

All-in-One Energy Storage single-phase System

SHANGHAI NEWTREND ELECTRIC CO., LTD.

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Selectable scope: YAIO single-phase only. Three-phase reference pages are not offered pending confirmation.

Supplied certificates, project compatibility and OEM commercial/warranty terms: To be confirmed.

Product Parameter

The YAIO series uses lithium iron phosphate (LFP) batteries , which are safe , long-lasting , efficient ,and have high powerdensity.Intelligent BMS provides comprehensive protection.Integrated design,capable of integrating 20/25/30/40kWH energy storage systems and 6/8/10/12kW hybrid inverters.Waterproof rating IP54, suitable for various house hold scenarios . Plug and play , no exposed power interface , safe and reliable .



Product Parameter

	5 Year Warranty or 6,000 Charging Cycles
	Local &Remote Monitoring
	Plug and Play
	Expandable Storage
	Ip54 rating

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MODEL NUMBER	YAIO-1PH6-20	YAIO-1PH8-25	YAIO-1PH10-30	YAIO-1PH12-40
PV input				
Max. input Power (kw)	9	12	15	18
Max. Pv Voltage (V)	550	550	550	550
MPPT Range (V)	80-500	80-500	80-500	80-500
Full MPPT Range (V)	170-500	150-500	130-500	160-500
Normal Voltage (V)	360	360	360	360
Startup Voltage (V)	100	100	100	100
Max. input Current (A)	18.5x2	18.5x3	18.5x3	18.5x3
Max. short Current (A)	26x2	26x2	26x2	26x2
No. of MPPT Tracker / Strings	2/2	3/4	3/4	3/4
Battery Port				
Battery Type	LiFePO4 102Ah	LiFePO4 102Ah	LiFePO4 102Ah	LiFePO4 102Ah
Total Battery Capacity	20.8kWH	26kWH	31.2kWH	41.6kWH
Nominal Battery Voltage	51.2V	51.2V	51.2V	51.2V
Battery Voltage Range	40-58.4V	40-58.4V	40-58.4V	40-58.4V
Protection	Over Voltage, Under Voltage, Over Current,Short Circuit, Over Temperature,Under temperature			
Depth Of Discharge	Lithium Ion 0~90% DOD Adjustable			
AC Grid				
Max Continuous Current (A)	28	37	46	55
Max Continuous Power (kVA)	6	8	10	12
Nominal Grid Current (A)	28/26.1	37/35	46/44	55/52
Nominal Grid Voltage (V)	198 to 242 @220/ 207 to 253 @230	198 to 242 @220/ 207 to 253 @230	198 to 242 @220/ 207 to 253 @230	198 to 242 @220/ 207 to 253 @230
Nominal AC Frenquency (Hz)	50/60	50/60	50/60	50/60
Current THD(%)	<3	<3	<3	<3
AC Load Output				
Max Continuous Current (A)	28	37	46	55
Max Continuous Power (kVA)	6	8	10	12
Max Peak Current (A) (10min)	41/39.2	55.5/52.5	69/66	82.5/78
Max Peak Power (kVA) (10min)	9	12	15	18
Nominal Ac Voltage L-N (V)	220 /230	220 /230	220 /230	220 /230
Nominal Ac Frequency(Hz)	50/60			
Switching Time (ms)	<10			
Woltage THD(%)	<3			

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EFFICIENCY				
CEC Effciency (%)	97.0%	/	/	/
Max. Efficiency (%)	97.6%	96.8%	96.8%	96.8%
PV to Bat. Efficiency (%)	98.1%	/	/	/
Bat. between AC Efficiency (%)	96.8%	/	/	/
PROTECTION				
PV Reverse Polarity Protection	YES	YES	YES	YES
Over Current/Voltage Protection	YES	YES	YES	YES
Anti-Islanding Protection	YES	YES	YES	YES
AC Short-ciruit Protection	YES	YES	YES	YES
Residual Current Detection	YES	YES	YES	YES
Ground Fault Monitoring	YES	YES	YES	YES
Insulation Resister Detection	YES	YES	YES	YES
PV Arc Detection	YES	YES	YES	YES
AC/DC surgeprotection	Type II	Type II	Type II	Type II
GENERAL DATA				
DC Switch	Standard	Standard	Standard	Standard
Dimensions [W*H*D] [mm]	950*650*1810	950*650*1810	950*650*1810	950*650*1810
Net Weight [KG]	450	505	560	670
Protection Degree	Ip54	Ip54	Ip54	Ip54
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling Concept	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan
Relatively Humidity	0-100%	0-100%	0-100%	0-100%
Operating Temperature Range(℃)	0 to 50 ℃	0 to 50 ℃	0 to 50 ℃	0 to 50 ℃
Operating Altitude(m)	<4000			
Stand by Consumption(w)	<5			
Display&Communication Interfaces	LCD,LED,RS485,CAN,Wi-Fi,GPRS,4G			
Certification&Approvals	NRS097,G98/G99,EN50549-1,C10/C11,AS4777.2,VDE-AR-N4105,VDE0126,IEC62109-1,IEC62109-2			
EMC	EN61000-6-2,EN61000-6-3			

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Supplied certificates, project compatibility and OEM commercial/warranty terms: To be confirmed.



