



DATASHEET

TRACKER CONTROL UNIT

TCS-150



**String Powered
Self Powered
AC Powered**



**Compatible with any
horizontal tracker**



**AI technology with
gains of up to 13%**



Backtracking Technology

VERSION HISTORY

VERSION	PUBLICATION DATE
v1.2408	14/08/2024
v1.2502	19/02/2025
v1.2507	14/07/2025
v1.2509	24/09/2025

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This product is not intended for use in residential environments, as it may cause electromagnetic interference that requires the user to take necessary measures to minimize such interference.

This equipment is not entitled to protection against harmful interference and must not cause interference to duly authorized systems.

MAIN INFORMATION

Tracker System	Horizontal Tracker
Modules / Tracker	up to 140 modules /Tracker
Tracking Range	$\pm 55^{\circ}$
Communication	Wireless / LoRaWAN
Algorithm	Astronomical with Backtracking
Power supply options:	
• TCS-150ST	String powered
• TCS-150SF	Dedicated panel
• TCS-150AC	Grid Powered

Compatible with Trackers

- Horizontal
- Roating motor
- Linear actuator



ELECTRICAL CHARACTERISTICS

Power Supply:

• TCS-150ST	300 to 1500 VDC
• TCS-150SF	36 to 75 VDC
• TCS-150AC	110/220 VAC

Output:

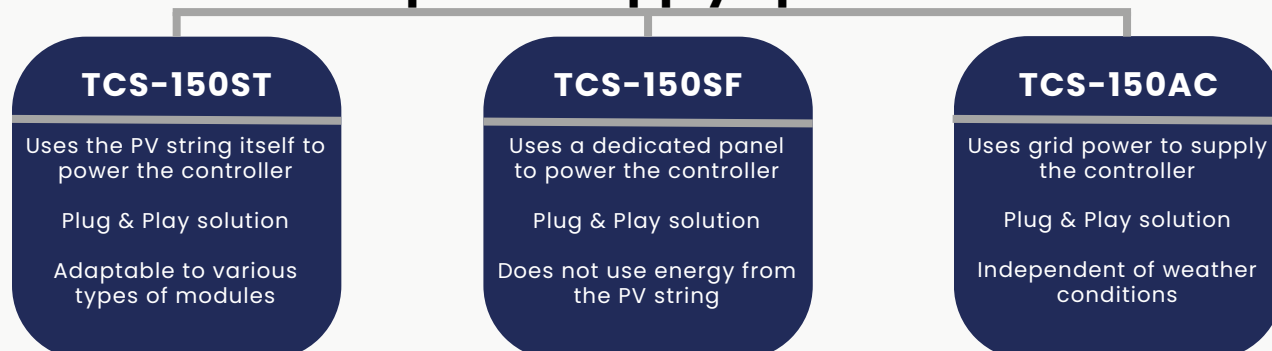
Nominal Voltage	24 VDC
Nominal Current	6.25A
Nominal Power	150 W
Maximum Current	10A

Battery:

Type	LiFePO4
Capacity	7000 mAh
Autonomy (rated current)	72 hours

Daily Consumption	0,2 kWh/day
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3 power supply options



MECHANICAL CHARACTERISTICS

Material	Polycarbonate with UV additive
Protection degree	IP 65
Weight (with LiFePO4 battery)	4,6 kg
Dimensions	380x240x180 mm
Ultraviolet Protection	
In accordance with	IEC 62817



09534-24-17291

SOFTWARE FEATURES

Wireless Communication	LoRaWAN
ISM band	915 MHz
Astronomical Algorithm with Backtracking Adjustment	
Tracking Accuracy	$\pm <1^\circ$
Wind Protection	Multi-level

