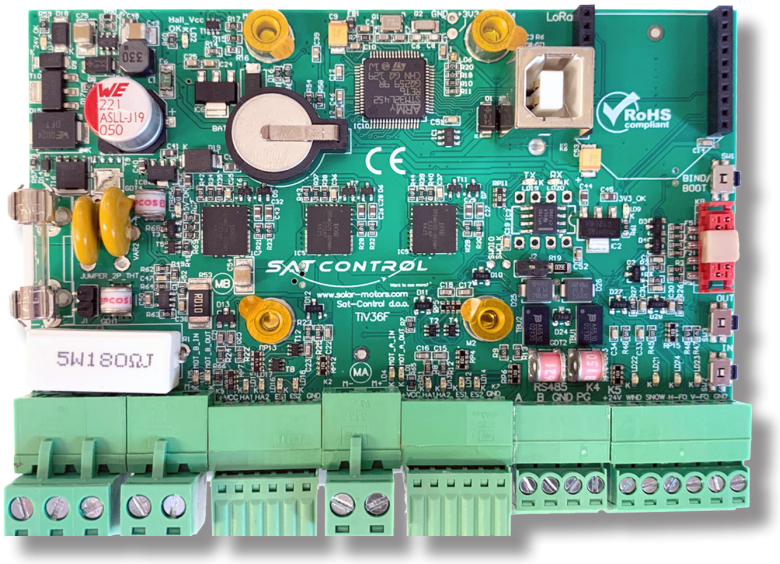
Solar positioner MICRO-F

Code: 0453

Standalone Solar Tracker Controller MICRO-F positioner for PMDC motors

The MICRO-F Solar Tracker Controller is designed to operate one dual-axis, or two single-axis solar trackers with PMDC motors. It is ideally suited for sites with a single or limited number of solar trackers. The MICRO-F has USB connectivity to manage via PC directly and RS485 communication for wired distance monitoring via RS485 to USB converter. It can also be monitored and managed wirelessly. Also, with additional connecting on to SIGMA solar server the remote monitoring and management through internet. Simple and fast installation, high reliability.

Features



- Supports dual-axis, up to two single-axis, roll-and-tilt trackers with PMDC motors.
- Stand alone or with Sigma server
- Integrated interface for LoRa WL Module (module available for additional payment)
- Calculated solar position using astronomical algorithms.
- Automatic detection of storm with parameterized peak wind speed threshold with wind sensor.
- Parameterized fixed positions for Snow, Storm or Clean positions.
- Alarming at electro-mechanical failure.
- Manual control of motors.
- Power fail detection.
- Tracker position feedback through quadrature encoder without any external sensor or with external inclinometer.
- Optional fine tuning via optic sensor.
- Optional moving out of sun for certain angle when thermal collectors overheated.
- Optional monitoring of solar irradiation and/or temperature probes.
- Tracker mode for following the sun or Heliostat mode with supported three different target positions through the three different time periods per day.
- Parameterized geographic location, tracker geometries (many), heliostats, supported slewing drives and linear actuators.
- Monitoring and managing of solar tracker via free program Helios Analytics.
- Integrated support for Android app via USB.

Description

One Controller - Many Applications – The MICRO-F stand-alone solar tracker controller can be used in a wide range of solar tracker applications through an extensive set of parameters. It is being used in new applications, but can also be used in the retrofit market.

Dual-Axis Trackers – One MICRO-F positioning controller is capable of managing a single dual-axis tracker through the two motor channels with PMDC motors. The tracker can either be of the traditional azimuth / elevation type (cartesian coordinate system), roll (east-to-west) and elevation type (polar coordinate system).

Single-Axis Trackers – One MICRO-F positioning controller is capable of managing up to two single-axis solar trackers through the two integrated motor channels. The tracker(s) can either rotate around the North/South, East/West or Polar Axis.

Communication – Using the USB port or RS485 or LoRa MICRO-F positioning controller through the PC app Helios analytics allow full control, setup, monitoring, and software updates, or with the set-up with Sigma.

Local Control – Basic local tracker control can be done through onboard push-buttons, or more extensively through the Android app Helios analytics which is used to define controller parameters and/or monitoring.

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Made in Europe

SAT CONTROL Want to get more?

Solar positioner MICRO-F

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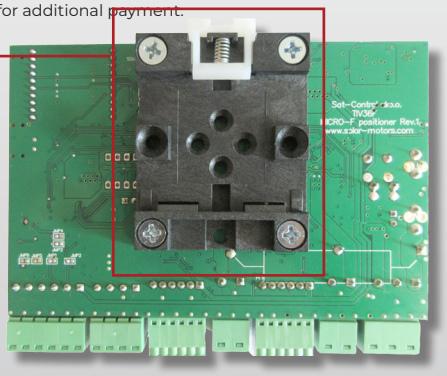
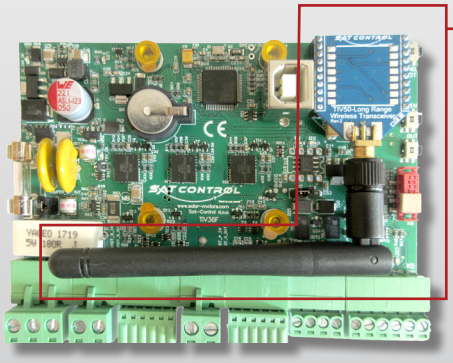
Technical Capabilities

Operation	
Geometrical Operation	Single or Dual Axis Positioner
Type	Stand alone Positioner
Communication	
Positioner communication	Primary - USB-B2.0, secondary - RS485 MODBUS
RS485	750 m twisted pair @ 0,5mm pair wire
Interface	wireless for LoRa WLM
Engine	
Max. number of controlled devices	For Max. 2 Linear Motors or Slewing drives
Power supply	
Power supply	External SMPS type
Input voltage	24 VDC +5% / –15%
Power consumption in idle	1 W
Selectable Hall output voltage	5/12/20v
Environmental conditions in operation	
Ambient temperature	-35 °C ... +75 °C
Relative air humidity	0% ... 85%, non-condensing
General data	
Dimensions (W / H / D) in mm	113 / 28 / 85
Weight	125 g
Mounting location	Indoors
Mounting options	DIN rail mounting
Status display	LEDs for power 4, com. (2), ES (4), HS (4), Out (4), ERR (2)
Hall signals	2 Hall signals per Axis; 90° shifted (quadrature encoder)
End switches	2 Switches per Axis (one required, one optional) - normally closed/open
Manual buttons	2 (East-West, Reference) + 1x (bind for wireless) 3 (motor rotation, reference, bind)
Inputs for sensors	Wind, Sun, 2x optical Sun
Upgrading	In The Field via USB, via RS485, via radio WLM LoRa
Extension connector	RS232 device/analog,digital inputs
Languages	
Software language	English
Language versions – manual	English
Features	
Warranty	2 years*
Certificates and approvals	www.solar-motors.com
Life Time	Min. 10 years; typical 20 years; Int. battery 5–10 years

* Optionally 5 or 10 years for additional payment.

Din rail holder





Integrated interface for LoRa WL Module
Code: 0449,
WLM-LORA-TIV50-433-A
(module available for additional payment)

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