CONVERT CONTROLLER

CONVERT TRACKER CONTROL SYSTEM

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Flexible and Reliable Control System

The Convert Controller optimizes energy production and lowers risk. The intuitive dashboard is easy to use and provides sophisticated analysis for lower operational costs.

- Real-time data acquisition of tracker performance metrics with alarm capabilities accessible from any electronic device.
- Lower operating costs with remote control for third-party service providers. Centralized commands permit programmed maintenance operations including PV module cleaning and immediate action in case of critical weather conditions.
- Smart sensors allow integration of a weather monitoring station for wind speed, direction, snow and irradiance. The wind direction information reduces stow time and wind load on PV modules.
- Simple, automated commissioning process. Seamless integration with higher-level plant SCADA system.
- Robust and fully reliable. Premium materials for long-lasting PV plant. Wide temperature range. Wireless connections between subfields, with no need for optical fiber.

POWERED BY **CONVERT TECHNOLOGY**

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PLATFORM DATA MANAGEMENT

- GUI web based
- Web browser interface connects to any PC, laptop or smartphone, remotely or locally in the PV plant
- Synchronized and always-connected GPS
- See the status of the trackers at a glance
- Remote management and control of maintainers and third-party service providers
- Enables operational analysis with data storage of weather, alarms, measures and status
- Storage of time and ensemble average measurements
- Log of all events
- Periodic emails with status reports
- Data exchange with other SCADAs through Modbus/TCP Communication Protocol
- Collection of all tracker data by wireless (Lora) connection at sub GHz frequencies

CONTROLS

- Ability to dynamically set the parameters stored in each control box to manage the different geometric conditions (azimuth, tilt, row pitch, etc.)
- Astronomic clock algorithm; self-configuring; tracking with independent rows and backtracking
- Control of the Convert trackers in different environmental conditions
- Management of the complex substrates with regard to and the position of the trackers

SENSORS AND RISK MITIGATION

- Wind and snow strategy to prevent damage to tracker
- Sun strategy for tracker self-power system reduces installation costs by not having to install cable and batteries on the tracker.
- Configurable sensors for various weather conditions
- A centralized wind strategy helps prevent tracker damages due to wind load, offering the ability to manage several different wind zones and account for different terrain features of the plant areas. The wind direction information helps reduce stow time and wind load on the whole tracker.
- Integrated lightning protection
- All switchboards are protected by a sun and rain screen

MECHANICAL AND ENVIRONMENTAL FEATURES

- Cables connect from the bottom, protected by cable glands
- Cabinet for indoors and outdoors
- Sun and rain screen
- 17" touch screen display (optional)
- Switchboard size: 500 x 400 x 200mm
- Switchboard size with screen support plate: 700 x 600 x 300mm
- Weight: 25kg
- Protection degree: IP 65
- Operating temperature: -20°C – +45°C
- Max. operating altitude: <2000m asl
- Passive cooling
- Sensors mechanical accessories up to 200mm pile diameter

INPUT

- Voltage: 120-240 Vac + -10%
- Frequency: 50/60 Hz + -5%
- Power supply: 1Phase + Neutral + Ground or 2Phase + Ground
- Rated current: 2 A
- Power factor: 0.6-1
- Protection by a fuse of size 10 x 38 mm: 400Vac 6 A

QUALIFICATIONS & CERTIFICATES:

UL 2703	ISO 14001
UL 3707	ISO 45001
ISO 9001	ISO 50001