



Neostar 2S Mono-Glass Module

440W-460W

Second Generation
Comprehensive Upgrade:

 **Partial Shading Optimisation**

 **Better Temperature Coefficient**

 **High Temperature Restriction**

 **Micro-crack Resistance**

 **Higher Power**

 **Lower BOS**

 **Full Black Design**



Product
Warranty



Performance
Warranty



reddot winner 2023



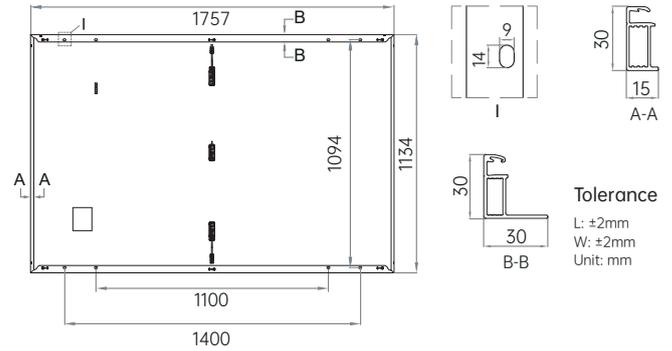
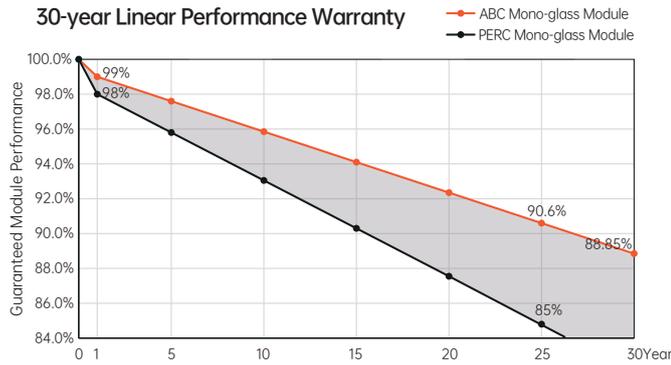
Munich RE 

460W
Output

23.1%
Efficiency

≤1%
First-year Degradation

≤0.35%
Annual Degradation from Year 2-30



Electrical Characteristics (STC: AM1.5 1000W/m ² 25°C NOCT: AM1.5 800W/m ² 20°C 1m/s)										Power Tolerance: 0~ + 3%	
Module Type	AIKO-A440-MAH54Mb		AIKO-A445-MAH54Mb		AIKO-A450-MAH54Mb		AIKO-A455-MAH54Mb		AIKO-A460-MAH54Mb		
	STC	NOCT									
P _{max} [W]	440	331	445	335	450	339	455	343	460	346	
V _{oc} [V]	40.49	38.24	40.59	38.33	40.69	38.43	40.79	38.52	40.89	38.62	
V _{mp} [V]	33.50	31.64	33.60	31.73	33.70	31.83	33.80	31.92	33.90	32.02	
I _{sc} [A]	13.91	11.25	14.02	11.33	14.12	11.42	14.22	11.50	14.32	11.58	
I _{mp} [A]	13.14	10.49	13.25	10.57	13.36	10.66	13.47	10.75	13.57	10.83	
Module Efficiency	22.1%		22.3%		22.6%		22.8%		23.1%		

Mechanical Specification	
Cell Type	N-Type ABC
Front Cover Mono glass	3.2 mm tempered glass
Frame	Black anodized aluminum
Cable	4mm ² (IEC) 12AWG(UL) 1200mm
No. of Cells	108(6*18)
Junction Box	IP68,3 bypass diodes
Connector	MC4-Evo2
Weight	21.5kg
Dimension	1757*1134*30mm
Package Detail	36pcs per pallet / 216pcs per 20'GP / 936pcs per 40'HC

Temperature Ratings (STC)	
Temperature Coefficient of I _{sc}	+ 0.05%/ °C
Temperature Coefficient of V _{oc}	- 0.22%/ °C
Temperature Coefficient of P _{max}	- 0.26%/ °C

