

# ROCKSOLAR

## 6kW Hybrid Solar System

7.04kW PV + 10kWh Growatt APX Battery + Partial-Home Backup  
System User & Installer Reference Manual

| System Component | Configuration                                   |
|------------------|-------------------------------------------------|
| Hybrid inverter  | Growatt MIN 6000TL-XH-US (W) (TRS-T) (RGM) (V2) |
| Solar array      | 16 x 440W modules = 7.04kW DC                   |
| Battery          | 10kWh Growatt APX HV LFP (2 x 5kWh modules)     |
| Backup transfer  | Growatt ATS 11400T-US - Partial Home Backup     |
| Rapid shutdown   | 16 x Tigo TS4-A-F                               |
| PV cable         | 2 sets x 40 ft, 10 AWG PV cable                 |

### IMPORTANT

This manual is a system-level guide. It does not replace the current Growatt, Tigo, PV module, meter, or electrical-equipment manuals. Installation, commissioning, service, and live electrical testing must be performed by qualified personnel in accordance with the NEC, local codes, utility requirements, permits, and the equipment labels/manuals.

Revision 1.0 | August 2026 | For U.S. residential applications

# Contents

1. Manual Scope & System Overview
2. System Configuration
3. Safety & Important Limitations
4. How the System Works
5. Installation Planning
6. PV Array & Tigo Rapid Shutdown
7. Growatt APX 10kWh Battery System
8. MIN 6000TL-XH-US Inverter, Meter & Monitoring
9. ATS 11400T-US Partial-Home Backup
10. Commissioning & Startup
11. Normal Operation
12. Shutdown & Emergency Response
13. Maintenance
14. Troubleshooting
15. Installer Commissioning Checklist
16. Reference Documents & Support

## OWNER QUICK NOTE

The system normally operates automatically after commissioning. Owners should primarily use the monitoring platform, watch for alerts, keep equipment accessible and unobstructed, and contact a qualified installer for electrical faults or service.

# 1. Manual Scope & System Overview

This manual describes the intended operation, major components, safety requirements, inspection points, commissioning sequence, and owner maintenance for the ROCKSOLAR 6kW hybrid solar and battery system configured with partial-home backup.

The system is designed to generate solar energy, use or export energy according to the commissioned operating mode, store energy in the Growatt APX high-voltage battery, and supply selected essential circuits through the ATS during a utility outage.

## 1.1 What this system is designed to do

- Generate up to 7.04kW DC from the 16-module PV array under Standard Test Conditions.
- Convert solar DC power to grid-compatible AC through the Growatt MIN 6000TL-XH-US inverter.
- Charge and discharge the 10kWh Growatt APX HV battery according to the selected energy-management mode.
- Provide partial-home backup to a dedicated essential-loads panel through the ATS 11400T-US.
- Provide module-level rapid shutdown functionality using 16 Tigo TS4-A-F devices with the compatible rapid-shutdown transmitter architecture.
- Provide revenue-grade metering / energy-flow information when the supplied meter is installed and commissioned correctly.

## 1.2 What partial-home backup means

Partial-home backup does not automatically power every circuit in the home. A qualified electrician selects and rewires designated essential circuits to a backup/essential-loads subpanel. During a grid outage, the ATS supplies that panel from the inverter when sufficient solar and/or battery power is available.

### LOAD PLANNING

The inverter is rated for 6kW nominal AC output at 240V. The 10kWh APX battery configuration is rated at 5kW nominal battery power. When PV is unavailable, sustained backup loads should be planned around the lower applicable continuous-power limit and any additional manufacturer/installation constraints. Avoid assuming that all large household loads can operate simultaneously.

# 2. System Configuration

| Item                        | System quantity / rating | Notes                                                       |
|-----------------------------|--------------------------|-------------------------------------------------------------|
| Growatt MIN 6000TL-XH-US    | 1                        | Hybrid / battery-ready inverter, V2 system variant          |
| 440W PV modules             | 16                       | 7.04kW total DC array; exact module model must be verified  |
| Tigo TS4-A-F                | 16                       | One rapid-shutdown device per PV module                     |
| Growatt APX 5.0P-B1-US      | 2                        | 5kWh per module; 10kWh nominal total                        |
| APX55042-P0-US power module | 1                        | Battery power module; base included in system configuration |
| Growatt ATS 11400T-US       | 1                        | Partial-home automatic transfer box                         |

| Item                | System quantity / rating | Notes                                                               |
|---------------------|--------------------------|---------------------------------------------------------------------|
| Revenue Grade Meter | 1 set                    | For system energy-flow measurement / export control as commissioned |
| 10 AWG PV cable     | 2 x 40 ft sets           | PV homerun cable; actual route and code compliance to be verified   |

