SH5.0/6.0RS

Residential Hybrid Single Phase Inverter



FLEXIBLE APPLICATION

- 80 V 460 V wide battery voltage range
- · Ideal for both retrofitting and new installations
- Built-in smart PID Zero function

USER FRIENDLY SETUP

- Plug and play installation
- iSolarCloud monitoring available on App and Web
- Lightweight and compact, optimized for heatdissipation

ENERGY INDEPENDENCE

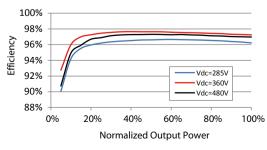
- Seamless transition to backup mode, for protection against power outages
- Fast Charging or discharging, enabling higher self-consumption results
- Built-in EMS with advanced customization

(SMART MANAGEMENT

- Real time data (10 seconds refresh sample)
- 24/7 live online monitoring and with integrated display
- · Online IV curve scan and diagnosis

CIRCUIT DIAGRAM

EFFICIENCY CURVE (SH6.0RS)





Type designation	SH5.0RS	SH6.0RS
Input (DC)		
Recommended max. PV input power	12000 Wp	13000 Wp
Max. PV input voltage *		600 V
Min. PV input voltage / Startup input voltage	40 V / 50 V	
Rated PV input voltage		360 V
MPPT operating voltage range **		40 V – 560 V
No. of independent MPP trackers		2
No. of PV strings per MPPT		1/1
Max. PV input current	32	A (16 A / 16 A)
Max. DC short-circuit current		A (20 A / 20 A)
Max. current for input connector		20 A
Battery data		
Battery type	L	i-ion battery
Battery voltage range		80 V - 460 V
Max. charge *** / discharge current ***		30 A / 30 A
Max. charge / discharge power		6600 W
Input / Output (AC)		
Max. AC power from grid	12000 VA	13000 VA
Rated AC output power	4999 W	6000 W
Max. AC output apparent power	4999 VA	6000 VA
Rated AC output apparent power	4999 VA	6000 VA
Rated AC output current (at 230 V)	21.7 A	26.1 A
Max. AC output current	22.7 A	27.3 A
Rated AC voltage	22.17	230 V
AC voltage range		250 V 154 V – 276 V
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 Hz – 55 Hz / 65 Hz	
Harmonic (THD)	< 3 % (of rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 at default value at rated power	
Feed-in phases / connection phases	1/1	
Backup data (on-grid mode)		1/1
Max. output power for backup load ****		6000 W
Max. output power for backup load ***** Max. output current for backup load *****	27.3 A	
· · · · · · · · · · · · · · · · · · ·		27.3 A
Backup data (off-grid mode)		2701/ / + 2.0/)
Rated voltage		230V (±2%)
Rated frequency	50 Hz	(/ 60 Hz (± 0.2 %)
THDV (@Linear load)		< 2 %
Backup switch time	F000 \\\ / F000 \\\	< 10 ms
Rated output power	5000 W / 5000 VA	6000 W / 6000 VA
Peak output power	٤	400 VA, 10 s
Efficiency		77.07.407.707
Max. efficiency / European efficiency	g	7.7 % / 97.3 %
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
		Yes
		Yes Yes
Leakage current protection		Yes Yes Yes
Leakage current protection DC switch (solar)		Yes Yes Yes Yes
Leakage current protection DC switch (solar) Surge protection	DC T	Yes Yes Yes Yes ype II / AC Type II
Leakage current protection DC switch (solar) Surge protection PID Zero		Yes Yes Yes Yes ype II / AC Type II Yes
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters		Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection		Yes Yes Yes Yes ype II / AC Type II Yes
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data		Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery)	Mast	Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3
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Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W*H*D) Weight	Mast Transforme	Yes Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W*H*D) Weight Mounting method	Mast Transforme 490 mm	Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight	Mast Transforme 490 mm Wall-I	Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range	Mast Transforme 490 mm Wall-I	Yes Yes Yes Yes Yes yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range	Mast Transforme 490 mm Wall-i	Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C
DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range	Mast Transforme 490 mm Wall-i	Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C 0 % - 100 %
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude	Mast Transforme 490 mm Wall-ı Nat	Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C 0 % - 100 % ural convection
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude	Mast Transforme 490 mm Wall-ı Nat	Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C 0 % - 100 % ural convection 4000 m
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude Noise (typical) Display	Mast Transforme 490 mm Wall-ı Nat LED digital	Yes Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C 0 % - 100 % ural convection 4000 m < 45 dB (A)
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude Noise (typical) Display Communication	Mast Transforme 490 mm Wall-I Nat LED digital RS485 / E	Yes Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C 0 % - 100 % ural convection 4000 m < 45 dB (A) display & LED indicator
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude Noise (typical) Display Communication DI / DO	Mast Transforme 490 mm Wall-I Nat LED digital RS485 / E DI *	Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 ℃ - 60 ℃ 0 % - 100 % ural convection 4000 m < 45 dB (A) display & LED indicator thernet / WLAN / CAN 4 / DO * 1 / DRM
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude Noise (typical) Display Communication DI / DO DC connection type	Mast Transforme 490 mm Wall-1 Nat LED digital RS485 / E DI * MC4 (PV, Max.6 mm²) / E	Yes Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 °C - 60 °C 0 % - 100 % ural convection 4000 m < 45 dB (A) display & LED indicator thernet / WLAN / CAN 4 / DO * 1 / DRM vo2 Compatible (Battery, Max.6 mm²)
Leakage current protection DC switch (solar) Surge protection PID Zero Parallel operation on grid port / Max. No of inverters Battery input reverse polarity protection General data Topology (Solar / Battery) Degree of protection Dimensions (W * H * D) Weight Mounting method Operating ambient temperature range Allowable relative humidity range Cooling method Max. operating altitude Noise (typical) Display Communication DI / DO	Transforme 490 mm Wall-1 Nat LED digital RS485 / E DI * MC4 (PV, Max.6 mm²) / E Plug and Play (Grid)	Yes Yes Yes Yes Yes Yes ype II / AC Type II Yes er-slave mode / 3 Yes erless / Transformerless IP65 * 340 mm * 170 mm 18.5 kg mounting bracket -25 ℃ - 60 ℃ 0 % - 100 % ural convection 4000 m < 45 dB (A) display & LED indicator thernet / WLAN / CAN 4 / DO * 1 / DRM

^{*} Input voltage exceeding the MPPT operating voltage range triggers inverter protection ** Please refer to the user manual for the full load MPPT voltage range *** Depending on the connected battery **** Please refer to the user manual and modify the settings based on actual load power ***** Calculated based on 220V grid voltage ****** AC Connector brand is Phoenix Contact and compatible brand. Country code needs to be set before grid connection

