GRACE SOLAR



GS-Light Intelligent Tracking System Solution

INTELLIGENT TRACKING SYSTEM-1P

● System Introduction

The photovoltaic tracking system independently developed by Grace Solar is unique and highly reliable. The system integrates new-generation information technologies such as AI, Internet of Things, energy storage, energy Internet, and intelligent manufacturing. Using the most advanced wind tunnel design, it can adapt to multi-tilt protection strategies, with astronomical tracking algorithm, shadow-avoid tracking mode, strong wind protection system, lightning protection design, anti-torsional stability system, wireless remote control and other functions to ensure safety Under the premise of balance, the conversion efficiency of solar modules can be improved.



Independent Single Row-1P

● Features

Two artificial intelligence	AI control	Reliable and safe communication	Extreme Weather protection	Wind Tunnel Test Report
600W+	**2.5m**	**LCOE**	**20%**	**25%**
600W+ Module	Match module length up to 2.5m	Reducing LCOE cost	Slope can be adapted to 20%	Improving the efficiency by 15-25%

● Suitable Power Plant Project

It is suitable for various power plant projects, especially in powerplants with double-sided modules or high civil construction costs.



Complex Terrain



Farmers Light Complementary



Fishing Light Complementary



Large Flat Ground Power Plant



Typhoon And Highly Corrosive

● Technical Information

Mechanical Aspect

Number of tracker drive modules	1X90
Number of motors per tracker	1-5
Tracking range	±60°(Customizable)
Material	Hot-dip galvanized steel + aluminum-magnesium-zinc plate + pre-galvanized
East-west land slope	Unlimited
North-south land slope	＜20%
Module arrangement	Single row vertical
Ground clearance	> 500mm, (Customizable)
Foundation form	Ramming pile, PHC pile, concrete foundation
Standard wind speed	< 47m/s, 3 seconds gust, (Customizable)
Protection wind speed	18m/s
Mechanical tracking accuracy	±2°
Land occupation rate	30%
Grounding method	Self-grounding

Electrical Aspect

Drive way	Slew Drive / Linear actuator drive
Motor Power	150W
Flat time	< 8minutes
Controller	MCU
Control tracking accuracy	＜2°
Control mode	Independent GPS time control + tilt sensor hybrid control
Limit protection	Mechanical limit + motor hard limit + soft limit
Motor protection	Overheat protection, overcurrent protection, self-locking protection
Operating temperature	-40~+70°C
Protection level	IP65
Power consumption	＜0.02kWh/day
Power supply	Self-powered supply/external power supply
Communication method	LoRa/Zigbee wireless communication or RS485
Signal transmission method	Wired/wireless optional

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