

Training Yard Panel  
Bulletin 4408: Start-Up Check-List



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***Start-Up & Commissioning Acceptance Test Procedure***

Customer Name: \_\_\_\_\_

Site Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unit Model Number: **TYP** - \_\_\_\_\_

Unit Serial Number: \_\_\_\_\_

Unit UL Number: \_\_\_\_\_

*Start-Up & Operations Check-List*

- \_\_\_\_\_ 1) Turn on incoming power supply OCPD.
- \_\_\_\_\_ 2) Measure incoming voltage and confirm within 5% of nameplate nominal requirements.
- \_\_\_\_\_ 3) Confirm High-Voltage dead-fronts are installed.
- \_\_\_\_\_ 4) Assure that the yard is empty of all personnel at risk, as yard may become energized.
- \_\_\_\_\_ 5) Turn on main disconnect handle. Unit enters self-test mode and passes.
- \_\_\_\_\_ 6) Unit enters pre-enabled mode, main safety system is OPEN.
- \_\_\_\_\_ 7) Assure that all e-stops are not engaged and index the Reset SS to the safety position to close/engage the main safety relay. Safety circuit disabled light extinguishes.
- \_\_\_\_\_ 8) System Alarm light flashes. Index the Reset SS to the alarm position to extinguish the system alarm light.
- \_\_\_\_\_ 9) The heartbeat pilot light is flashing at a 1-second interval.
- \_\_\_\_\_ 10) Depress the Light/Horn Test pushbutton and verify all horns, beacons and lights are operational.
- \_\_\_\_\_ 11) Clear all yard personnel as the lines will become energized. Depress the Energize High-Voltage pushbutton. Confirm horns sounds and beacons illuminate. Repeat for all circuits.
- \_\_\_\_\_ 12) Depress the System Safe/Off pushbutton and verify that the HV de-energizes.

*Alarms & Warnings Check-List*

**Bypass the door contact to work inside the cabinet.**

- \_\_\_\_\_ 1) Open A-Phase VT fuse holder. Verify alarm.
- \_\_\_\_\_ 2) Open B-Phase VT fuse holder. Verify alarm.
- \_\_\_\_\_ 3) Open C-Phase VT fuse holder. Verify alarm.
- \_\_\_\_\_ 4) Pull TVSS Cartridge. Verify warning.
- \_\_\_\_\_ 5) Turn off High-Voltage circuit breaker. Verify alarm. Repeat for all circuits.
- \_\_\_\_\_ 6) Disconnect the DC Power Supply health wiring. Verify alarm.
- \_\_\_\_\_ 7) Depress the Door E-Stop pushbutton. Verify condition.
- \_\_\_\_\_ 8) Depress field remote E-Stop pushbuttons. Verify condition. Repeat for all.
- \_\_\_\_\_ 9) Disconnect one control wire from the A-Phase CT. Verify unit shut-down. Repeat for all circuits.
- \_\_\_\_\_ 10) Disconnect one control wire from the B-Phase CT. Verify unit shut-down. Repeat for all circuits.
- \_\_\_\_\_ 11) Disconnect one control wire from the C-Phase CT. Verify unit shut-down. Repeat for all circuits.
- \_\_\_\_\_ 12) Remove door contact bypass. Verify unit shut-down. Replace door contact to original state.

*Program and Tag Data Check-List*

- \_\_\_\_\_ 1) Enter "Scaling & Conversions" routine and adjust the: voltage SCP blocks; Windings Ration and Secondary Current; and verify the secondary voltage.
- \_\_\_\_\_ 2) Enter the "Alarms - Non-Critical" routine and adjust the: High-Side Trip Setting (mA); Short Current (low side Amps); and +/- Percentage Limits tags
- \_\_\_\_\_ 3) Open the "Unit Test Logic" routine and do the following: clear any stored open times to zero; and any last secondary current fault levels.

*System In-Use Check-List*

\_\_\_\_\_ 1) Assure the yard is free and clear of all unauthorized personel. Have the customer assemble all necessary equipment for testing.

\_\_\_\_\_ 2) Energize one circuit at a time and test for fault current levels, mean-time to de-energize, and short circuit faults. Repeat a minimum of ten times to collect accurate data and obtain an average. Document this avergage below.

Mean-Time: \_\_\_\_\_

Mean-Current: \_\_\_\_\_

\_\_\_\_\_ 3) Verify that there are no HV energizing faults.

\_\_\_\_\_ 4) Document the ambient outside temperatue during start-up.

Degrees \*C: \_\_\_\_\_

Degrees \*F: \_\_\_\_\_

\_\_\_\_\_ 5) Have customer connect secondary transformers and energize the circuit. Verfiy that system recongnizes additional excitation current and adjusts accordingly.