Installation Guide	
Operation Temperature	-40°C - +85°C
Maximum Series Fuse Rating	25A
Protection Class	Class II
V _{oc} and I _{sc} Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Loading	Front 5400Pa Back 2400Pa
Hail Test	25 mm diameter hail at 23 m/s
Fire Rating	IEC Class C





Sigen Energy Controller

3.0 – 12.0 kW Single Phase

- EMS inside for precise control
- Up to 4 MPP. trackers
- Multi-source black start
- On & off-grid compatibility
- DC/AC ratio up to 2
- IP66 system protection rating

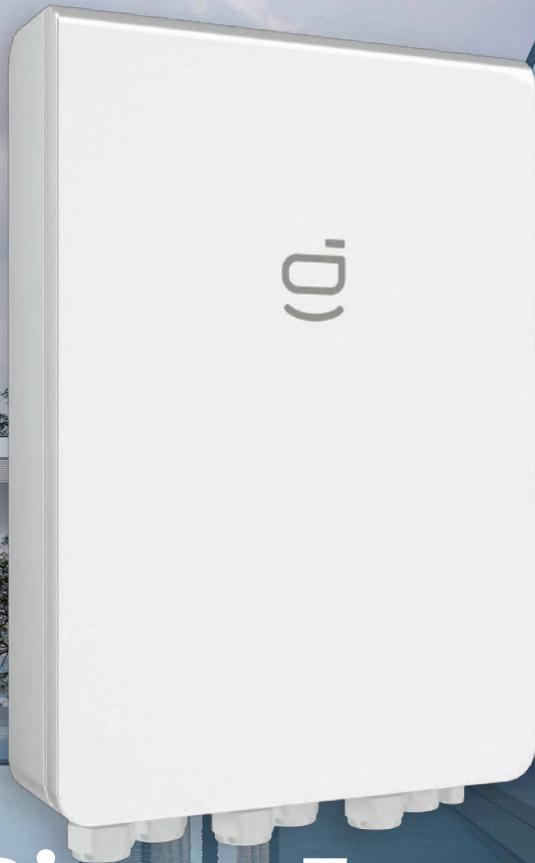


Sigen Energy Controller 3.0–12.0 kW Single Phase ¹

SigenStor EC	3.0 SP	3.6 SP	4.0 SP	4.6 SP	5.0 SP	6.0 SP	8.0 SP	10.0 SP	12.0 SP	Units	
DC Input (from PV)											
Max. PV power	6000	7360	8000	9200	10000	12000	16000	20000	24000	W	
Max. DC input voltage					600					V	
Nominal DC input voltage					350					V	
Start-up voltage					100					V	
MPPT voltage range					50 ~ 550						V
Number of MPP trackers					2		3	4	4		
Number of PV strings per MPPT					1						
Max. input current per MPPT					16						A
Max. short-circuit current per MPPT					20						A
AC Output (on-grid)											
Nominal output power	3000	3680	4000	4600	5000	6000	8000	10000	12000	W	
Max. output apparent power	3300	3680	4400	5000	5500	6600	8800	11000	12000	VA	
Nominal output current	13.6	16.0	18.2	20.9	22.7	27.3	36.4	45.5	54.6	A	
Max. output current	15.0	16.0	20.0	22.7	25.0	30.0	40.0	50.0	54.6	A	
Nominal output voltage					220 / 230 / 240		220 / 230				V
Nominal grid frequency					50 / 60						Hz
Power factor					0.8 leading ~ 0.8 lagging						
Total current harmonic distortion					THDi < 2%						
Efficiency											
Max. efficiency	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	97.6%	97.6%	97.6%		
European efficiency	97.0%	97.1%	97.2%	97.3%	97.4%	97.4%	97.0%	97.0%	97.0%		
AC Output (backup)											
Peak output power (10 seconds)	4500	5520	6000	6900	7500	9000	12000	15000	15000	W	
Nominal output voltage					220 / 230 / 240		220 / 230				V
Nominal output frequency					50 / 60						Hz
Power factor					0.8 leading ~ 0.8 lagging						
Total voltage harmonic distortion					THDv < 2%						
Disruption time of backup switch ²					0						ms
Battery Connection											
Battery module models					SigenStor BAT 5.0 / 8.0						
Number of modules per controller					1 ~ 6						pcs
Battery module voltage range					300 ~ 600						V
Protection											
Safety protection feature	DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter ³ , AC overcurrent/overvoltage/short-circuit protection. Type II DC/AC surge protection, Anti-islanding protection										
General Data											
Dimensions (W / H / D)					700 / 300 / 245		700 / 300 / 260			mm	
Weight					18		36			kg	
Storage temperature range					-40 ~ 70						°C
Operating temperature range					-30 ~ 60						°C
Relative humidity range					0% ~ 95%						
Max. operating altitude					4000						m
Cooling					Natural convection		Smart air cooling				
System ingress protection rating					IP66						
Communication	WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)										
Standard Compliance											
Standard ⁴	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2										

