

# powerBOX<sup>®</sup>

## SOLAR HYBRID AIR CONDITIONER



AC/DC HYBRID TYPE



powerBOX<sup>®</sup>

# SOLAR HYBRID AIR CONDITIONER



## FEATURES

- ★ 100% solar panel drive in day time, help you to reduce the 60%-90% electricity bill
- ★ No battery, no inverter, no wire controller, plug and play
- ★ AC/DC/AC+DC mix power supply
- ★ SEER up to 6.6 and SCOP up to 4.6
- ★ Best energy saving solution with high investment return rate
- ★ Increase the value of your house, shop and office
- ★ Suitable for areas with good sunshine, enjoy cooling days without grid
- ★ Wide working condition from -15 °C to 58 °C



Max100%  
Energy Saving



Full DC



ECO Control



ACDC  
Auto-Balance



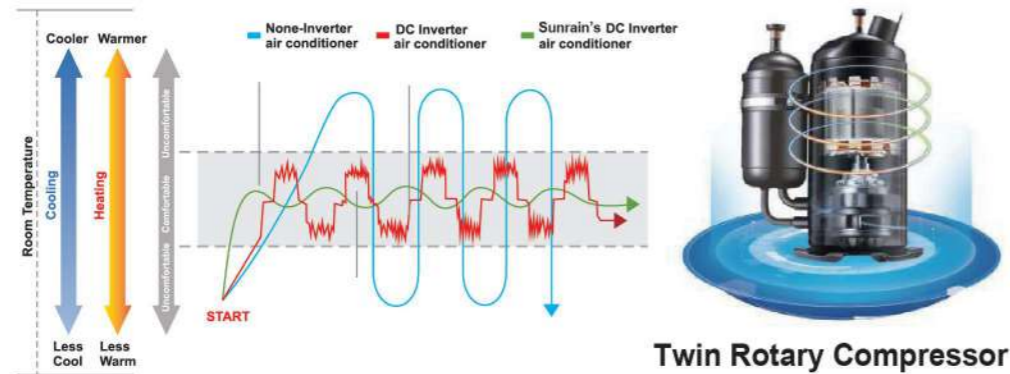
No Solar Charge Controller  
Battery Bank



Working Temp Range  
(-10 °C to 58 °C)



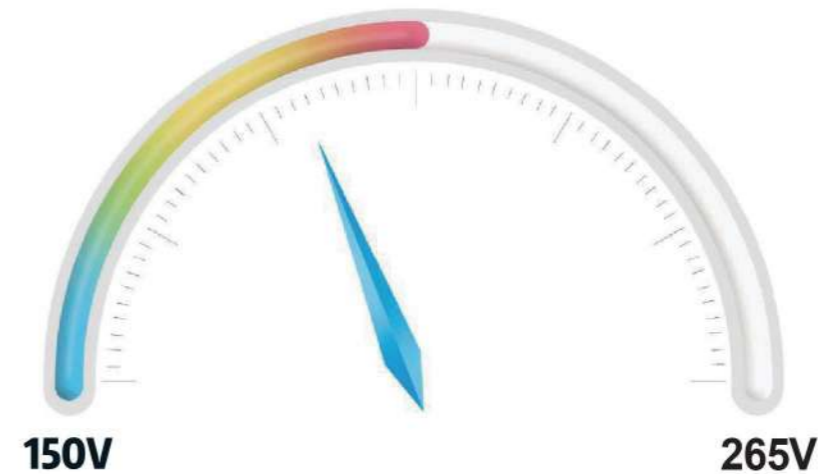
# BUILD YOUR SMART ECO HOUSE WITH powerB⚡X<sup>®</sup>



Sunrain has its own DC inverter controller technology for inverter air conditioners. It can make the compressor run at a low frequency of 0.1Hz and improve the utilization of the DC compressor by 10% compared with other DC inverter controller technologies.

## Wide voltage operation

The air conditioner can be started and operated at 150V-265V to avoid damage to the air conditioner caused by unstable voltage.



**Twin Rotary DC Compressor**



**Outdoor DC fan motor**



**Indoor DC fan motor**

## 3D Air supply

The horizontal and vertical adjustable air deflector design can achieve an all-around air supply, ensuring comfortable airflow in every corner of the room.



## Multiple protection

Provide timely self-protection for the compressor, electric control and the motor in case of abnormal circumstances and faults.



# ACDC HYBRID

## 1 DC only

When the PV power meets the minimum operating power of the compressor, the air conditioner can start and be powered by solar energy only, even when the grid is off. This results in 100% energy savings.



