GS-Light Intelligent Tracking System Solution

Intelligent Tracking System (Double Row Linkage)

● **Technical Information**

Mechanical Aspect

Number of tracker drive modules	2X60
Number of motors per tracker	1
Tracking range	±60°
Material	Hot-dip galvanized steel + aluminum-magnesium-zinc plate + pre-galvanized
East-west land slope	< 5%
North-south land slope	< 15%
Module arrangement	Single row Portrait, 2 rows linkage
Ground clearance	> 500mm, (customizable)
Foundation form	Ramming post, PHC pile, Concrete
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 driver
Motor power	150W
Flat time	< 8 minutes
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℃
Protection level	IP65
Power consumption	< 0.04kWh/day
Power supply	String power supply/external power supply
Communication method	LoRa/Zigbee wireless communication or RS485
Signal transmission method	Wired/wireless optional

● **System Introduction**

The self-developed two row linkage tracking system adopts larger cross-section and high-strength main beam, with better stiffness, higher natural vibration frequency and more safety and reliability. It is suitable for high-power and large-size modules. Compared with the conventional single row tracking system, the number of electric control and drive is twice less, and the failure rate is lower. Through wind tunnel test, a more reasonable wind resistance mechanism is obtained, which can more effectively protect the 25 year life of the power plant.

● **Features**

· The number of electronic controls and drives is small, and the failure rate is lower;
· Strong adaptability, simple installation, convenient operation and maintenance;
· More reasonable design, safer and more reliable;
· A more reasonable wind resistance mechanism through wind tunnel test;
· AI intelligent control system can increase production capacity output by 6%;
· DC string and lithium battery backup power supply, reducing LCOE cost.

● **Suitable Power Plant Project**

It is suitable for power plant projects with relatively flat land, especially in power plant projects with lower cost requirements.