SW110
WIND MACHINE CONTROL & MONITORING

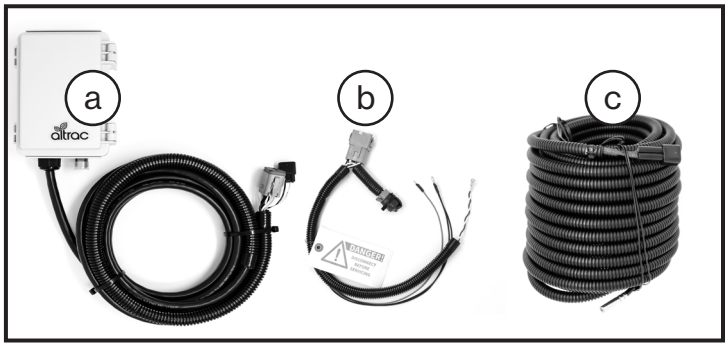
APPLICATION

The Altrac system enables growers to control their wind machines from a smart phone or desktop. Our cellular-powered unit lets you remotely start/stop your machine, change start/stop temperatures, and check vitals to make sure everything is running correctly. We also send alerts based on temperature, battery voltage, machine state, etc.

GENERAL INFORMATION

The wind machine station has three components, (a) the cellular powered station which attaches to the wind machine tower to send and receive data (b) the engine wiring harness which plugs into your wind machine engine and autostart to pull sensor data (c) a temperature probe that reads temperature out in your field to determine when the wind machine should start and stop. If needed, Altrac can provide an external antenna to increase cellular range if current coverage is not sufficent.

The station can be attached to any wind machine make or model. This is key to our product, since most farmers have a range of wind machines installed over the past 30 years.



ST100 CELLULAR POWERED STATION

The ST100 includes a cellular modem that provides 2G/3G or LTE/5G connectivity to your wind machine. All sensors plug in directly to the device.

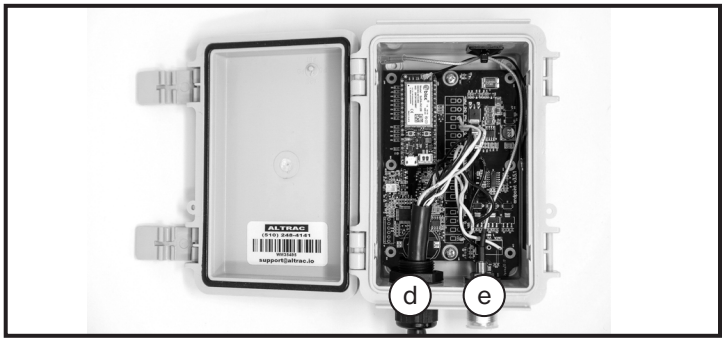
The housing is a weatherproof enclosure with a (d) cable gland that provides IP67 waterproofing. An (e) optional coaxial connector for a cellular antenna can be added if needed.

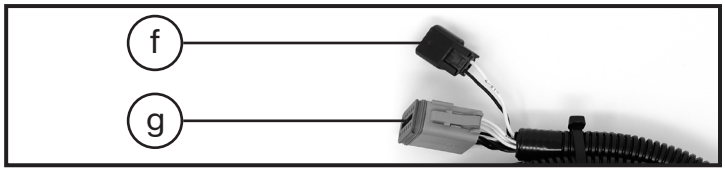
The control cable runs from the cable gland down into the wind machine tower and terminates with 2 standard connectors:

(f). The 2-pin connector to attach to the temperature probe.