## 2.1 Key equipment ratings

| Parameter                          | System rating / manufacturer data  |
|------------------------------------|------------------------------------|
| PV array nameplate                 | 7.04kW DC (16 x 440W)              |
| Inverter AC nominal output @ 240V  | 6,000W                             |
| Inverter AC nominal output @ 208V  | 5,200W                             |
| Inverter max recommended PV power  | 12,000W                            |
| Inverter max DC system voltage     | 600V DC                            |
| Inverter MPPT count                | 3                                  |
| Max input current per MPPT         | 13.5A                              |
| Max short-circuit current per MPPT | 16.9A                              |
| APX battery nominal energy         | 10kWh                              |
| APX battery nominal power          | 5kW                                |
| APX battery chemistry              | Lithium iron phosphate (LFP)       |
| APX battery warranty               | 10 years (manufacturer stated)     |
| Backup type                        | Partial home through ATS 11400T-US |

### PV MODULE HOLD POINT

The exact 440W module model and electrical data (Voc, Vmp, Isc, Imp, temperature coefficient) were not provided for this manual. Do not finalize string design or energize the PV input until the selected module is verified against the MIN 6000TL-XH-US voltage and current limits at the site design temperatures.

## 3. Safety & Important Limitations

### **DANGER - HIGH VOLTAGE**

PV modules can produce hazardous DC voltage whenever exposed to light. The APX battery is a high-voltage energy-storage system. The inverter, ATS, meter, PV conductors, battery conductors, and backup circuits may remain energized from more than one source. Never open equipment covers or disconnect energized connectors unless you are qualified and the equipment has been safely isolated and verified de-energized.

### 3.1 Qualified-person requirements

- Installation, commissioning, service, live measurements, and conductor termination must be performed by qualified electrical personnel.
- Follow NEC requirements, local amendments, utility interconnection rules, permit documents, and all equipment labels/manuals.
- Use listed equipment, listed connectors, correct torque values, approved conductor types, and required overcurrent/disconnect protection.
- Never modify anti-islanding, export-control, grid-code, protection, or battery parameters without authorization from the installer/utility/manufacturer.

### 3.2 Owner safety rules

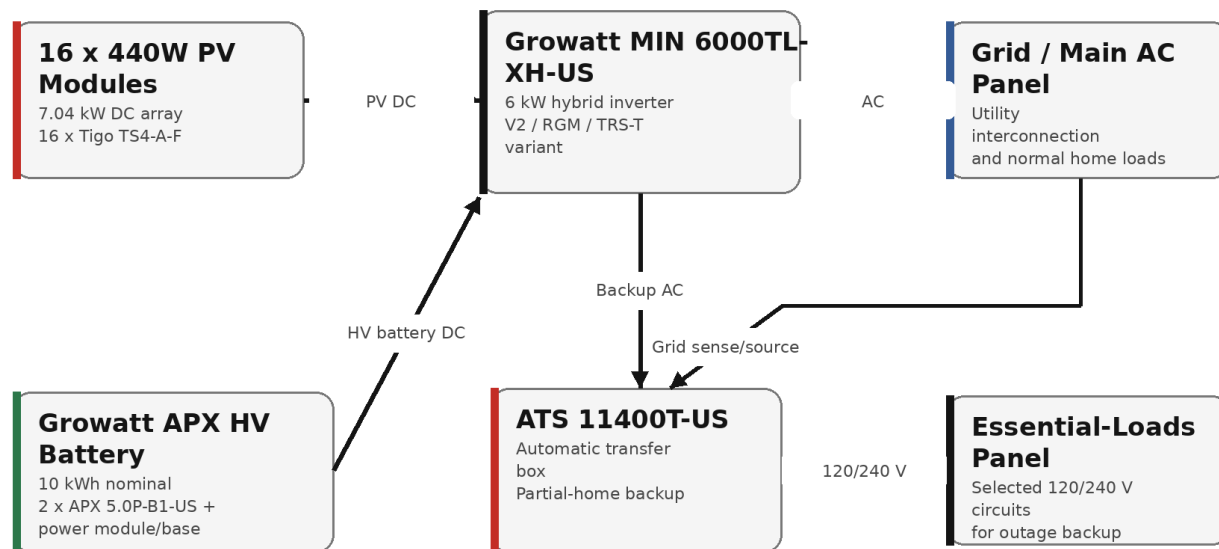
- Do not open the inverter, ATS, battery power module, battery modules, rapid-shutdown devices, meter enclosures, or electrical panels.
- Do not unplug PV or battery connectors while the system is operating.
- Keep equipment clear of storage, combustible materials, standing water, pests, and blocked ventilation paths.
- If there is smoke, fire, flooding, physical damage, unusual odor, or exposed wiring, stay clear and follow the site emergency shutdown/rapid-shutdown instructions. Contact emergency services when appropriate.
- After severe storms, roof work, electrical work, or utility service changes, have the system inspected if damage or abnormal operation is suspected.

