

ETB Control Center

All-in-one enclosure



ETB Controller

Intelligent energy storage controls software that utilizes AI and machine learning to forecast and optimally discharge energy storage systems operating in the field. Best-in-class technology coupled with industry-leading domain expertise.

ETB Control Center

Our turnkey, fully wired enclosure houses all of the necessary hardware components in a single box, enabling a streamlined installation and commissioning. Pre-configured for the specific project and application.



Turnkey

Pre-configured for your project and ready for operation. Simple installation and connectivity.



Rugged

NEMA 4 rated, robust design to withstand the elements and extreme environments.



Proven

Utilizing best-in-class hardware components to ensure reliability and maximum uptime.

Technical Specifications

Part Number		PA3124-LTE
Mechanical Data	Dimensions (WxHxD)	16" X 20" X 8" 406 x 508 x 203 mm
	Weight	24.5 lb / 11.1 kg
Environmental	Enclosure Rating	NEMA4
	Storage Temperature	-40°C to 70°C
	Operating Temperature	-10°C to 43°C
	Max Ambient Temperature	45°C with 50% shade coverage
Power Ratings	Input Voltage Range	90V-305VAC L-N
	Input Current	1A (Max 15A overcurrent protection required)
	System Frequency	60hz
	Output Voltage	24V
	SCCR	5kA
Compliance Standards	Enclosure	UL508A
	Metering	ANSI C12.2 - 0.5%
	Controls	Sunspec IEEE 2030.5
Communications	Internet Connectivity	Wired Ethernet Embedded LTE (optional)*
	Device Communications	Modbus TCP Modbus RTU (RS485) CAN bus SunSpec 2030.5

*LTE packages can be procured through Energy Toolbase.

Technical Specifications for North America

Operating Modes

- Demand Charge Management
- Time-of-Use Arbitrage
- Solar Self-Consumption
- DC Clipping Recapture
- Demand Response Programs
- Signal-Based Dispatching

Certification

EMS Certifications

- CE & FCC Class A
- UL Listed Device
- Sunspec IEE 2030.5

Storage Partner Certifications

- UL1741 (SA/SB)
- UL9540 (A)

Metering

- Integrates with Modbus TCP enabled Revenue Grade Meter
- High Accuracy CT's (ANSI .06 or Better)
- Data Capture from Solar PV, Storage, Utility Metered Load

Resilience

- Autonomous operation for limited periods of time with no Internet
- Sustained operations during power interruptions

Communications

- RS-485 or Ethernet/ TCP Networks
- Modbus TCP
- Modbus RTU
- Sunspec/Mesa Modbus API

Connectivity

- Wired Ethernet
- Embedded LTE (optional)*

Compatibility

- ETB Monitor - a single monitoring platform for all ESS hardware deployed at site with ETB Controller Integrated with tier one hardware vendors

