

BiT-1P Smart Solar Tracker System



The BiT-1P one-in-portrait solar tracker optimizes lifetime value and performance, helping project developers and asset owners get the most from their power plant. Ideally suited for sites with challenging soils, high winds, and irregular boundaries, the BiT-1P tracker features slew driving system for maximum stability in extreme weather, equipped with dampers to ensure the stability of the system.

Features

Reliable

Technology Mature >10 years

Suitable

Large size Module up to 660W

Quick Installation

With less components

JT-Cloud

On-line O&M tools

THE RELIABLE TRACKER UNDER THE SUN -- **JuTracker @ BiT-1P**

GREATEST RELIABILITY.

Reducing the number of sensitive components has resulted in the highest operational uptime in the industry.

With the fewest fasteners of any option, BiT-1P provides labor-saving installation, adding up to big savings. The robust mounting interface is designed and tested to withstand up to 2400 pascals.

ZERO SCHEDULED MAINTENANCE.

The tracker's gearboxes are sealed and lubricated for life, resulting in zero scheduled maintenance. All tracker rows self-calibrate twice daily, ensuring that each row is always at the optimal tracking angle. Uninterrupted module rows create a robot-ready design permitting autonomous module cleaning.



GENERAL	
Tracking Type	BiT-1P Horizontal Single Axis (E-W)
String Voltage	1500v
Portrait Rows	1 portrait
No. Panel per tracker	Max 90 (3 Strings)
Drive Type	Slewing Driver
Motor Type	24VDC Motor
East-west / North-south Dimensions	Site / Module Specific
Array Height	1.5m Min Height Above Grade (0.5m Clearance)
Ground Coverage Ratio (GCR)	Flexible, 30 %– 50% Typical
Modules Supported	Max Module Size (L= 2.3m* W= 1.2m) ,
Tracking Angle	Up To $\pm 60^\circ$
Operating Temperature Range	-25°C To 65°C
Foundation	Driven Pile , Ground Screw , Concrete
Module Attachment	Fastener Bracket With Integrated Grounding Attaches To Solar Module Interface Bracket Containing Pre-installed Clips
Structure Material & Coating	High strength steel(Hot dip Galvanized, Pre-galvanized, hot dip zinc aluminum magnesium alloy coated)
Allowable Wind Load	Stow Velocity 150 KM/h, 3-second Gust Exposure ; Operational Velocity 80KM/H; Customized Designs Available For Higher Wind Speeds
Wind Protection	Passive Mechanical System Relieves Wind And Obstruction Damage — No Power Required
Grounding Method	Self-grounding Structure
Corrosion Class	Standard C3 / C4&C5 on requirement
Protection Class	IP54 / IP 65 on requirement
Max. Slope	N-S 15% ; E-W Unlimited

ELECTRONICS AND CONTROLS	
Solar Tracking Method	Astronomical Algorithm with backtracking
Control Electronics	TCU for each tracker NCU connected TCUs
Data Feed	NCU MODBUS over Ethernet to SCADA
Night-time Stow	Yes
Tracking Accuracy	$\pm 1^\circ$ standard, field adjustable
Power Supply	String-Powered with Battery backup (AC 120V~240V external as optional)
Communications	Wireless Lora® (MODBUS RS485 optional)

INSTALLATION, SERVICES & Availability	
Structural Calculations & Drawings	Yes
On-site Training & System Commissioning	Yes
Connection Type	Fully bolted connections, no welding
In-field Fabrication Required	No
Dry Slide Bearings & Articulating Driveline Connections	Self lubricating Bearing
Availability	$\geq 99\%$

ADDITIONAL	
Daily Power Consumption per Tracker	< 0.1KWH
Energy Gain vs. Fixed-Tilt	Up to 25%, site specific
Warranty	10 year structural, 5 year drive & control components
Codes and Standards	IEC 62817/UL 2703 / UL 3703 ASCE 7-10 / CE



WIND ENGINEERING CONSULTANTS