### 3.3 Rapid-shutdown caution

Current Tigo TS4-A-F 725W devices ship in the ON state. Module voltage can therefore be present immediately after a TS4-A-F is connected to a PV module. Treat all PV conductors and module-level devices as energized whenever the modules are illuminated unless a qualified person has verified otherwise.

## 4. How the System Works

The diagram below shows the system at a conceptual level. It is not a construction wiring diagram and intentionally omits site-specific disconnects, breakers, conductors, grounding/bonding, utility equipment, and code-required labels.



Conceptual system architecture only. Final conductor sizing, overcurrent protection, disconnects, grounding, string design, and utility interconnection must be engineered and installed to applicable codes and equipment manuals.

## 4.1 Normal grid-connected operation

Solar power is converted by the inverter and used according to the commissioned energy-management mode. Depending on settings, solar may serve home loads, charge the APX battery, and/or export to the grid where permitted. The revenue-grade meter provides energy-flow information used by the control strategy.

## 4.2 Grid outage / backup operation

When the grid is unavailable, the ATS supports the dedicated essential-loads panel from the inverter backup output. Backup availability depends on battery state of charge, PV production, configured reserve limits, inverter/battery power limits, and the connected loads.

# 5. Installation Planning

## 5.1 Before installation

- Confirm utility interconnection approval, permit requirements, and equipment eligibility for the project location.
- Confirm the exact PV module datasheet and complete string-voltage/current calculations using site minimum temperature.
- Confirm roof or ground-mount structural suitability, module layout, fire setbacks, attachment method, grounding/bonding, and rapid-shutdown requirements.
- Confirm inverter, battery, ATS, meter, main panel, and essential-loads panel locations before conduit and conductor installation.
- Confirm battery clearances, environmental limits, service access, and approved mounting method from the latest Growatt APX manual.
- Create an essential-load schedule and verify expected continuous and surge loads against the available backup capability.
- Confirm conductor sizes and overcurrent protection from actual installation conditions, conductor type, terminal ratings, code calculations, and manufacturer manuals. The included 10 AWG PV cable does not determine all site wiring sizes.

## 5.2 Equipment location principles

Mount all equipment in locations that comply with the manufacturer environment and clearance requirements, protect equipment from physical damage, allow safe service access, and keep required working clearances. The MIN inverter is NEMA 4X/IP65 rated and the APX system is listed as NEMA 4X/IP66 in the supplied datasheets; this does not remove the need to follow detailed location restrictions in the manufacturer manuals.

## 6. PV Array & Tigo Rapid Shutdown

### 6.1 PV array configuration

The system contains 16 x 440W PV modules for a 7.04kW DC nameplate array. The MIN 6000TL-XH-US has three MPPTs. A practical starting layout is two independent strings of eight modules, each on a separate MPPT, leaving the third MPPT unused; however, this is only a provisional layout until the actual module electrical data and site design temperatures are verified.

#### STRING DESIGN VERIFICATION

For every proposed string, verify temperature-corrected open-circuit voltage remains below 600V DC, operating voltage remains inside the inverter operating/full-load range, and module/string current does not exceed the applicable 13.5A MPPT input-current and 16.9A MPPT short-circuit-current limits. Use the exact current Growatt datasheet/manual for the supplied inverter revision.

