EI Automatic Transfer Switch (ATS)

Quick Start Guide - TSS-200-US

1. General Information

ATTENTION – READ FIRST

1. This document is for quick guidance only. For details, please refer to the Energy Intelligence (EI) ATS Installation & Operations Manual.
2. Damage caused by failure to follow the contents of the EI ATS Installation & Operations Manual is not covered by the warranty.
3. Before installing the system, check that the package contents are intact and complete against the packing list. If any damage is found or any component is missing, contact your dealer.

1.1 Package Contents

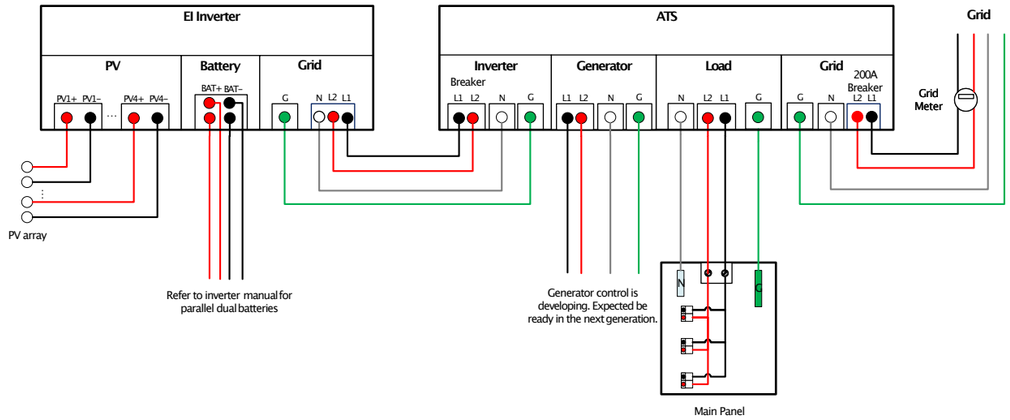
Item	Quantity
TSS-200-US ATS	1
Mounting bracket	1
Quick Start Guide	1
Sleeve anchors	2
M5 Security screws	2
M4 Phillips screw with washers	2
3pin wiring connector	2
6pin wiring connector	1
200A circuit breaker interlocking kit	1

1.2 Required Tools

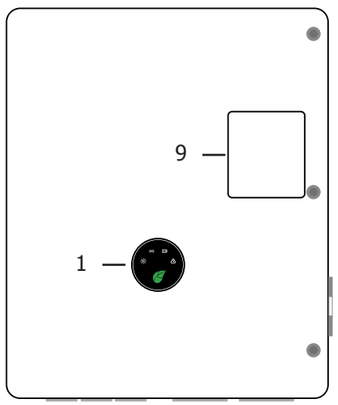
CAUTION – Use tools with insulated handles. Always wear appropriate PPE.

Item	Use
Wire cutter/crimp tool	Wiring the ATS
Philips Screwdriver	Wiring terminals
Rubber mallet/hammer	Mounting
Drill	Mounting
Level	Mounting
2.5mm-8mm Allen keys	Cover/Security Bracket/Wire Terminals

1.3 System wiring diagram

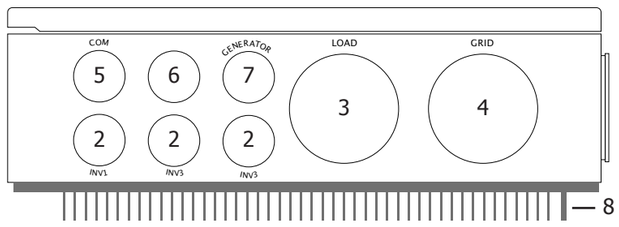


1.4 EI ATS Enclosure Overview



1. Status display
2. 1¼" Inverter knockouts
3. 2½" Load knockout
4. 2½" Grid knockout
5. 1¼" Communication knockout
6. 1¼" unassigned knockout
7. 1¼" Generator knockouts
8. Heat sink
9. 200A Main Circuit breaker Access door

