

CX3Px

Solar Tracker Controller

The CX3Px 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

- Support for external Inclinometer and GPS receiver
- Motor soft start and stop. Short circuit-detect and current control.
- 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.
- Integrated battery Management System.
- Support for implied or external motor limit switches, or inclinometer based absolute limit switch.
- 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
- Optional optically isolated primary RS485 interface for commercial field intra communication
- Optional wireless 2.4GHz interface for commercial field intra communication
- Ethernet 10/100 base-T
- Extensive LED hardware diagnostics
- Push buttons for Reset, ServiceMode, Calibration, East/West, Up/Down, and Learn
- Analog input channel for external temperature or irradiance sensing.



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 (TxCX) and field controllers (FxCX).

Communication – Using the integrated Ethernet interface, the SCX or FxCX 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 & Sensory Inputs - Each of the two 24VDC motor drivers contains circuitry to regulate motor power and detect overloads, prevent burn out, and extend the life of the motors. Each 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.

Hardware Options

Version	Description
SCX	Stand-alone w. Ethernet Interface for Remote Communication.
FMCX	Field master w. Ethernet Interface for Remote Comm. & RS485 for intra-field comm.
FWCX	Field master w. Ethernet Interface for Remote Comm. & RF for intra-field comm.
TMCX	Field slave w. RS485 for intra-field comm.
TWCX	Field slave w. RF for intra-field comm.

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