### 6.2 Tigo TS4-A-F rapid shutdown

- Install one TS4-A-F per PV module in the approved orientation and mounting method.
- Connect each TS4-A-F to the corresponding PV module and connect TS4 outputs in series to form the designed string.
- The TS4-A-F communicates by PLC with a compatible Tigo RSS transmitter. The specified inverter variant includes the TRS-T rapid-shutdown transmitter configuration; verify the installed transmitter and PVRSS compatibility on equipment labels and the current Tigo/Growatt documentation.
- Keep Tigo cable glands oriented as required by Tigo and secure conductors so connectors and cables are not under tension or resting where water can collect.
- After commissioning, the installer must test the rapid-shutdown function and apply required NEC rapid-shutdown labels/placards.

### 6.3 Included PV cable

The system includes two 40 ft sets of 10 AWG PV cable. Final routing, allowable ampacity, temperature correction, rooftop derating, conductor protection, conduit fill, voltage drop, and connector compatibility must be verified for the actual installation. Do not use mixed connector brands unless specifically listed/approved for mating.

### 6.4 PV design record (complete before energizing)

| Design item                  | Installer record |
|------------------------------|------------------|
| PV module manufacturer/model |                  |
| Module Voc / Vmp             |                  |
| Module Isc / Imp             |                  |
| Voc temperature coefficient  |                  |

| Design item                      | Installer record |
|----------------------------------|------------------|
| Site minimum design temperature  |                  |
| Proposed modules per string      |                  |
| Temperature-corrected string Voc |                  |
| String operating voltage         |                  |
| MPPT current check               |                  |
| Stringing approved by            |                  |
| Date                             |                  |

## 7. Growatt APX 10kWh Battery System

### 7.1 Battery configuration

The battery consists of two APX 5.0P-B1-US battery modules (5kWh each) with one APX55042-P0-US power module and the system base, for 10kWh nominal energy. The supplied APX datasheet specifies LFP chemistry, modular expansion, module-level energy optimization, and a 10-year warranty.

| Battery parameter           | 10kWh system                                   |
|-----------------------------|------------------------------------------------|
| Nominal energy              | 10kWh                                          |
| Nominal power               | 5kW                                            |
| Peak output power           | 7kW for 60 seconds                             |
| Chemistry                   | Cobalt-free lithium iron phosphate (LFP)       |
| Inverter-side voltage range | 380-550V                                       |
| Protection rating           | IP66 / NEMA 4X                                 |
| Operating ambient range     | -10 to 50°C (14 to 122°F), subject to derating |
| Warranty                    | 10 years (manufacturer stated)                 |

### 7.2 Battery installation and service

- Use only the approved APX power module, battery modules, base, system cables, mounting hardware, and communication wiring for the system.
- Follow Growatt requirements for floor/wall mounting, anti-tip hardware, clearances, cable routing, grounding/bonding, and environmental conditions.

- The battery is high voltage and not owner-serviceable. Do not remove covers, separate energized modules, or disconnect battery power/communication cables while energized.
- Keep battery equipment dry, accessible, clean, and protected from impact and unauthorized access.
- If the battery reports a fault, abnormal heat, swelling, odor, smoke, or liquid leakage, keep clear and contact qualified service personnel immediately.

### **7.3 Battery operating expectations**

Actual usable backup time varies widely with load, battery reserve settings, temperature, battery state of health, PV production, and inverter operating mode. A 10kWh battery does not mean 10kW of continuous power. Energy (kWh) determines how long loads can run; power (kW) determines how large the instantaneous load can be.

## **8. MIN 6000TL-XH-US Inverter, Meter & Monitoring**

### **8.1 Inverter functions**

- 6,000W nominal AC output at 240V (5,200W nominal at 208V per supplied datasheet).
- Three MPPT inputs for PV energy harvesting.
- Battery-ready operation with compatible Growatt APX HV battery.
- AFCI and rapid-shutdown support.
- Energy-management modes including self-consumption, zero export, time-of-use, and off-grid/backup functionality as supported by the commissioned system.
- Revenue Grade Meter support for energy-flow control and measurement.

### **8.2 Monitoring**

After commissioning, connect the system to the Growatt monitoring platform designated for the MIN XH US series. Owners should use monitoring for daily production, battery state of charge, energy-flow trends, and fault notifications. Commissioning and firmware/parameter changes should be performed by the installer using the appropriate Growatt tools.