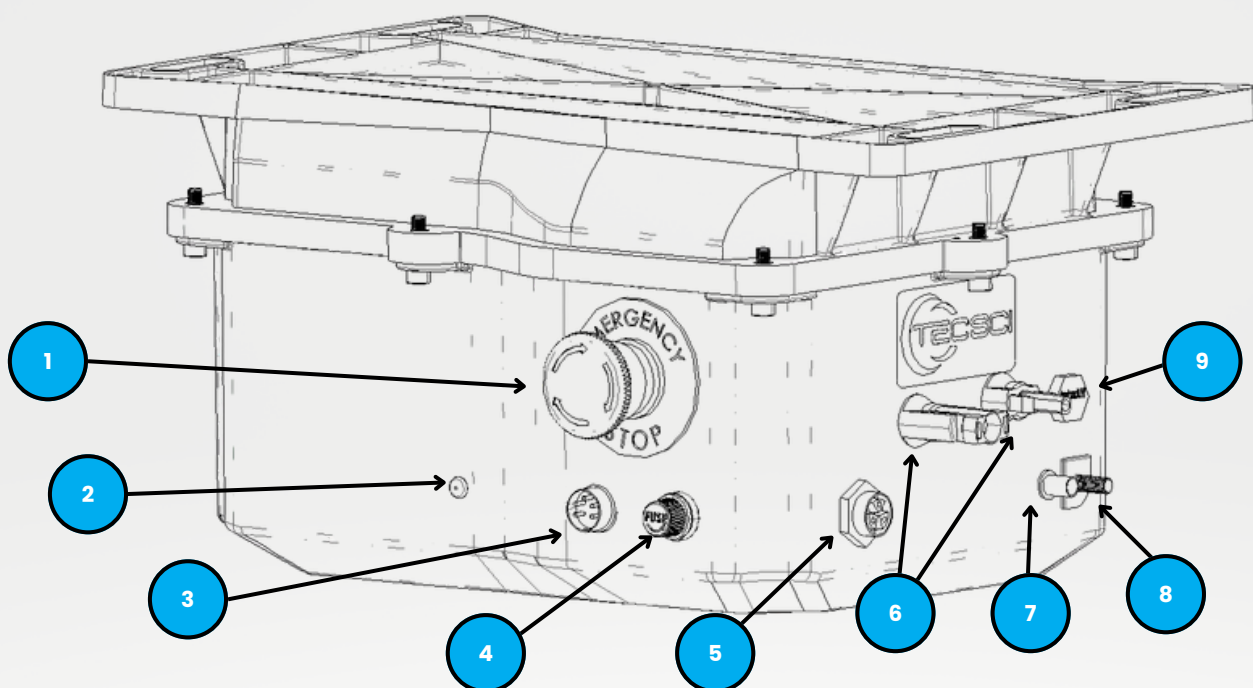
SAFETY & ALARMS

Overcurrent protection for motor	☒
Movement limit	☒
Motor lock detection	☒
Input overvoltage protection	☒
Battery overtemperature protection	☒

