	-25 to 70			
Modular Dimension, W*D*H (mm)	130x165x190		210x195x330	
Modular IP Degree Protection	IP20, indoor modular cover			
Cabinet Dimension, W*D*H (mm)	350x240x550			
Cabinet IP Degree Protection	IP54, outdoor			
Gross Weight (Kg)	8.0	8.5	9.5	10.5

SPIT Series: 3 Phase Solar Pump Inverter									
Model Type	SPIT Series								
Type Number	SPIT-0.75K	SPIT-1.5K	SPIT-2.2K	SPIT-3.7K	SPIT-5.5K	SPIT-7.5K	SPIT-11K	SPIT-15K	SPIT-18.5K
Compatible AC Input Condition									
AC Grid Input Condition	Optional, Can be connected under special intelock system								
Input Voltage Phase (VAC)	3 Phase								
Input Voltage Range (VAC)	380 / 480 @ 323 - 528								
Input Frequency (Hz)	50/60, +/- 5%								
Input Power Capacity (KVA)	1.5	3	4	6	9	11	17	21	24
AC Output / Water Pump Load Data									
Output Voltage Phase	3 Phase								
Output Voltage (VAC)	380 / 480								
Output Frequency (Hz)	0 - 500								
Output Current (A)	2.1	3.8	5.1	9	13	17	25	32	37
Pump Motor Power Rating (KW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5
Pump Motor Power Rating (HP)	1	2	3	5	7.5	10	15	20	25
Solar PV Input Data									
PV Panel Class Recommend	Poly Silicon, Mono Silicon								
PV Open Circuit Voltage (Vdc)	800								
PV Input Start-up Voltage (Vdc)	350								
MPPT Operating Voltage (Vdc)	350 - 750								
MPPT Tracking Speed Time (s)	0 - 60, adjustable, 0.2 default								
MPPT Tracking Efficiency	> 99%								
MPPT Channel Number (pcs)	1 Channel								
Standby Power Consumption (W)	5	6	8	9	10	12	16	18	20
Recommend Solar Power (Wp)	0.9	1.8	2.5	4.5	6.5	9	13	18	22

Monitoring System									
Monitoring Parameters	Output voltage, Current , frequency, power, torque, bus voltage, state parameters								
Local Monitoring, LCD	Embedded, handset color display monitor								
Remote Monitoring	RS485,Modbus, I/O Card optional								
Safety & EMC									
Certification	CE,GB,RoHS, ISO9001, ISO14001								
Safety Standards	LVD 2006/95/EC ; IEC/EN 62109-1/2 ; IEC/EN 62040 ; IEC/EN 61800-5-1 ; IEC/EN 61800-2/3:2004;								
EMC Standards	EMC 2004/108/EC ; EN 55022 ; EN 55024 ; IEC 61000-6-2/4 ; IEC 61000-3-11/12 ;								
Over / Under Voltage Protection	Intergated								
Start-up / Shutdown Voltage Protection	Intergated								
Dry-run Motor Protection	Intergated								
Ground Fault Detection	Intergated								
SPD Protection for PV String	Intergated								
AC Output Breaker	Intergated								
Under Load Protection	Intergated, by detection current threshold								
Motor Thermal Protection	Intergated, pre-warning coefficient adjustable								
Auto-Start/Stop	Intergated, based on water tank level detection, 3-electrode stick optional								
Auto Restart	Intergated, based on water tank level detection, 3-electrode stick optional								
Environmental & Packing Data									
Relative Humidity	0 to 95%, non-condensing								
Altitude (m)	up to 2000, derating 5% power per 500m plus								
Operating Temperature (°C)	-20 to 60								
Storage Temperature (°C)	-25 to 70								
Modular Dimension, W*D*H (mm)	130x165x190	160x185x250	210x195x330	285x230x430					
Modular IP Degree Protection	IP20, indoor modular cover								
Cabinet Dimension, W*D*H (mm)	350x240x550				450x240x650				
Cabinet IP Degree Protection	IP54, outdoor								
Gross Weight (Kg)	8.0	8.5	9.5	10.5	11	13	13.5	14	16