

# Distributed Energy Storage System

29.9~50kW/50~60kWh

- Inverter and battery highly integrated to form a compact design
- Support multiple sets of sub-systems operation in parallel in off-grid mode
- Multiple MPPTs and battery input for single system
- Easy installation and maintenance
- Suitable for multiple C&I application scenarios
- Support UPS function
- Strong power grid adaptability



**G**ROWATT

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P O W E R  
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R R O W O

Hybrid Inverter Data					
Model	WIT 29.9K-XHU	WIT 30K-XHU	WIT 36K-XHU	WIT 40K-XHU	WIT 50K-XHU
Max. recommended PV power (for module STC)	59.8kW	60kW	72kW	80kW	100kW
Start voltage	195V				
Max. DC voltage	1100V				
Nominal voltage	620V				
MPP voltage range	180V-1000V				
Full load DC voltage range	375V-850V	375V-850V	450V-850V	500V-850V	620V-850V
Max. input current per MPP tracker	40A				
Max. short-circuit current per MPP tracker	50A				
No. of PV strings per MPP tracker	2				
No. of MPP trackers	4				
Battery Data (DC)					
Battery voltage range	200-900V				
No. of battery input	3				
Max. charging / discharging current	55A*3				
BMS communication	RS485/CAN				
Input/Output AC					
AC input/output nominal power(Grid)	59.8kW/29.9kW	60kW/30kW	72kW/36kW	80kW/40kW	100kW/50kW
Max. AC input/output apparent power(Grid)	59.8kVA/29.9kVA	66kVA/33kVA	79.2kVA/39.6kVA	88kVA/44kVA	110kVA/55kVA
Max. input/output current(Grid)	90.6A/45.3A	100A/50A	120A/60A	133.3A/66.7A	166.7A/83.3A
Max. input current(GEN/AC couple)	90.6A/45.3A	100A/45.5A	120A/54.5A	133.3A/60.7A	166.7A/75.7A
Max. output current(Smart load)	200A				
Nominal AC voltage/range	380/400V, -15%~10%				
Nominal AC grid frequency/range	50Hz/60Hz, 45-55Hz/55-65Hz				
Power factor(@nominal power)	>0.99				
Adjustable power factor	-1...+1				
THDi	<3%				
AC grid connection type	3P3W+PE/3P4W+PE				
Backup Power					
AC nominal output power	29.9kW	30kW	36kW	40kW	50kW
Max. AC apparent power	29.9kVA	45kVA	54kVA	60kVA	75kVA
Nominal AC voltage	220V/230V(L-N), 380V/400V(L-L)				
Nominal AC frequency	50/60Hz				
Max. output current	68.0A	68.2A	81.8A	91A	113.6A
Overload capability	1.5 time of rated power, 10s				
THDv	<3% (@Linear full load)				
Efficiency					
Max. efficiency	98.1%				
Protection Devices					
DC reverse polarity protection	Yes				
Battery reverse protection	Yes				
Insulation resistance monitoring	Yes				
AC/DC surge protection	Type II				
AC short-circuit protection	Yes				
Ground fault monitoring	Yes				
Grid monitoring	Yes				
String monitoring	Yes				
Anti-islanding protection	Yes				
Residual-current monitoring unit	Yes				
General Data					
Dimensions (W/H/D)	920/585/320mm				
Weight	92kg				
Operating temperature range	-30°C - 60°C (>50°C derating)				
Noise emission	≤55dB				
Altitude	4000m				
Topology	Transformerless				
Cooling	Smart air cooling				
Protection degree	IP66				
Relative humidity	0~95%				
Interfaces					
Display	OLED+LED/APP				
Interfaces	RS485/USB/CAN, WIFI/LAN(Opt)				
Warranty: 5 / 10 years	Yes/Opt				

NRS 097-2-1:2017, EN 50549-1, IEC 62116, IEC 61727, G99:2020, VDE 4105, IEC/EN 61000-6-1, IEC/EN 61000-6-3, IEC/EN 62109-1, IEC/EN 62109-2

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## Battery System Data

Model	AXE 50.0H-1HT-S1	AXE 60.0H-1HT-S1
Control module	AXE 1000100-C1	
Number of control module	1	
Battery module	AXE 5.0H-E1 EU	
Number of modules in series	10	12
Energy capacity	50kWh	60kWh
Usable capacity	45kWh	54kWh
Max. output power*1	50kW	60kW
Max. charge/discharge current	100A	
Dimension (W/H/D)	800/2000/1000mm	
Weight	≤0.9t	≤1t
Nominal voltage	512V	614.4V
Operating voltage range	464~568V	556.8~681.6V
Ingress protection	IP55	
Installation style	Floor stand	
Operating temperature range	-25~55°C	
Relative humidity	5% ~ 95%	
Cooling	Air-Cooling	
Warranty	10 years	
Noise emission	<65dB	
Maximum altitude	≤2000m	

### Control Module AXE 1000100-C1

Dimension (W/H/D)	482/131/580mm
Weight	≤15kg
Communication port	CAN/RS485/USB
Operating voltage range	120V-1000Vdc
Maximum current	100A
Monitoring parameters	SOC, System voltage, current, cell voltage, cell temperature, PCBA temperature