INTERFACES

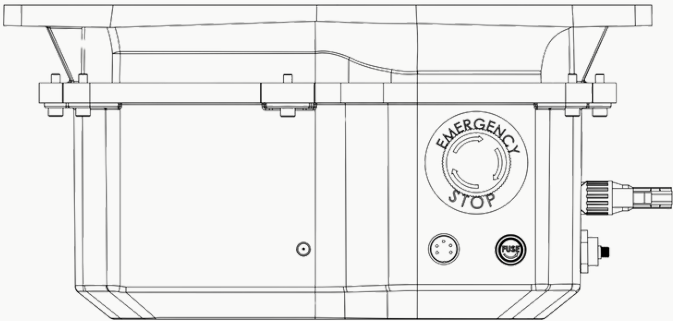
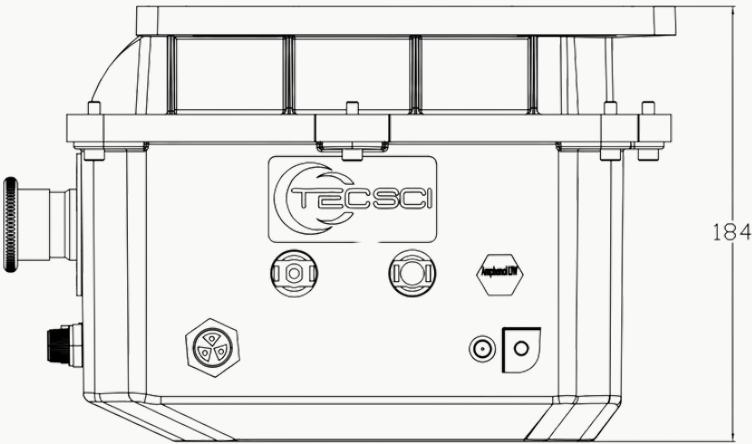
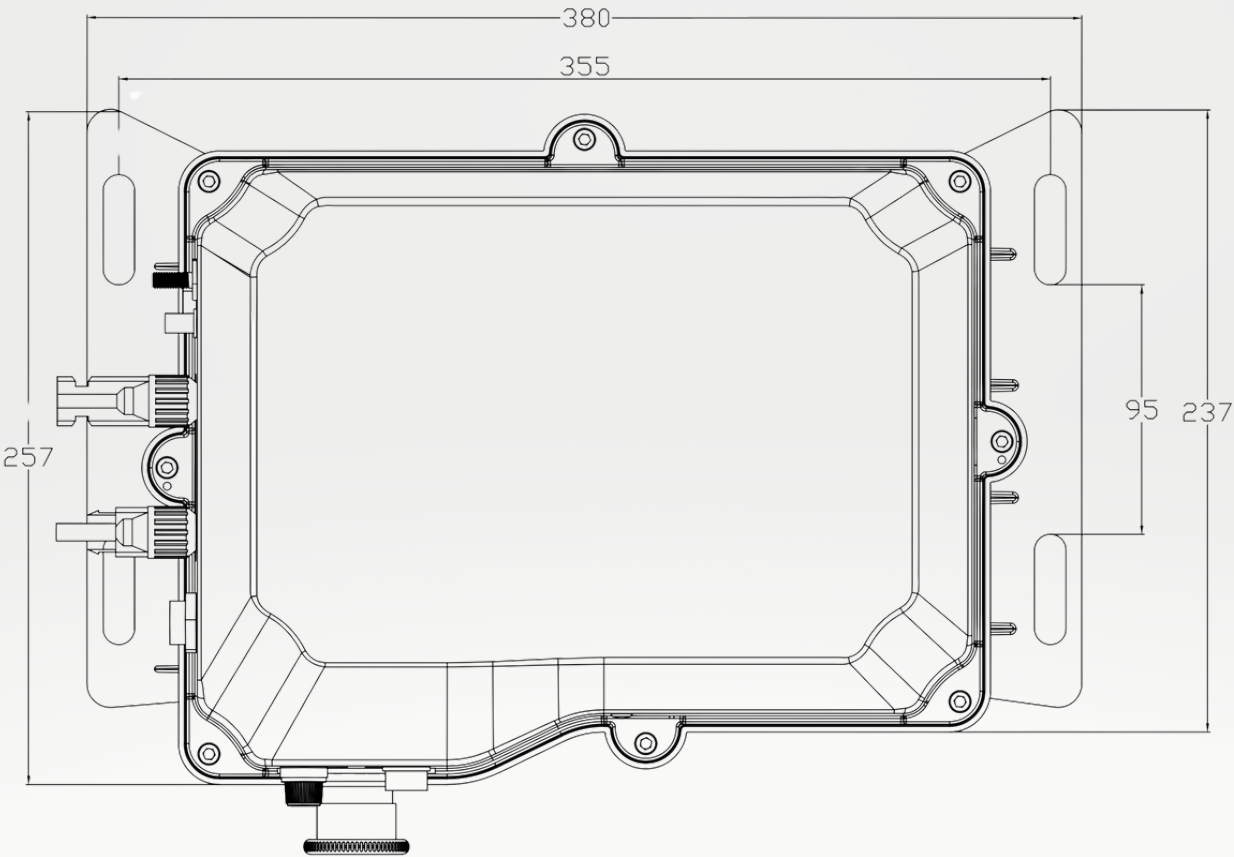
Emergency Button	
Serial Connection	RS232 (9600 bps)
LED	RGB
External Fuse	4A / 1500VDC
Internal Fuse (battery)	6x32 15A
Antenna Connector	50 Ω
Motor Connector	Weipu SP2110/S3

GENERAL CHARACTERISTICS



TCS - 150SF / ST / AC	
1	Emergency button
2	LED – User interface indicator
3	Serial connection
4	Internal fuse (battery)
5	Motor connector
6	DC power connectors
7	Antenna connector
8	Grounding screw
9	Air filter