Note – (3) additional 2½" knockouts available on back (2) and side (1)

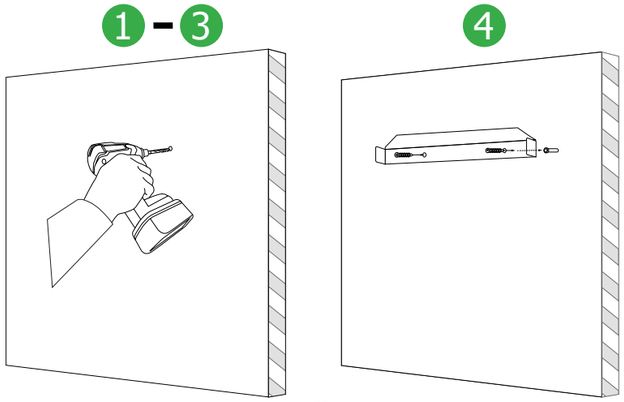


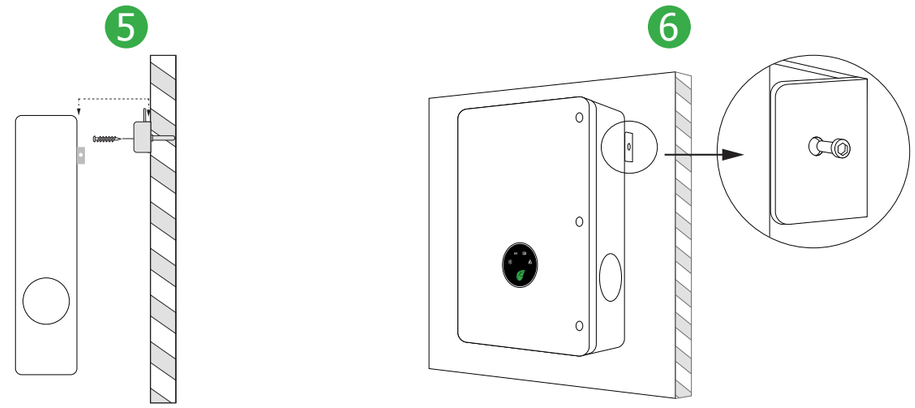
2. Installation

2.1 Mounting & opening the ATS

Although the Tigo ATS comes with mounting hardware, use the appropriate hardware for the mounting surface.

1. Reserve at least 12" on all sides of the ATS. Install vertically or tilted back no more than 15 degrees.
2. Use a level and the mounting bracket to mark the mounting holes.
3. Drill out mounting holes to 1.7" (45mm) depth.
4. Place the sleeve anchor in each hole, tap with the mallet/hammer. Place mounting bracket aligned with the anchors exposed through the screw holes and use the mounting screws to attach to the wall.
5. Confirm bracket is level and screws are tight then lift ATS on to the mounting bracket.
6. Insert security screws into each side of the bracket, fastening the bracket to the ATS with a 4mm Allen key.
7. Remove the caps covering the Allen head screws on the front cover. Using an 5mm Allen key, loosen the Allen screws and remove the cover.

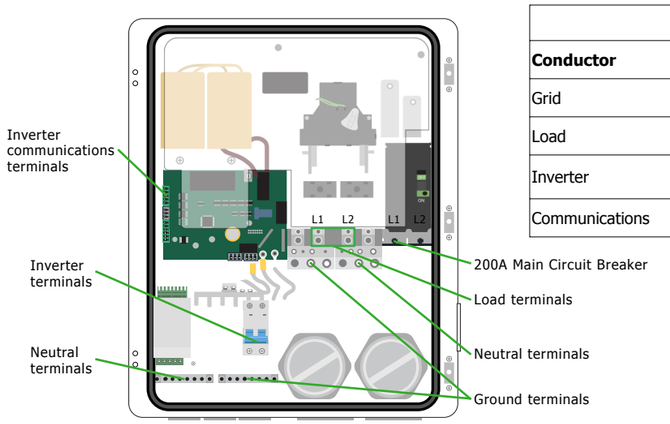




3. Electrical connections

CAUTION - Check that all Disconnect switches are OFF before wiring. For personal safety, do not operate with electricity and always wear appropriate PPE.