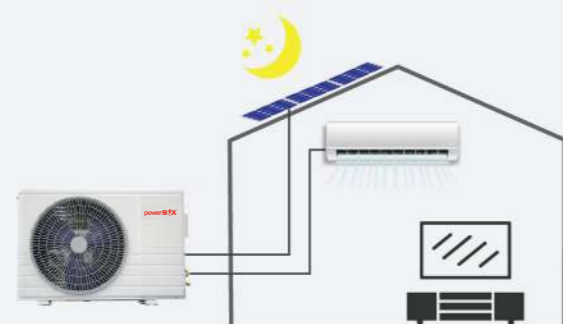
## 2 AC+DC

When the sunshine is not sufficient, such as in the morning or on a cloudy day, the air conditioner will prioritize using PV electricity. Any shortfall will be supplemented by the power grid.



## 3 AC only

During the night, the air conditioner consumes electricity from the power grid and operates on the same principle as a regular air conditioner.



# Application Area



Hospital

Supermarket

Office

School

# Product Specification

Model	--	ACH-012TB1	ACH-018TB1	ACH-024TB1
Wires/connector/qty		PV1-F4mm/MC4/50M	PV1-F4mm/MC4/50M	PV1-F4mm/MC4/50M
Max electric current/peak current		12/15A	12/15A	12/15A
Power Supply	Rated Voltage	V~	208-240	208-240
	Rated Frequency	Hz	50	50
	HYbrid Solar DC	V-	70-350	70-350
	Min/Max. Voltage	V~	150/265	150/265
Solar Dc Current	Max Current	A	12.00	12.00
Rated Current	Cooling Rate Current	A	3.85	5.88
	Heating Rate Current	A	4.02	5.80
Rated Power	Cooling Rate Power	W	860	1340
	Heating Rate Power	W	905	1320
Min. Power Input	W	180	220	280
Max. Power Input	W	1500	1900	2700
Cooling Capacity	W	3500	5000	7220
	Btu/h	12000	17100	24692
Min. Cooling Capacity	W	1300	1700	2100
	Btu/h	4500	5800	7150
Max. Cooling Capacity	W	3950	5450	7800
	Btu/h	13500	18600	26668
Heating Capacity	W	3500	5250	7050
	Btu/h	12050	1800	24000
Min. Heating Capacity	W	1130	1310	1400
	Btu/h	3850	4500	4777
Max. Heating Capacity	W	4300	5800	8600
	Btu/h	14600	19600	29343
EER	W/W	4.02	3.74	3.76
	Btu/W	13.74	12.79	12.86
SEER	Btu/W	23.00	21.00	20.00
COP	W/W	3.87	4.01	3.75
	Btu/W	13.34	13.70	12.80
HSPF	Btu/W	9.70	9.55	9.60
Indoor Unit	Indoor Unit Model	--	SACI-012TB1	SACI-018TB1
	Fan Type	--	Cross-flow	Cross-flow
	Indoor Unit Air Flow Volume	m3/h	700	1000
	Set Temperature Range	°C	16-32	16-32
	Set Temperature Range	°F	60-90	60-90
	Sound Pressure Level(SH/H/L/SL)	dB (A)	24-37-42	30-42-45
	Dimension (W×H×D)	mm	910*330*233	970*330*233
	Dimension of Package(W×H×D)	mm	985*375*315	1035*395*315
	Stacked Layers	--	7	7
	Net Weight	kg	10	11
	Gross Weight	kg	13	14
	Outdoor Unit	Outdoor Unit Model	--	SACO-012TB1
Compressor Trademark		--	HIGHLY	HIGHLY
Compressor Model		--	GSX102SKQA6JL	GSD113RKQF6JV6B
Compressor Type		--	Rotary	Rotary
Permissible Excessive Operating Pressure for the Discharge Side		MPa	4.3	4.3
Permissible Excessive Operating Pressure for the Suction Side		MPa	2.5	2.5
Maximum Allowable Pressure		MPa	4.3	4.3
Cooling Operation Ambient Temperature Range		°C	0-55	0-55
Heating Operation Ambient Temperature Range		°C	-15-32	-15-32
Sound Pressure Level		dB (A)	52	54
Dimension (W×H×D)		mm	797*556*336	874*559*368
Dimension of Package(W×H×D)		mm	855*600*367	913*604*396
Stacked Layers		--	4	4
Net Weight		kg	27	31
Gross Weight		kg	30	34
Refrigerant		--	R32	R32
Refrigerant Charge	kg	0.80	0.95	
Application Area	m2	14-24	21-30	
Loading Quantity	Loading Quantity( 20GP Container )	unit	85	
	Loading Quantity( 40GP Container )	unit	180	
	Loading Quantity( 40HQ Container )	unit	220	