MECHANICAL SPECIFICATIONS



APPLICATIONS

PV Plant - Computer



NCS-500



Anemometer

Gateway



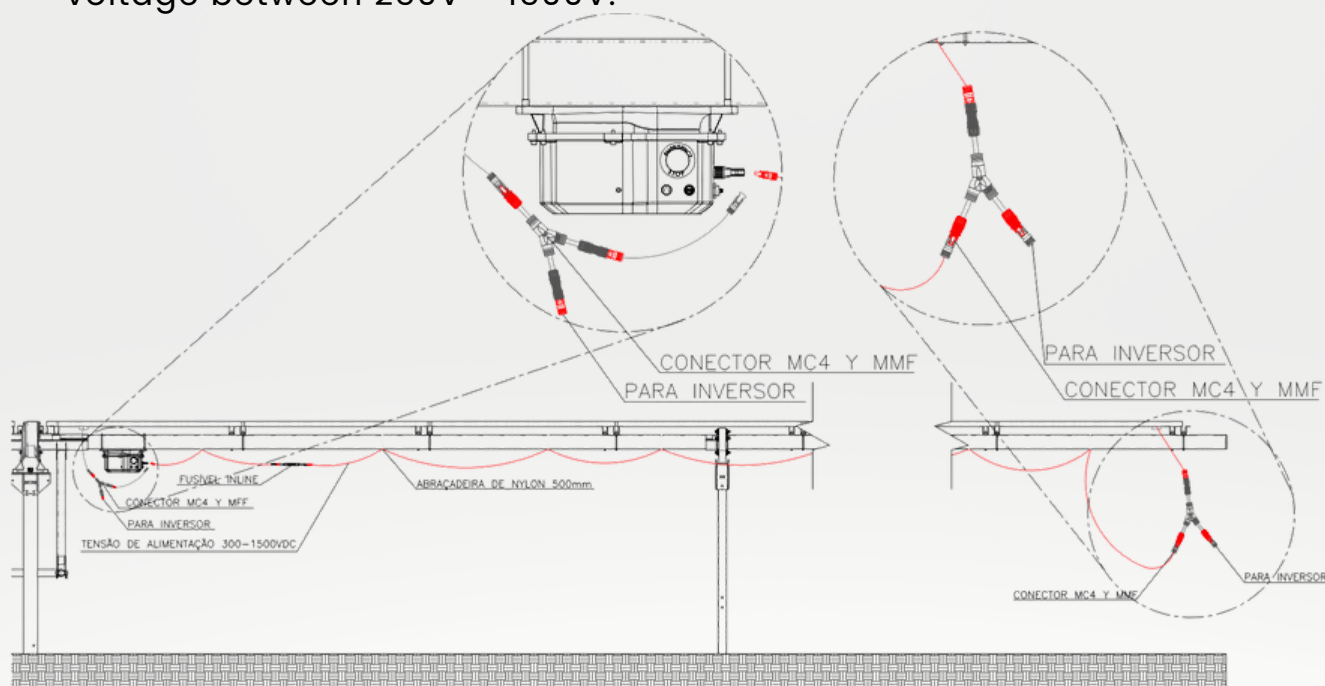
TCS-150 ST/ SF / AC



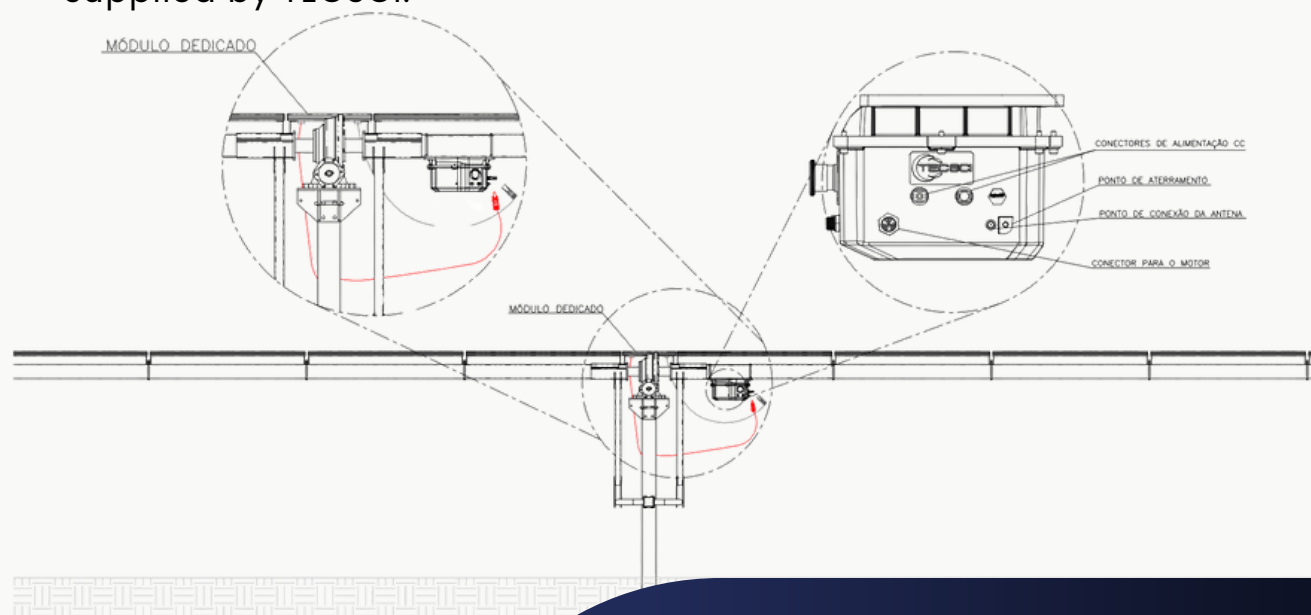
+500

APPLICATIONS

- TCS-150ST: Equipment powered by the Photovoltaic String, with input voltage between 250V – 1500V.