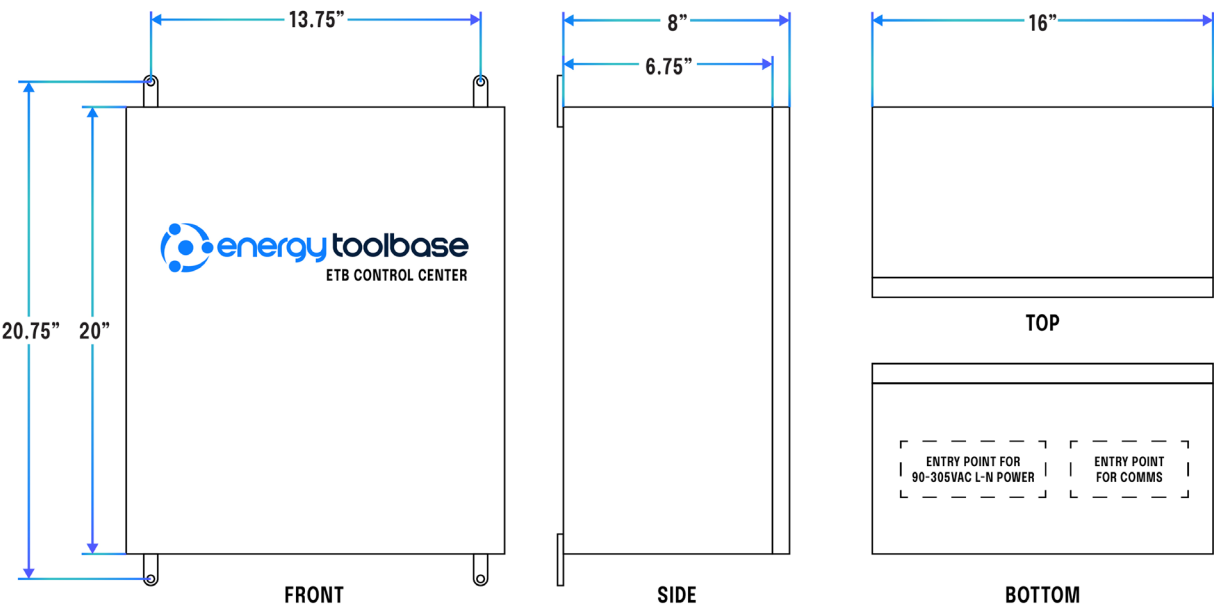
Environment

- Operating Temperature: -10°C to 43°C
- Relative Humidity: 10% to 95% (non-condensing)

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Dimensional Drawings

Penetrations for cable & conduit entry must be made on the bottom of the enclosure. ETB Control Center conduit entrances must use properly rated hubs/connectors sealed with fire rated compound to prevent moisture intrusion. Enclosure contains serviceable parts and must abide by working clearances per NEC.



Wiring Diagrams

CT leads should be ran in dedicated conduit, separate from current carrying conductors.

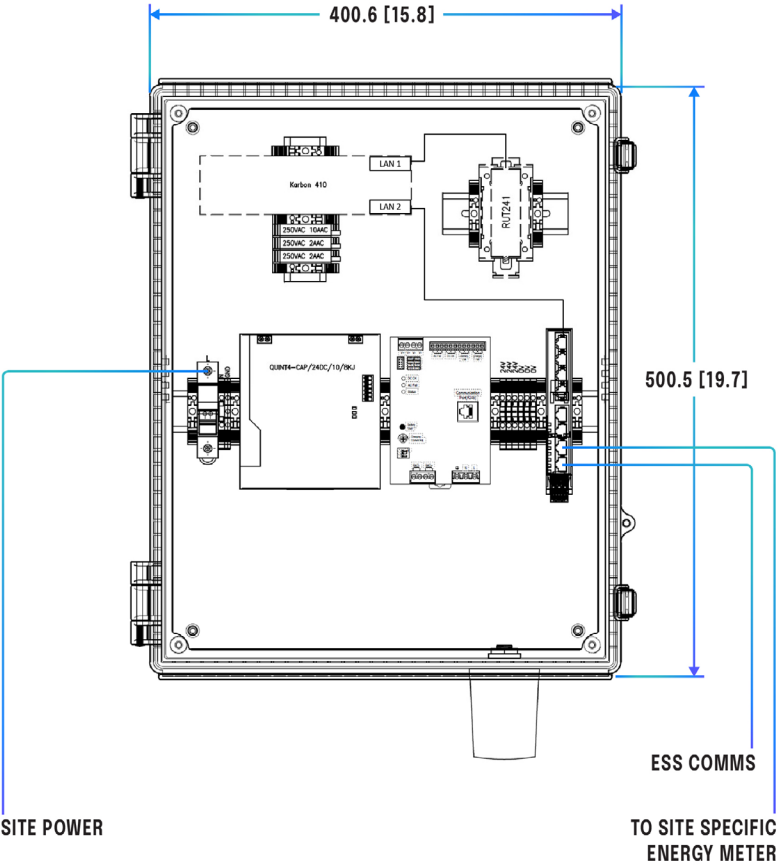
All CT measurements must be validated with a field test.

CT extension types and lengths vary by ESS manufacturer. Please refer to the appropriate ETB Controller Installation Guides below:



ETB Controller Installation Guides

help.energytoolbase.com/hc/en...





POWERED BY
ACUMEN AI



Hardware Components



Ruggedized EMS PC

Karban 410 ruggedized industrial computer. Houses Acumen EMS processing and data logging applications.



Industrial Ethernet Switch

Industrial Ethernet Switch. 8-port unmanaged switch used to connect on-site Modbus Devices to the ETB Controller.



Uninterruptible Power Supply (UPS)

Capacitor based DC-UPS. Backup power supply to rugged PC, industrial Ethernet switch, and cellular modem (if applicable).



Power Supply

Din-Rail mountable power supply. 90-305V input. 24VDC output.



Cellular Modem (Optional)

High power, Gigabit Ethernet, and up to 300 Mbps downlink speeds over LTE-Advanced.

*While ETB maintains strict quality control over all components due to availability components may be swapped out for an equivalent product.