- Sigen Energy Controller 8.0–12.0 kW Single Phase is only available in specific regions. Please contact Sigenergy or local distributors for details.
- This refers to the load-side disruption time, to achieve this functionality Sigen Energy Gateway needs to be used together with Sigen Energy Controller and Sigen Battery. Test conditions: In the open-circuit state of the power grid, the nominal power of the Sigen Energy Controller is higher than the total power of the home loads.
- This is an optional feature only supported in certain models, please contact Sigenergy for more information.
- For all standards refer to the certificates category on the Sigenergy website.

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Sigen Energy Gateway HomeMax Series

- Multiple breaker positions reserved for SigenStor or other loads
- Seamless switch to backup mode, worry-free energy usage
- Ready for generator, heat pump or other controllable loads
- Support both whole home backup & partial home backup
- 350 ms reverse power flow protection of grid & generator
- Uninterrupted power supply through PV+ESS/grid/generator

Sigen Energy Gateway HomeMax Single / Three Phase

Preliminary

Sigen Gateway	HomeMax SP	HomeMax TP	Units
Grid Connection			
Grid connection type	Single phase	Three phase	
Nominal AC input / output voltage	220 / 230 / 240	380 / 400	V
Nominal AC input / output current	100	76	A
Nominal AC input / output power	22 / 23 / 24	50 / 52.6	kW
Nominal AC frequency		50 / 60	Hz
Disruption time of backup switch ¹		0	ms
AC Output to Backup Port			
Nominal AC output voltage	220 / 230 / 240	380 / 400	V
Nominal AC output current	100	76	A
Nominal AC output power	22 / 23 / 24	50 / 52.6	kW
Nominal AC frequency		50 / 60	Hz
Overvoltage category		III	
Inverter Connection / EV Charger Port (optional)			
Max. number of connection	3	2	
Nominal AC voltage	220 / 230 / 240	380 / 400	V
Nominal AC input current	32	38	A
Compatible EV charger power	7	11 / 22	kW
EV charging mode	Solar boost charging, time-based charging, load balancing		
Smart Port Connection			
Generator output voltage	220 / 230 / 240	380 / 400	
Nominal input / output current	63	76	A
Nominal AC input / output power	13.8 / 14.5 / 15.1	50 / 52.6	kW
Generator 2-wire start		Supported	
General Data			
Dimensions (W / H / D)	455 / 660 / 179	510 / 750 / 179	mm
Weight	19	23	kg
Storage temperature range		-40 ~ 70	°C
Operating temperature range		-30 ~ 55	°C
Relative humidity range		0% ~ 95%	
Max. operation altitude		4000	m
Cooling	Natural convection		
Ingress protection rating	IP54		
Communication	Fast Ethernet, RS485, dry contact		
Installation method	Wall mounted		

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INCLUDES FREE BIRD PROTECTION



MRS BROWN

We already had solar panels installed but we're very troubled with pigeons. Deege installed the netting, the men were efficient extremely polite and tidy workers. Delighted to say we have no constant cooing now. Would highly recommend.



PROTECT BOTH YOUR INVESTMENT & WILDLIFE



ENHANCE THE AESTHETICS OF YOUR SYSTEM



MINIMISE CLEANING AND MAINTENANCE COSTS