3.1 Electrical connections overview & conductor schedule



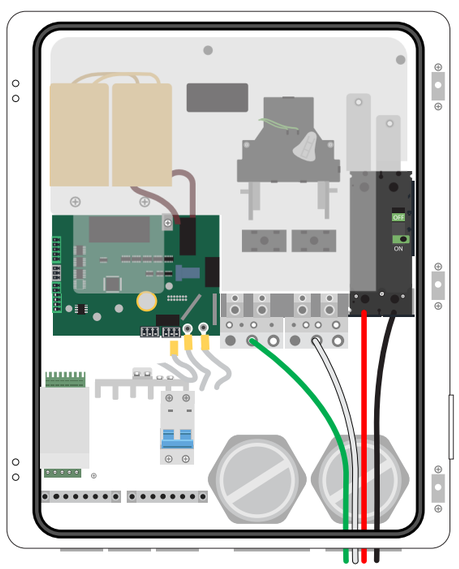
Conductor Schedule			
Conductor	**Qty**	**Type**	**Size**
Grid	4	Min. 90°C rated, insulated (or bare-EGC conductors), copper, solid or stranded (not fine stranded)	L1, L2, N: 4-4/0 AWG, EGC: 6-1/0 AWG
Load	4		L1, L2, N: 1/0-4/0 AWG, EGC: 6-1/0 AWG
Inverter	4		L1, L2, N: 8-6 AWG, EGC: 8 AWG
Communications	1	RS485 shielded, twisted pair (2-wire)	24 AWG

3.2 Grid connections

Check that the Grid disconnects/breakers, if present, are in the OFF position before wiring the ATS.

Note – This connection feeds power to the ATS from the utility grid. Direct connection to utility feeders or a line side may require coordination with the local utility company.

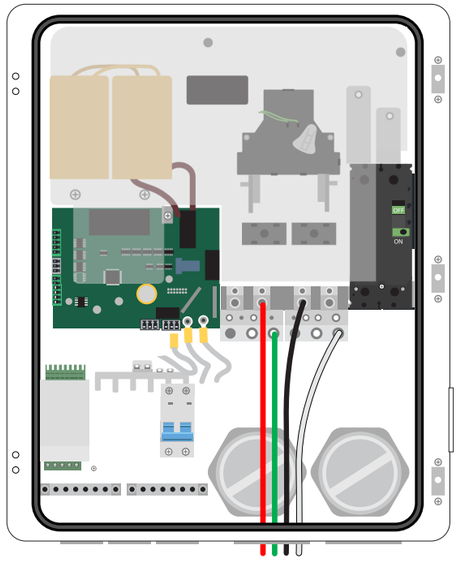
1. Run appropriately sized conduit to the Grid knockout **(4)**. Use appropriate conduit fittings to ensure a water-tight seal and run the Grid conductors.
2. Strip 10mm of insulation from the end of the **Neutral** and **Ground** conductors and terminate at the neutral and ground bus bars with 16.6ft-lbs (22.5Nm).
3. Strip 10mm of insulation from the end of the **L1** and **L2** Grid conductors and terminate at the 200A Main Circuit with 16.6ft-lbs (22.5Nm).



3.3 Load connections

Note – This connection feeds all power sources to the main load panel to the home.