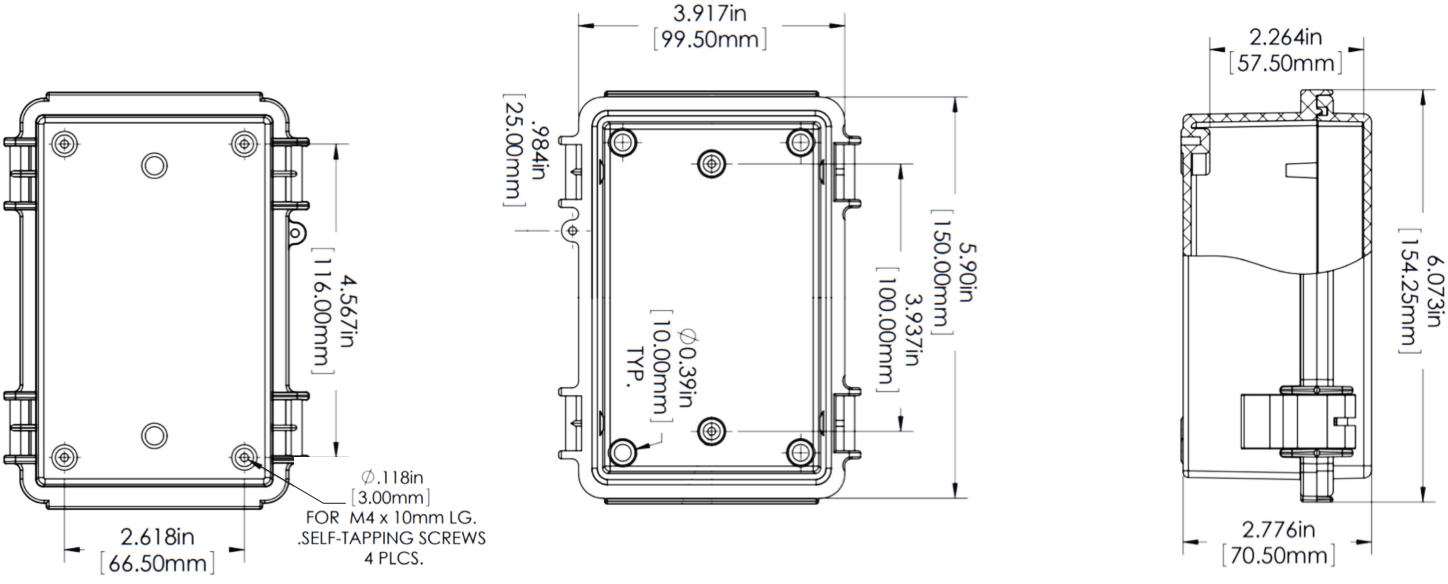
(g). The 12-pin connector to attach to the wind machine wiring harness.

A 3.7V Li-Po auxiliary battery is also included (not shown).





ST100 HOUSING DIMENSIONS



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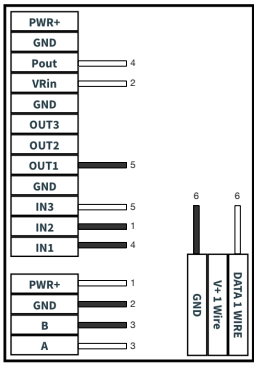
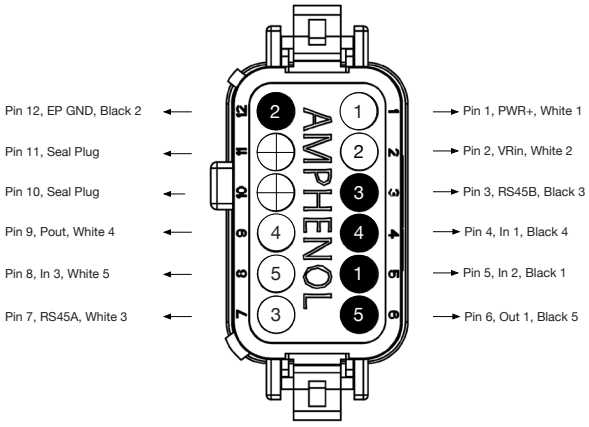
CONTROL LINE WIRING DIAGRAM

EP I/O	Connector	Connector Pin #	Conductor Pair #	Conductor Color
RS-485 A	Amphenol 12P	7	3	White
RS-485 B	Amphenol 12P	3	3	Black
GND	Amphenol 12P	12	2	Black
PWR +	Amphenol 12P	1	1	White
IN 1	Amphenol 12P	4	4	Black
IN 2	Amphenol 12P	5	1	Black
IN 3	Amphenol 12P	8	5	White
OUT 1	Amphenol 12P	6	5	Black
VR IN	Amphenol 12P	2	2	White
P OUT	Amphenol 12P	9	4	White
GND (Temp)	Furukawa 2P	2	6	Black
DATA 1 WIRE	Furukawa 2P	1	6	White

EP 3.5

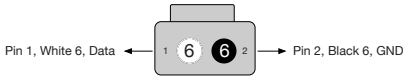


A
12 PIN Amphenol Connector
Female Pins



View from Back

B
2 Pin Furukawa Connector
Female Pins



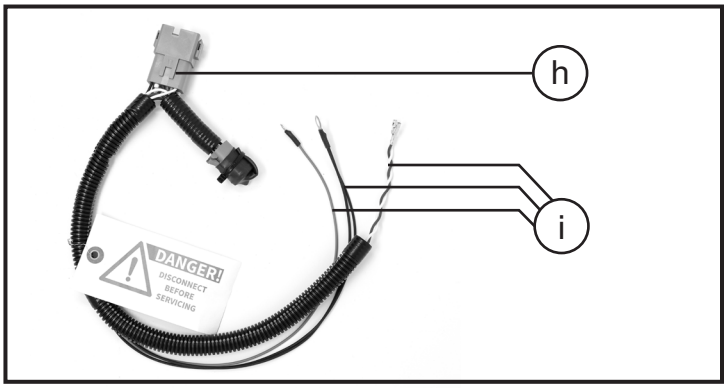
View from Back

WIRING HARNESS

The wiring harness connects the engine of the wind machine to the ST100. The specific wiring harness will be determined by the make of wind machine and engine type.

