

Short Specification

AccuSine PCS+

1. Active harmonic filter (AHF) shall provide three types of correction: harmonic mitigation, power factor correction, and mains current balancing. All functions can be operated independently or in any combination.
2. AHF rated up to 200 amperes shall be fully rated for continuous duty to 45°C when supplied as open chassis (IP00) or in wall mounted NEMA 1 (IP20) enclosures. All floor standing AHF shall be fully rated for continuous duty to 40°C. Derating by 2% per °C to 50°C is required.
3. All AHF provided in floor standing units shall include a door interlocked circuit breaker and top or bottom cable entry. Power connections shall be provided in a power plenum with vertical busbar such that after completion of power terminations there is no access to the termination locations without removal of a safety panel.
4. AHF shall use instrument rated current transformers (CT) rated for 50/60 Hz with any primary voltage and 1 or 5 ampere secondary ratings. Type 1 accuracy is required. CT can be shared with other devices such as metering.
5. The location of the CT shall be on the source (grid) side of the AHF power connections for all AHF systems whether the AHF system is a single unit or multiple units. Use of auxiliary CT mounted on each AHF power feed in the AHF system are not permitted.
6. Closed loop logic shall be employed that provides 3% THDi performance when selected properly and when the AHF units are loaded above 50%. 5% THDi performance shall be attained at all load levels except below 25% of AHF load levels when the AHF system is selected properly.
7. The AHF shall provide 2nd to 51st harmonic mitigation. All harmonic orders shall be individually activated or deactivated and have 0-100% adjustment of current injection for each harmonic order. 100% of AHF rating shall be available through the 5th harmonic order.
8. The AHF shall include control of harmonic performance via set point control for %THDI or %THD. When the proper current rating is installed, the set point level desired shall be maintained. AHF can only correct for the loads that the CT can measure. Any external voltage or current distortion will not be corrected.
9. Paralleling of AHF shall employ the identical units as used for single AHF installations. Master-Slave or Master-Master sequence control shall be provided. Any unit that receives the CT signal is considered an available master. All units shall be interconnected with a CAN bus. Field commissioning of units can be conducted from any unit in the parallel system. The HMI and communications of one unit can be used to view all units within a parallel system.
10. AHF shall provide ports with RJ45 connectors for remote communications. Communications shall be via Modbus RTU or Modbus TCP/IP. Remote communications shall provide full control and monitoring ability of all AHF functions including all operating parameters and diagnostics.
11. AHF shall provide a USB connection on the face of the base enclosure assembly such that the history and setup of the AHF can be reviewed when the power has been removed from the AHF. Connection to a laptop computer shall be the USB ports.