Lauritzen Inc.
Bringing new ideas to renewable energy

WSX™

Weather Station for Solar Applications

WSX™ is engineered to be a full-featured weather station for Solar Tracking Fields.

Features

- Powerful anemometer interface
- Rain collector interface
- Integrated barometric pressure sensing
- GPS based time-of-day clock
- Temperature and humidity sensor interface
- Dual amplified analog channels for irradiation sensors
- Dual H-bridge power out
- Ethernet 10-Base-T interface
- Available in Polycarbonate or Aluminum enclosure
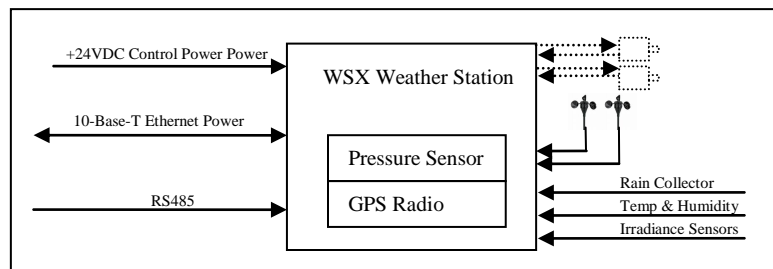
Description

Safety

WSX™ is the ideal weather station to provide in-field intelligence to protect your solar tracker investment. While it streams weather data to the *Valhalla™* server for remote access, it also operates locally to identify severe weather conditions and alert field equipment to those dangers.

Flexible

WSX™ flexible interfaces support any kind or weather sensors: irradiance, wind, relative humidity, temperature and rain. For redundancy the system is designed for dual anemometers to measure the wind at two elevations or separate locations.

Irradiance

WSX^{TM} has two amplified analog inputs that can receive irradiance data from a variety of sensor manufacturers. By mounting the sensors on a tracker's surface, both GNI and DNI can be obtained.

Dual Anemometers

WSX^{TM} is capable of receiving inputs from two anemometer and wind direction sensor pairs, thus providing a level of redundancy and ability to provide measurements at different elevations. Anemometer thresholds can be programmed to generate anemometer events.

Barometric Pressure

WSX^{TM} is also capable of measuring barometric pressure, and detect sudden pressure drops. Such pressure drops can be programmed to generate pressure drop events.

Solar Field Data Broadcasting

Periodic messages are broadcast within the local network, and they include a time stamp, sensory data, and field-level alerts.

Electrical Ratings

Parameter	Min	Typ	Max	Units
Controller Voltage Supply	6	24	40	V
Controller Power Consumption	0.05		0.25	W
Irradiance Sensor Input Range	0		3.3	V

Thermal Characteristics

Parameter	Min	Typical	Max	Units
Storage Temperature	-40		120	^{o}C
Operating Temperature	-10		60	^{o}C

Sensory Information

Sensor	Accuracy	Units
Temperature	+/-2.0	C
Relative Humidity Range	20 to 95	%
Barometric Pressure	TBD	BAR

Analog Inputs

Sensor	Accuracy	Units
Temperature	+/-2.0	C
Relative Humidity Range	20 to 95	%
Barometric Pressure	TBD	BAR

Mechanical

Parameter	Value	Units
Weight	1	Kg with Polycarbonate enclosure
	2	Kg with Aluminum enclosure
Dimensions	25 x 18 x 9	cm
Enclosure	NEMA4x	Polycarbonate or Aluminum

Ordering Information

For further information related to ordering, quantity discounts, and other products or optional accessories, please visit www.lauritzen.biz and fill out the online submission form