### **8.3 Meter direction matters**

Incorrect meter/CT orientation can cause incorrect import/export readings and improper energy-management behavior. During commissioning, the installer must verify the meter direction, phase assignment, communications, and real-time power-flow direction before enabling export control or time-of-use logic.

## **9. ATS 11400T-US Partial-Home Backup**

### **9.1 Purpose**

The ATS 11400T-US is used with the MIN XH US system for partial-home backup and provides split-phase 120/240V backup architecture. It feeds a dedicated backup/essential-loads panel rather than automatically backing up every circuit in the home.

### **9.2 Essential-loads panel**

Before the ATS is connected, a secondary AC panel must be provided for the backup loads. The electrician moves selected circuits from the main panel to this essential-loads panel. Typical candidates include refrigeration, lighting, internet/networking, selected receptacles, sump/well controls where power requirements allow, and other essential loads selected during system design.

### **9.3 Loads that need special review**

- Central air-conditioning and heat pumps with high starting current
- Electric water heaters

- Ranges / ovens
- Electric clothes dryers
- EV chargers
- Large well pumps or motor loads
- Workshop tools, welders, compressors, or other high-surge equipment

Some of these loads may be supportable if engineered correctly, but they should not be assumed to be suitable for the essential-loads panel without a load and surge-current analysis.

## 9.4 Backup transfer behavior

During normal operation, the essential-load panel is supplied in the commissioned grid-connected configuration. When the utility fails, the ATS and inverter transition the backup circuits to inverter-supported operation. Transfer behavior and available power depend on inverter firmware/settings, ATS wiring, battery state, and PV conditions.

# 10. Commissioning & Startup

### QUALIFIED INSTALLER ONLY

The following section is a commissioning overview, not a substitute for the Growatt quick guide/user manual. Final commissioning must use the current instructions for the exact inverter revision, ATS, APX battery, meter, and rapid-shutdown hardware.

## 10.1 Pre-power checks

- Confirm all equipment is securely mounted and required clearances are maintained.
- Confirm AC, PV, battery, meter, communication, grounding/bonding, and ATS terminations are complete and torqued to manufacturer requirements.
- Confirm PV polarity and string voltages with suitable test equipment before connection/energization.
- Confirm every PV string remains below the inverter maximum DC voltage and inside the validated design limits.
- Confirm battery power and communication cables are connected correctly and the APX stack is mechanically secure.
- Confirm the ATS is wired to the dedicated essential-loads panel and the backup-load schedule is within design limits.
- Confirm meter/CT direction and communications.
- Confirm rapid-shutdown devices and transmitter architecture match the approved PVRSS configuration.
- Confirm required breakers, disconnects, labels, placards, and utility interconnection equipment are installed.

## 10.2 Manufacturer startup sequence - overview

Growatt commissioning instructions for the MIN TL-XH US family call for the qualified installer to energize the inverter DC switch, energize the battery power switch and any battery-side breaker where applicable, then energize the AC grid breaker and complete inverter quick settings/commissioning. Use the current manual for the exact supplied revision and do not rely on this summary if the equipment labeling or manual sequence differs.

## 10.3 Commissioning tests

- Grid-connected solar production and phase/voltage check
- Battery communication, SOC display, charge and discharge operation
- Energy-meter direction and import/export readings
- Rapid-shutdown initiation and recovery test
- Utility outage simulation / ATS transfer test using approved procedure
- Essential-load operation during backup mode
- Battery reserve / minimum SOC behavior

- Monitoring portal registration and owner access
- Owner training on normal operation, alarms, emergency shutdown, and service contact

## 11. Normal Operation

### 11.1 Recommended owner workflow

- Check the monitoring app periodically for solar production, battery SOC, grid flow, and alerts.
- Keep backup loads within the designed essential-load schedule, especially during outages.
- If an outage is expected to be prolonged, reduce nonessential backup loads to conserve battery energy.
- Do not change grid/export, battery-protection, or advanced installer parameters without technical approval.
- Keep internet/network equipment powered if remote monitoring is expected during outages.