- The multi-pin connector (h) attaches to the control line through the 12-pin connector (g). **Disconnect this connector when servicing your wind machine.**

- From the leads of the wiring harness (i) we measure RPM, battery voltage, engine codes, and controller states.



WIRING HARNESS MODELS

MODEL	*MACHINE MAKE*	*ENGINE TYPE*	*MODEL*	*MACHINE MAKE*	*ENGINE TYPE*
WH100	AMARILLO	454/460	WH111	HAUFF/CHINOOK	FORD V-10
WH101	HAUFF/CHINOOK	454/460	WH112	ORCHARD RITE	FORD V-10
WH102	ORCHARD RITE	454/460	WH121	ELECTRIC WIND MACHINE	ELECTRIC MOTOR
WH103	VAMCO	454/460	WH130	JACK RABBIT	454/460
WH110	AMARILLO	FORD V-10	WH140	ORCHARD RITE	CAT 6.6 / 7.1

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TEMPERATURE PROBE

The standard temperature probe is 40 feet long and jacketed in loom tubing for protection. The probe is calibrated in the factory and does not require in-field calibration.

(j). The 2-pin male connector connects to the control line.

(k). For the best performance, the stainless steel probe should be kept in the shade. Growers usually run the probe into the fruit zone of their crop or place it beneath a sunguard.

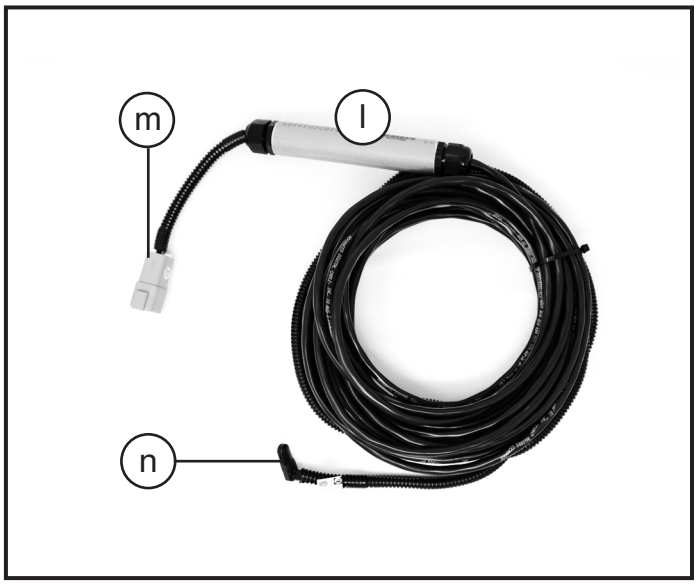
PROPANE SENSOR

A propane sensor is available to our customers that use propane fuel for their wind machines. It attaches to a remote ready propane gauge. The propane sensor is 40 feet long.

(l). The electronics are protected by potting resin and a pvc conduit capped with cable glands to prevent moisture damage.

(m). 6-pin connector to attach to the appropriate wiring harness.

(n). The boot connector attaches to a remote ready propane gauge which Altrac can also provide



REMOTE READY PROPANE GAUGE TYPES:

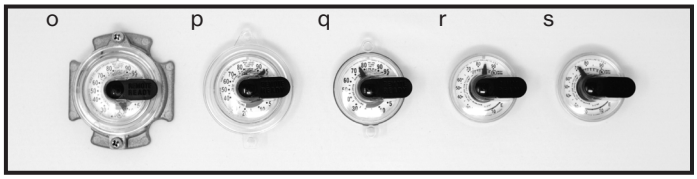
(o). Sr. gauge tabbed with adapter

(p). Sr. gauge tabbed

(q). Jr. gauge tabbed

(r). Jr. gauge “A”

(s). Jr. gauge “B”



GENERAL SPECIFICATIONS

WIRELESS OPTIONS: 2G/3G or LTE/5G

PROVIDERS: AT&T and T-Mobile (USA)

WEATHERPROOF: Outdoor Rated (IP67)

HARDWARE: Automotive Grade Components

VOLTAGE: 12VDC

POWER CONSUMPTION: 4mA (10 watt solar panel recommended)

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WHEN ORDERING SPECIFY:

- Wind Machine Make
- Engine Type
- Fuel Type
- OR wiring harness model part no.

HOW TO ORDER

Distributors:
https://altrac.io/pages/distributors-1

Get more info about our products:
sales@altrac.io

Website:
ALTRAC.IO

FOR SUPPORT

Customer Support for Existing Devices:
support@altrac.io

Altrac YouTube Channel for Installation Videos:
https://www.youtube.com/channel/UCHESvrZtwov9rOFO6J0syaw

CONTACT ALTRAC

(510)248-4141

7 DAYS A WEEK, FROM 7 A.M. - 11 P.M. CENTRAL TIME

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