### Battery Module AXE 5.0H-E1 EU

Battery type	Lithium-ion
Nominal energy	5kWh
Nominal voltage	51.2V
Pack operating voltage range	46.4~56.8V
Dimension (W/H/D)	482/131/580mm
Battery module weight	≤47kg

UN 38.3, IEC 62619, IEC 60730, IEC 62477, CE, RoHS, UKCA

## System Options

AXE 50.0~60.0H-1HT-S1*3(92.16~184.32kWh)	√	√	√	√	√	
AXE 50.0~60.0H-1HT-S1*2(61.44~122.88kWh)	√	√	√	√	√	
AXE 60.0H-1HT-S1*1(61.44kWh)	√	√	√	√	√	
AXE 55.0H-1HT-S1*1(56.32kWh)	√	√	√	√	√	
AXE 50.0H-1HT-S1*1(51.2kWh)	√	√	√	√	√	
Battery System	Inverter	WIT 29.9K-XHU	WIT 30K-XHU	WIT 36K-XHU	WIT 40K-XHU	WIT 50K-XHU

\* 1 Depend on the max. battery charge/discharge power of the inverter.

\* Nominal charge/discharge current and power derating will occur related to temperature and SOC.

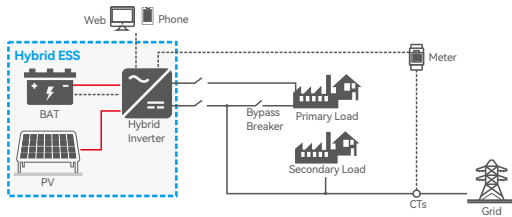
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# Solutions

## On/Off-Grid System

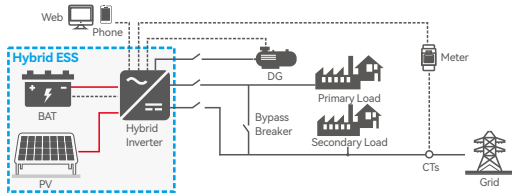


### Single System or Multiple Systems

#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 50.0-60.0H-1HT-S1
- SEM-XA-RM+CTs (for multiple system)
- ShineWiLAN-X2 (for single system)
- TPM-CT-E/C-EU (for single system)
- Battery Terminal Junction Box (optional)

## On/Off-Grid System with DG

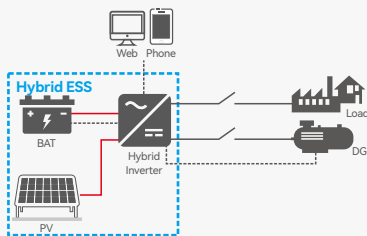


### Single System or Multiple Systems

#### Hybrid ESS:

- WIT 100K-HU-PLUS
- AXE 50.0-60.0H-1HT-S1
- SEM-XA-RM+CTs (for multiple system)
- ShineWiLAN-X2 (for single system)
- TPM-CT-E/C-EU (for single system)

## Off-Grid System

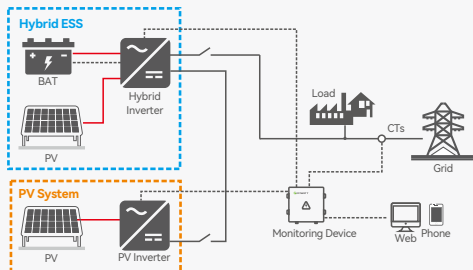


### Single System or Multiple Systems

#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 50.0-60.0H-1HT-S1
- SEM-XA-RM+CTs (for multiple system)
- ShineWiLAN-X2 (for single system)
- Battery Terminal Junction Box (optional)

## On-Grid AC-Coupled System



### Multiple Systems

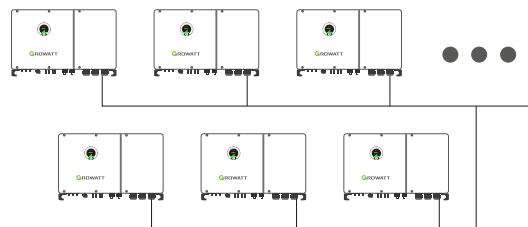
#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 50.0-60.0H-1HT-S1
- SEM-XA-RM+CTs (for multiple system)
- Battery Terminal Junction Box (optional)

#### PV System:

- MAX series PV Inverters
- MID series PV Inverters

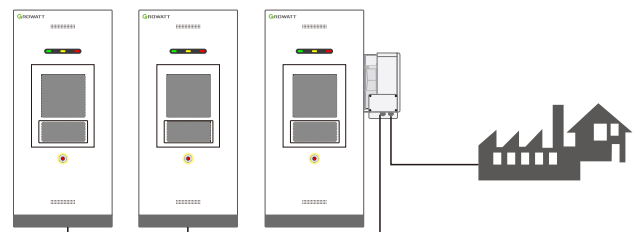
## AC Multi-System Parallel Operation



parallel operation of up to 10 inverters\*2

## DC\*1

### Flexible Battery Capacity



extend to 120~180kWh each inverter\*3

\*1 DC means battery input capability here.

\*2 For parallel demand over 6 units, please consult with Growatt technical team for more information.

\*3 Each battery input provides up to 55A current. For higher charging/discharging current demand, battery terminal junction box can be purchased.