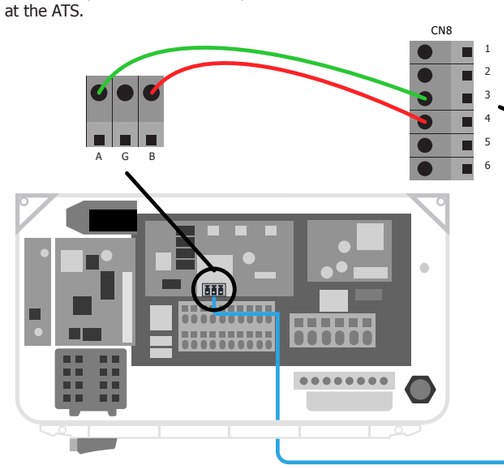
1. Run appropriately sized conduit to the Load knockout **(3)**. Use appropriate conduit fittings to ensure a water-tight seal and run the Grid conductors.
2. Strip 10mm of insulation from the end of the **Neutral** and **Ground** conductors and terminate at the neutral and ground bus bars with 16.6ft-lbs (22.5Nm).
3. Strip 10mm of insulation from the end of the **L1** and **L2** Load conductors and terminate at the Load Terminals with 16.6ft-lbs (22.5Nm).



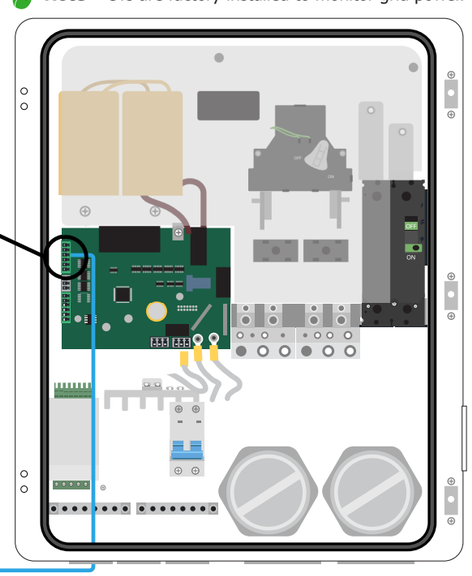
3.4 Inverter communications connections

The COMMUNICATIONS cable must be connected before the INVERTER power connections.

1. Run appropriately sized conduit from the inverter to the Com knockout **(5)**. Use appropriate conduit fittings to ensure a water-tight seal. Route the RS485 cable from the inverter to the ATS.
2. The top 6-pin connector in the ATS is used for inverter communications. Only the center two pins are used. Connect the wires to positions **3** and **4** at the ATS.
3. At the inverter, the RS485 cable connects to the 3-pin connector above the DC inputs. Only pins **1** and **3** are used. Ensure pin **1** at the inverter is connected to pin **3** at the ATS and pin **3** at the inverter is connected to pin **4** at the ATS.



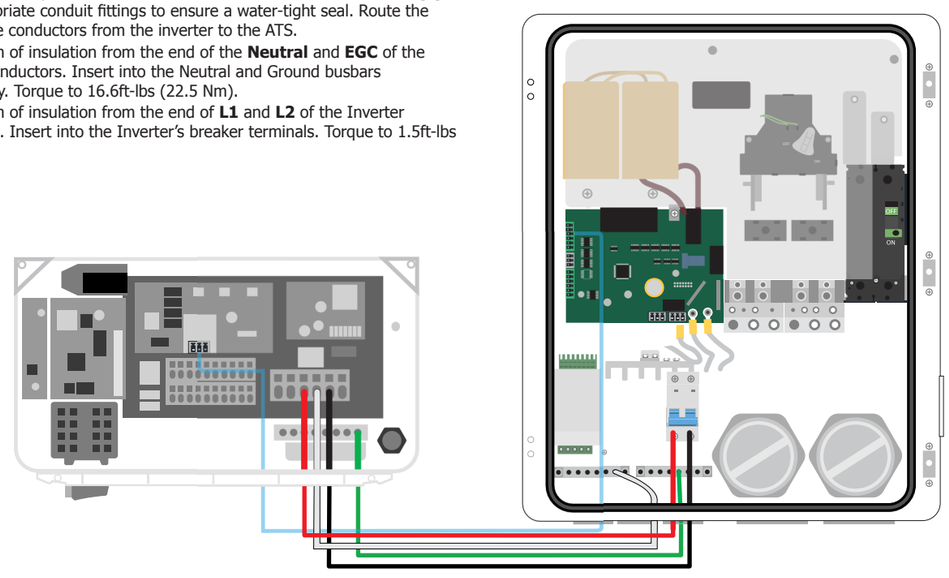
Note – CTs are factory installed to monitor grid power.



