

CX2Px

Solar Tracker Controller

The CX2Px platform is designed specifically to serve the solar industry for solar tracking applications. It is capable of withstanding both high and low temperatures, voltage spikes on both supplies and control inputs, and extensive diagnostic indicators.

Features

- Internal 3-axis inclinometer
- Support for external Inclinometer and GPS receiver
- Many safety features for motors including Dual H-Bridge DC motor drivers, and built-in motor current sensing—prevents current spikes, extending life of brushed motors
- Built-in support for single and dual channel encoders
- Aux out channel to be used as electrical brake, 24V encoder power supply, communication supply, lighting, or external VFD fault reset.
- Support for implied or external motor limit switches
- Support for external Emergency Stop switch
- Support for external Storm/Clean mode switch
- Support for AC-fail detection
- Interface to pulsed energy meter
- Support for external anemometer as manufactured by APRS World, NRG, Inspeed & Davis
- Optically isolated primary RS485 interface for commercial field intra communication
- Secondary RS485 interface for local solar inverter communication.
- Ethernet 10/100 base-T.
- Extensive instant hardware diagnostics through 31 LED's
- Push buttons for Reset, ServiceMode, Calibration, East/West, and Up/Down
- Dual analog input channels, which can monitor irradiance, temperature or current sensor



Description

One Platform, Multiple Applications – The CX controller can be used as a stand-alone solar tracker controller (SCX), or as a component in commercial solar tracking applications requiring interconnected tracking (TCX) and field controllers (FCX).

Communication – Using the integrated Ethernet interface, the SCX or FCX controllers are not only Internet capable, but have complete back-end, and remote support through Lauritzen’s Valhalla server and website, including remote control, monitoring, and software updates.

Modulated Power Output - Each of the two DC motor drivers contains circuitry to regulate motor power and detect overloads, prevent burn out, and extend the life of the motors. Both motor voltage and current are recorded by the platform which can be downloaded for monitoring

Low Voltage Power - To ease installation, the controller is operated by a single 24V DC power supply.

Sensory Inputs - for inputs the CX platform has two dual channel encoders, four limit switches, one stop button, anemometer, and analog and general purpose switched inputs. The encoder inputs can be either reed switches or Hall sensors, with either a pull up/down or high-impedance termination. An optional dual analog input can be used for additional analog sensors such as temperature or irradiance measurement.

Electrical Ratings

Parameter	Min	Typ	Max	Units
Controller Voltage Supply	8	24	70	V
Controller Power Consumption		0.4	1.0	W
Motor Voltage Supply	10	24	40	V
Motor Current	NA	3	10	A

Thermal/Mechanical Characteristics

Parameter	Min	Typical	Max	Units
Storage Temperature	-40	40	120	°C
Operating Temperature	-10	40	70	°C
Controller Dimensions		155 x 160		mm
Controller Weight		0.275		kg