

# Straton UPS Level 2 Maintenance and Troubleshooting Training Course

11 – 15 January 2027
Frankfurt

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## Overview

Straton UPS Level 2 Maintenance and Troubleshooting Training Course is a one-week advanced course for UPS service, electrical maintenance, critical-power, and facilities functions who leave with a Straton UPS Level 2 Maintenance and Troubleshooting Plan. The course connects industrial UPS architecture, safe maintenance boundaries, diagnostic evidence, alarm analysis, fault isolation, controlled replacement, and performance verification. Participants practice maintenance decisions through documented scenarios rather than live intrusive work. Agile Leaders Training Center delivers this course on Straton UPS Level 2 maintenance and troubleshooting.

## Who Should Attend

- Functions responsible for servicing industrial UPS equipment and maintaining power continuity
- Teams responsible for electrical maintenance, inspection, calibration, and controlled component replacement
- Groups responsible for critical-power monitoring, alarm response, and fault escalation
- Personnel responsible for facilities resilience, maintenance planning, and contractor oversight
- Specialists responsible for battery condition, thermal evidence, and UPS performance testing

The course assumes participants already interpret UPS one-line diagrams, operating states, alarms, isolation controls, and Level 1 maintenance records, and leaves out introductory electrical theory, live intrusive work, proprietary software access, firmware changes, and unsupported model-specific repair procedures.

## Departments and Industries

The course supports departments and industries that depend on governed industrial UPS maintenance and critical-power continuity.

- Electrical maintenance and reliability departments
- Facilities engineering and critical-environment operations
- Data centers, telecommunications, and control rooms
- Process industries, utilities, and manufacturing facilities
- Hospitals, laboratories, and transport infrastructure

## Learning Objectives

By the end of this course, participants will be able to:

- Analyze Straton UPS architecture and safe maintenance boundaries.
- Diagnose rectifier, inverter, bypass, battery, and cooling evidence.
- Use alarm histories to isolate probable fault paths.
- Evaluate inspection, calibration, and replacement decisions.
- Apply functional tests and performance verification criteria.
- Build a preventive maintenance and escalation plan.

## Course Agenda

### Day 1: Establish Safe Diagnostic Boundaries

- Straton Industrial UPS Functional Architecture Map
- Rectifier, Inverter, Static Bypass, and Battery Energy-Flow Model
- IEC 62040-1 Safety Boundary and Backfeed Checklist
- Maintenance State, Isolation, and Escalation Decision Matrix
- Level 1 Record-to-Level 2 Evidence Handover Template

### Day 2: Evaluate Power Conversion Subsystems

- Rectifier and Charger Input Evidence Worksheet
- DC Link Condition and Measurement Review Method
- Inverter Output Waveform and Load Evidence Matrix
- Static and Manual Bypass State-Transition Diagram
- Cooling Path, Fan, Filter, and Thermal Inspection Checklist

### Day 3: Isolate Alarms and Fault Paths

- Alarm Chronology and Event-Log Reconstruction Sheet
- Symptom-to-Subsystem Fault Isolation Tree
- Overload, Voltage, and Frequency Evidence Comparator
- Intermittent Fault Reproduction and Exclusion Method
- Diagnostic Finding, Uncertainty, and Escalation Record

### Day 4: Plan Maintenance and Verify Performance

- IEEE 1188-2025 VRLA Battery Condition Review
- Inspection, Calibration, and Controlled Replacement Decision Board
- IEC 62040-3 Functional Performance Test Matrix
- Load, Efficiency, and Transfer-Performance Verification Sheet
- Preventive and Predictive Maintenance Interval Planner

## Day 5: Practice Integrated Troubleshooting

- Suggested Exercise: Reconstruct a Straton UPS Alarm Sequence
- Suggested Exercise: Isolate a Power Conversion Fault Path
- Suggested Exercise: Evaluate Battery and Thermal Evidence
- Suggested Exercise: Verify Post-Maintenance Functional Performance
- Capstone Exercise: Build the Straton UPS Level 2 Maintenance and Troubleshooting Plan

## Practical Exercises

The course uses suggested activities to convert UPS evidence into controlled maintenance and escalation decisions.

- Suggested activity: trace rectifier, inverter, bypass, battery, and cooling evidence through an industrial UPS scenario.
- Suggested activity: rebuild an alarm timeline and distinguish probable causes from secondary effects.
- Suggested activity: compare calibration, component replacement, further testing, and escalation options against documented boundaries.
- Suggested activity: assemble performance checks and maintenance intervals into a reviewable plan.

## FAQs

### Who suits Straton UPS Level 2 maintenance training, and what does it assume?

Straton UPS Level 2 maintenance training suits experienced UPS service, electrical maintenance, critical-power, and facilities personnel who already use diagrams, operating records, alarms, isolation controls, and Level 1 maintenance evidence.

### How does Straton UPS Level 2 troubleshooting differ from basic UPS operations training?

Straton UPS Level 2 troubleshooting moves beyond normal operating checks into subsystem evidence, alarm chronology, fault isolation, maintenance decisions, performance verification, and defined escalation boundaries.

### How should Straton UPS alarms be analyzed during maintenance?

Straton UPS alarms should be ordered by time, operating state, load condition, subsystem, preceding event, and secondary effect before a probable fault path is selected and tested against available evidence.

## What evidence supports a Straton UPS component replacement decision?

A Straton UPS component replacement decision needs repeatable symptoms, measurements, inspection findings, alarm history, isolation results, applicable limits, safety boundaries, and a defined post-maintenance verification method.

## How is Straton UPS performance verified after maintenance?

Straton UPS performance is verified through controlled functional checks covering operating modes, transfers, alarms, load behavior, output characteristics, battery evidence, thermal condition, and documented acceptance or escalation criteria.

## Conclusion

Participants take back a Straton UPS Level 2 Maintenance and Troubleshooting Plan. The plan joins architecture, safety boundaries, subsystem evidence, alarms, fault paths, battery and thermal condition, maintenance decisions, tests, and escalation criteria. It changes scattered observations into a traceable basis for preventive work, controlled intervention, post-maintenance verification, and technical escalation.