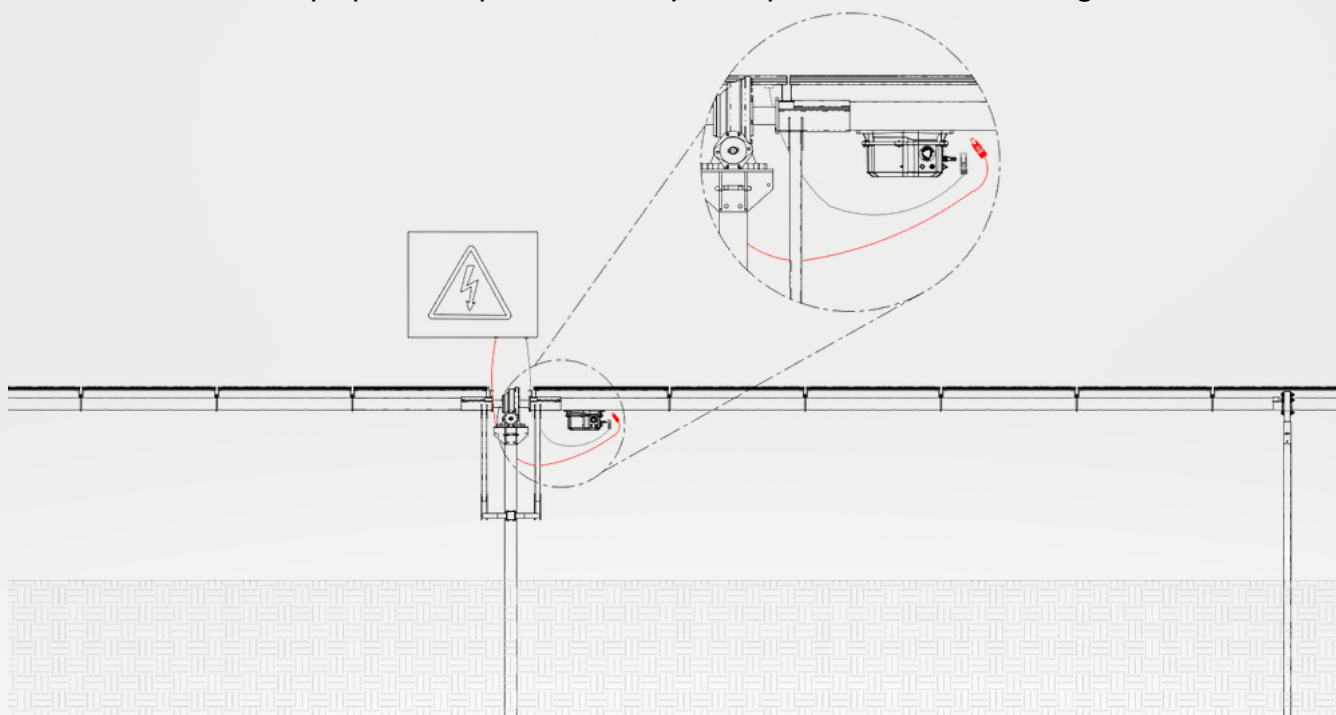


- TCS-150SF: Equipment powered by a dedicated photovoltaic module supplied by TECSCI.



APPLICATIONS

- TCS-150AC: Equipment powered by the plant's electrical grid.



TECSCI provides the complete electrical design for all three types of equipment power supply.



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