### 11.2 Common operating modes

| Mode                      | Typical purpose                                                                              |
|---------------------------|----------------------------------------------------------------------------------------------|
| Self-consumption          | Use solar locally first and charge/discharge battery to reduce grid purchases.               |
| Time-of-use (TOU)         | Charge/discharge the battery according to configured rate periods and reserve rules.         |
| Zero export               | Limit or prevent export to the grid where required, using correctly installed metering.      |
| Backup / off-grid support | Maintain selected essential loads when the utility is unavailable, subject to system limits. |

## 12. Shutdown & Emergency Response

### 12.1 Normal service shutdown

A complete service shutdown should be performed by qualified personnel using the current Growatt procedure. The manufacturer process includes issuing the appropriate shutdown command when required, isolating AC and PV DC sources, and powering down the battery system in the specified sequence. Because site disconnects and breaker arrangements vary, follow the site one-line diagram and equipment labels.

### 12.2 Emergency / first-responder shutdown

- Use the site-labeled rapid-shutdown initiator / emergency disconnect as installed and permitted by code.
- Do not open PV connectors, inverter covers, battery covers, ATS covers, or electrical panels during an emergency.
- Even after rapid shutdown, parts of the system may remain energized. Treat all equipment and conductors as live until verified safe by qualified personnel.
- For fire, smoke, flooding, or damaged battery equipment, keep people away from the equipment and contact emergency services.
- After any emergency shutdown, have the system inspected before returning it to service.

## 13. Maintenance

| Frequency            | Owner / service action                                                                                                                                                                                           |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monthly              | Review monitoring data and alerts; confirm system is producing and battery SOC behaves normally.                                                                                                                 |
| Every 3-6 months     | Visual ground-level inspection for damage, loose visible conduit, debris, pests, water intrusion signs, or blocked access. Do not open equipment.                                                                |
| After severe weather | Check for visible panel, roof, conduit, equipment, or enclosure damage. Arrange professional inspection if damage is suspected.                                                                                  |
| Annually             | Qualified electrical/solar inspection as appropriate: terminals, protection devices, grounding/bonding, labels, rapid-shutdown function, battery condition, firmware, meter operation, and backup transfer test. |
| As needed            | Clean PV modules only using methods allowed by the module manufacturer and safe roof-access practices.                                                                                                           |

### 13.1 Battery care

- Maintain the APX battery within its permitted ambient conditions and keep the enclosure free of dust/debris accumulation.
- Do not pressure-wash, spray solvents, paint, drill, or modify the battery enclosure.
- Contact qualified service if battery faults repeat or if capacity/performance changes significantly.

## 14. Troubleshooting

| Symptom                                | Owner checks                                                                                                                                      | When to call service                                                                   |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| No solar production                    | Check monitoring status, time of day, utility status, and whether a site disconnect/breaker is visibly tripped. Do not repeatedly reset breakers. | If fault persists, inverter shows fault, or a breaker trips again.                     |
| Battery not charging                   | Check SOC, operating mode, reserve setting shown in monitoring, PV availability, and alerts.                                                      | If battery communication/fault alarm appears or battery remains unavailable.           |
| No backup during outage                | Reduce backup loads, check battery SOC and monitoring status.                                                                                     | If ATS/inverter does not transfer, fault persists, or essential panel remains dead.    |
| Backup trips under load                | Turn off large/nonessential backup loads.                                                                                                         | If normal essential loads still cause trips or overload alarms.                        |
| Rapid shutdown active / PV unavailable | Do not bypass the rapid-shutdown system.                                                                                                          | Installer should inspect Tigo transmitter/PLC path, TS4s, wiring, and inverter status. |

| Symptom                              | Owner checks                                | When to call service                                                                    |
|--------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------|
| Meter readings reversed / abnormal   | Do not change advanced settings.            | Installer should verify meter/CT direction, phase mapping, and communications.          |
| Battery abnormal heat / odor / smoke | Keep clear; do not touch or open equipment. | Treat as an emergency; contact emergency services as appropriate and qualified service. |