All-in-One Energy Storage Three-phase System

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Product Parameter

The YAIO series uses lithium iron phosphate (LFP) batteries,which are safe,long-lasting,efficient,and have high power density.Intelligent BMS provides comprehensive protection.Integrated design, capable of integrating 30/39/45/60kWH energy storage systems and 15/20/25/30kW hybrid inverters.Waterproof rating IP54,suitable for various household scenarios.Plug and play,no exposed power interface,safe and reliable.



Product Parameter

	5 Year Warranty or 6,000 Charging Cycles
	Local &Remote Monitoring
	Plug and Play
	Expandable Storage
	Ip54 rating

Selectable scope: YAIO single-phase only. Three-phase reference pages are not offered pending confirmation.
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MODEL NUMBER	YAIO-3PH15-30	YAIO-3PH20-39	YAIO-3PH25-45	YAIO-3PH30-60
PV input				
Max. DC input Power (kw)	22.5	30	37.5	45
Max. Pv Voltage (V)	1000	1000	1000	1000
Rated DC input Voltage (V)	620	620	620	620
DC input Voltage Range (V)	150-1000	150-1000	150-1000	150-1000
MPPT Voltage Range (V)	150-850	150-850	150-850	150-850
Full MPPT Range(V)	500-850	500-850	500-850	500-850
Start up Voltage (V)	160	160	160	160
Max. DC input current (A)	20+32	32x2	40x2	40x2
Max. Short Current(A)	30+48	48x2	60x2	60x2
No. of MPPT Tracker / Strings	2/3	2/4	2/4	2/4
Battery Port				
Battery Type	LiFePO4 102Ah	LiFePO4 102Ah	LiFePO4 102Ah	LiFePO4 102Ah
Total Battery Capacity	31.33kWH	39.16kWH	46.99kWH	62.66kWH
Total Nominal Battery Voltage	284.8V	356V	427.2V	569.6V
Total Battery Voltage Range	240-350.4V	300-438V	360-525.6V	480-700.8V
Number of Battery Pack	4	5	6	8
Charging Curve	3 Stages	3 Stages	3 Stages	3 Stages
Protection	Over Voltage, Under Voltage, Over Current,Short Circuit, Over Temperature,Under temperature			
Depth Of Discharge	Lithium Ion 0~90% DOD Adjustable			
AC Grid				
Nominal Ac Output Power (kw)	15	20	25	30
Max. AC Input Power	22.5	30	37.5	45
Max. Ac Output current(A)	27	32	40	48
Nominal AC Voltage (V)	230/400	230/400	230/400	230/400
Nominal AC Frenquency (Hz)	50/60	50/60	50/60	50/60
Power Factor	1(-0.8-0.8)adjustable	1(-0.8-0.8)adjustable	1(-0.8-0.8)adjustable	1(-0.8-0.8)adjustable
Current THD (%)	<3%	<3%	<3%	<3%
AC Load Output (Back-up)				
Nominal Output Power (VA)	15000	20000	25000	30000
Nominal Output Voltage (V)	230/400	230/400	230/400	230/400
Nominal Output Frequency (Hz)	50/60	50/60	50/60	50/60
Nominal Output Current (A)	21.8	29	36.3	43.5
Peak Output Power	16500VA, 60S	22000VA, 60S	27500VA, 60S	33000VA, 60S
THDV (with linear load)	<3%			
Switching Time (ms)	<10			

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EFFICIENCY				
Euro Efficiency	97.5%	97.8%	98%	98.1%
Max.Efficiency	98.3%	98.2%	98.5%	98.5%
Battery Charge/Discharge Efficiency	98%	98%	98%	98%
PROTECTION				
Reverse Polarity Protection	YES	YES	YES	YES
Over Current / Voltage Protection	YES	YES	YES	YES
Anti-islanding Protection	YES	YES	YES	YES
AC Short-ciruit Protection	YES	YES	YES	YES
Leakage Current Detection	YES	YES	YES	YES
Ground Fault Monitoring	YES	YES	YES	YES
Grid Monitoring	YES	YES	YES	YES
AC/DC surge protection	Type II	Type II	Type II	Type II
GENERAL DATA				
DC Switch	Standard	Standard	Standard	Standard
Dimensions [W*H*D] [mm]	653*923*1820	653*923*1820	653*923*1820	653*923*1820
Net Weight [KG]	620	680	740	860
Protection Degree	Ip54	Ip54	Ip54	Ip54
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling Concept	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan
Relatively Humidity	0-100%	0-100%	0-100%	0-100%
Operating Temperature Range (℃)	0 to 50 ℃	0 to 50 ℃	0 to 50 ℃	0 to 50 ℃
Operating Altitude (m)	<4000			
Standby Consumption (w)	<5			
Display & Communication Interfaces	LCD,LED,RS485,CAN,Wi-Fi,GPRS,4G			
Certification & Approvals	NRS097,G98/G99,EN50549-1,C10/C11,AS4777.2,VDE-AR-N4105,VDE0126,IEC62109-1,IEC62109-2			
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