3.5 Inverter power connections

Do not wire until COMMUNICATIONS have been completed.

1. Run appropriately sized conduit from the inverter to an Inv knockout **(2)**. Use appropriate conduit fittings to ensure a water-tight seal. Route the appropriate conductors from the inverter to the ATS.
2. Strip 10mm of insulation from the end of the **Neutral** and **EGC** of the Inverter conductors. Insert into the Neutral and Ground busbars respectively. Torque to 16.6ft-lbs (22.5 Nm).
3. Strip 10mm of insulation from the end of **L1** and **L2** of the Inverter conductors. Insert into the Inverter's breaker terminals. Torque to 1.5ft-lbs (2 Nm).



4. LED Status

Symbol	Function	Color	Status	Action	Description
	Grid	Green	ON	N/A	Grid power is ON
			OFF	N/A	No Grid power
	Communications	Green	ON	N/A	Normal operation
			OFF	0.5s on / 0.5s off	Abnormal communications with the inverter
	System Status	Green	ON	N/A	Normal operation (on-grid)
			Flashing 1s on/off	N/A	Normal operation (off-grid)
	Fault	Red	ON	0.5s on / 0.5s off	A Fault has occurred
			OFF	N/A	Normal operation
			Flashing 1s on/off	1s on / 3s off	The connected loads are overloading the available output power

5. Pre-power checklist

✔	Check Item	Acceptance Criteria
	ATS installation	The ATS is installed correctly, securely and reliably.
	Conduit/Cable layout	Conduit/cables and conductors are routed properly, and as requested by the customer.
	Cable connections	The AC output conductors, DC input conductors, and communications cables are labeled and connected correctly and securely.
	Grounding	Ground conductors are connected correctly, securely and reliably.
	Conduit connections	All conduit attachments are sealed and bonded, when necessary.
	Disconnect switches	All external disconnect switches connecting to the ATS are in the OFF position.
	Workmanship	Cable ties are secured evenly, have no sharp edges, the wirebox and installation area are left clean and accessible.

6. Commissioning

⚠ **CAUTION – For personal safety always wear appropriate PPE.**

If the battery, inverter, and grid installations/connections are complete, the system may now be turned on for operation.

1. Turn on the battery DC switch.
2. Turn on the PV DC Disconnect switch at the bottom of the inverter. Release the RSD button. If inverter does not turn on, press and hold the push button from left of the battery to force start the inverter. **Note –** Inverter error light will be flashing red due to no grid is detected.
3. Turn on the inverter circuit breaker inside ATS.
4. Turn the 200A main circuit breaker ON, and any other disconnect switch on the grid side.
5. Download our App and start commissioning process.
6. **Note -** The "battery" light on the ATS becomes solid green if the inverter sees the grid. If no error light on the inverter and ATS, proceed to step 7.
7. Close the ATS door and torque the Allen screws to 1.8ft-lbs (2.5Nm).

7. Troubleshooting

Issue	Check
In grid-on operation the ATS does not switch over when there is loss of grid.	1. Turn OFF the EI Inverter and the grid. 2. Open the ATS door and check the grid and INV conductors are properly connected to the correct terminals. 3. If issues persist, please contact Tigo Customer Care team.
Load panel has no power.	1. Check the Status Display **(1)** for error codes and follow recommended steps if codes are active. 2. Check that the grid voltage is within 180-270V and frequency is 45-65Hz. 3. Check for communications error codes and miswiring. 4. If issues persist, please contact Tigo Customer Care team.

8. Your Customer Service Contact

Tigo Energy, Inc.

655 Campbell Technology Pkwy
Campbell, CA 95008

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https://support.tigoenergy.com/

Tigo ATS | EI Inverter | EI Battery | Support | Community

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