## 15. Installer Commissioning Checklist

| #  | Commissioning item                                                                            | Complete                 |
|----|-----------------------------------------------------------------------------------------------|--------------------------|
| 1  | Permits / utility authorization verified                                                      | <input type="checkbox"/> |
| 2  | Exact 440W PV module model recorded                                                           | <input type="checkbox"/> |
| 3  | PV string voltage/current calculations completed and approved                                 | <input type="checkbox"/> |
| 4  | PV strings polarity-tested before energization                                                | <input type="checkbox"/> |
| 5  | 16 Tigo TS4-A-F devices installed and secured                                                 | <input type="checkbox"/> |
| 6  | Rapid-shutdown transmitter / PVRSS compatibility verified                                     | <input type="checkbox"/> |
| 7  | PV cable routing and connectors inspected                                                     | <input type="checkbox"/> |
| 8  | MIN 6000TL-XH-US mounted and wired per current manual                                         | <input type="checkbox"/> |
| 9  | APX 10kWh battery stack assembled, secured, grounded/bonded, and connected per current manual | <input type="checkbox"/> |
| 10 | Battery communications verified                                                               | <input type="checkbox"/> |
| 11 | ATS 11400T-US installed and essential-loads subpanel completed                                | <input type="checkbox"/> |
| 12 | Backup-load calculation reviewed                                                              | <input type="checkbox"/> |
| 13 | Revenue Grade Meter / CT direction and phase mapping verified                                 | <input type="checkbox"/> |
| 14 | Grid settings / utility profile commissioned                                                  | <input type="checkbox"/> |

| #  | Commissioning item                                        | Complete                 |
|----|-----------------------------------------------------------|--------------------------|
| 15 | Operating mode and battery reserve set                    | <input type="checkbox"/> |
| 16 | Rapid-shutdown function tested                            | <input type="checkbox"/> |
| 17 | Grid-outage / ATS transfer test completed                 | <input type="checkbox"/> |
| 18 | Backup loads verified under expected operating conditions | <input type="checkbox"/> |
| 19 | Monitoring account created and owner access confirmed     | <input type="checkbox"/> |
| 20 | Owner trained on normal operation and emergency shutdown  | <input type="checkbox"/> |
| 21 | Required labels / placards installed                      | <input type="checkbox"/> |
| 22 | One-line diagram and manufacturer manuals left with owner | <input type="checkbox"/> |

## Commissioning record

| Field                                        | Record |
|----------------------------------------------|--------|
| Installation address                         |        |
| Installer / company                          |        |
| Commissioning date                           |        |
| Inverter serial number                       |        |
| Battery serial numbers                       |        |
| ATS serial number                            |        |
| PV module make/model                         |        |
| PV string configuration                      |        |
| Monitoring site ID                           |        |
| Utility / interconnection approval reference |        |
| Notes                                        |        |

## 16. Reference Documents & Support

If any instruction in this system manual conflicts with a manufacturer manual, equipment label, approved permit set, utility requirement, or applicable electrical code, follow the authoritative requirement and have the system design reviewed before proceeding.

### 16.1 Manufacturer documents used for this manual

- Growatt MIN 3000~7600TL-XH-US Datasheet (supplied ROCKSOLAR copy).
- Growatt MIN 3-11.4kTL-XH-US User Manual (current U.S. manual family; includes V2 ATS-US partial-backup connection and commissioning guidance).
- Growatt APX HV Battery US Datasheet (supplied copy).
- Growatt APX HV Battery System US User Manual.
- Growatt ATS-US product documentation / Quick Guide.
- Tigo Installation Manual: TS4-A-F, TS4-A-2F, and Rapid Shutdown System (RSS) Transmitters with Pure Signal Technology, English v4.4.
- Tigo TS4-A-F product / installation guidance.

### 16.2 Official support resources

**Growatt USA downloads:** <https://us.growatt.com/support/download/manual-quick-guide>

**Growatt MIN XH US product page:** <https://us.growatt.com/products/min-3000-11400tl-xh-us>

**Growatt ATS-US product page:** <https://us.growatt.com/products/ats-us>

**Tigo TS4-A-F product page:** <https://www.tigoenergy.com/product/ts4-a-f>

**Tigo TS4-A-F / RSS installation manual:** <https://www.tigoenergy.com/documents/installation-manual-ts4-rss-transmitter-pst>

### 16.3 ROCKSOLAR support

For product selection, system questions, replacement components, or technical support, use the current contact information listed on the ROCKSOLAR U.S. website and your sales/order documentation.

### Revision history

| Revision | Date        | Description                                                                                                       |
|----------|-------------|-------------------------------------------------------------------------------------------------------------------|
| 1.0      | August 2026 | Initial system-specific manual for 6kW MIN XH US + 7.04kW PV + 10kWh APX + ATS partial-home backup configuration. |