

# MARSRIVA

## Hybrid Solar Inverter

Three Phase - IP65 - High Frequency

Model: MR-SPH30K(50K)-LP3-TL65E

### FEATURES

- IP65 waterproof and dustproof design
- Wide battery input range 200VDC – 900VDC
- Parallel operation up to 4 units with common battery
- Built-in WiFi for mobile monitoring (App is available)
- Two independent AC power sources connected and switched automatically
- User-adjustable charging current up to 100A
- User-friendly HMI LCD design and easy configuration
- Built-in communication port for BMS (CAN and RS485)



### SPECIFICATION

MODEL	MR-SPH30K-LP3-TL65E	MR-SPH50K-LP3-TL65E
MAXIMUM PV INPUT POWER	40kW	65kW
RATED OUTPUT POWER	30kW	50kW
MAXIMUM CHARGING POWER	30kW	50kW

#### GRID-TIE OPERATION

##### PV INPUT (DC)

Nominal DC Voltage / Maximum DC Voltage	720VDC / 1000VDC	
Start-up Voltage / Initial Feeding Voltage	320VDC / 350VDC	
MPP Voltage Range	350VDC – 900VDC	
Full MPP Voltage Range	420VDC – 900VDC	
Number of MPP Trackers / Maximum Input Current	3 / A: 26A, B: 26A, C: 26A	4 / A: 32A, B: 32A, C: 32A, D: 32A

##### GRID OUTPUT (AC)

Nominal Output Voltage	230VAC (P-N) / 400VAC (P-P)	
Output Voltage Range	184VAC – 265VAC* per phase	
Nominal Output Current	43.5A per phase	47.5 – 51.5 Hz or 59.3 – 60.5 Hz
Power Factor range	0.9 lag – 0.9 lead	

##### EFFICIENCY

Maximum Conversion Efficiency (DC/AC)	96.5%
European Efficiency@ Vnominal	96%

#### OFF-GRID OPERATION

##### AC INPUT

AC Start-up Voltage / Auto Restart Voltage	120VAC – 140VAC per phase / 180VAC per phase	
Acceptable Input Voltage Range	170VAC – 290VAC per phase	
Maximum AC Input Current	50A	83A

##### PV INPUT (DC)


Maximum DC Voltage	1000VDC	
MPP Voltage Range	350VDC – 900VDC	
Full MPP Voltage Range	420VDC – 900VDC	
Number of MPP Trackers / Maximum Input Current	3 / A: 26A, B: 26A, C: 26A	4 / A: 32A, B: 32A, C: 32A, D: 32A

##### BATTERY MODE OUTPUT (AC)

Nominal Output Voltage	230VAC (P-N) / 400VAC (P-P)	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	97%	

**!** These figures are based on VDE-4105 standard. All figures may vary depending on different AC voltage and country requirements.  
Power derating 1% every 100 m when altitude is over 1000m  
Specifications are subject to change without notice, all product drawings are for reference only.

MODEL	MR-SPH30K-LP3-TL65E	MR-SPH50K-LP3-TL65E
MAXIMUM PV INPUT POWER	40kW	65kW
RATED OUTPUT POWER	30kW	50kW
MAXIMUM CHARGING POWER	30kW	50kW
<b>HYBRID OPERATION</b>		
<b>PV INPUT (DC)</b>		
Maximum DC Voltage	1000 VDC	
Start-up Voltage / Initial Feeding Voltage	320VDC / 350VDC	
MPP Voltage Range	350VDC – 900VDC	
Full MPP Voltage Range	420VDC – 900VDC	
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AC Start-up Voltage / Auto Restart Voltage	120VAC – 140VAC per phase / 180 VAC per phase	
Acceptable Input Voltage Range	170VAC – 290VAC per phase	
Maximum AC Input Current	50A	83A
<b>BATTERY MODE OUTPUT (AC)</b>		
Nominal Output Voltage	230VAC (P-N) / 400VAC (P-P)	
Efficiency (DC to AC)	97%	
<b>BATTERY &amp; CHARGER</b>		
Battery Voltage Range	500VDC – 900VDC	
Maximum Discharging Current	100A	
Maximum Charging Current	50A	60A
<b>GENERAL</b>		
<b>PHYSICAL</b>		
Dimension, D x W x H (mm)	255 × 660 × 750	
Net Weight (kgs)	73	110
<b>INTERFACE</b>		
Communication Port	RS-232, USB, DRY CONTACT, RS-485 and Wi-Fi	
Intelligent Slot	Optional SNMP, MODBUS and GPRS	
<b>ENVIRONMENT</b>		
Humidity	0 – 100% RH (Non-condensing)	
Operating Temperature	-25 to 60°C (>45°C De-rating)	
Altitude	0 – 1000 m**	
<b>PROTECTION &amp; CERTIFICATE</b>		
Safety	IEC/EN 61000, IEC/EN 62920, EN 62477	
Grid Connection Standard	NRS097-2-1:2017, VDE-AR-N4105, G99, IEC 61683, IEC 61727, IEC 62116	

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