

Instruction Manual

1. PRE-OPERATIONAL GUIDELINES

Prior to system integration and commissioning, it is mandatory to read this manual thoroughly. Strict adherence to all safety warnings and operational constraints is required to ensure system integrity and personnel safety.

a. SAFETY PROTOCOLS



[WARNING] ELECTRICAL & THERMAL HAZARDS

- **Live Components:** Do not contact the unit or connection cables during operation or immediately following power-down. Residual high voltage and thermal energy may cause severe electrical shock or burns.
- **Thermal Management:** Do not obstruct the intake or exhaust ports of the integrated cooling fan. Airflow restriction significantly increases fire risk.
- **Authorized Access:** This power supply is engineered for installation and maintenance by QUALIFIED SERVICE PERSONNEL only.

b. TECHNICAL CAUTIONS & OPERATIONAL LIMITS

- **Wiring Integrity:** Verify all terminal polarities and specifications against the wiring diagrams before energizing.
- **Operational Constraints:** To prevent equipment damage and ensure long-term reliability; input voltage, output current/power, ambient temperature, and humidity levels must be maintained strictly within the specified technical specifications.
- **Environmental Constraints:** Avoid exposure to corrosive gases, high-intensity electromagnetic fields, or conductive dust. For high-humidity installations, formal waterproofing measures are required.
- **Load Management:** Sustained operation under over-current, short-circuit, or out-of-range input voltage conditions may lead to thermal runaway or internal damage.

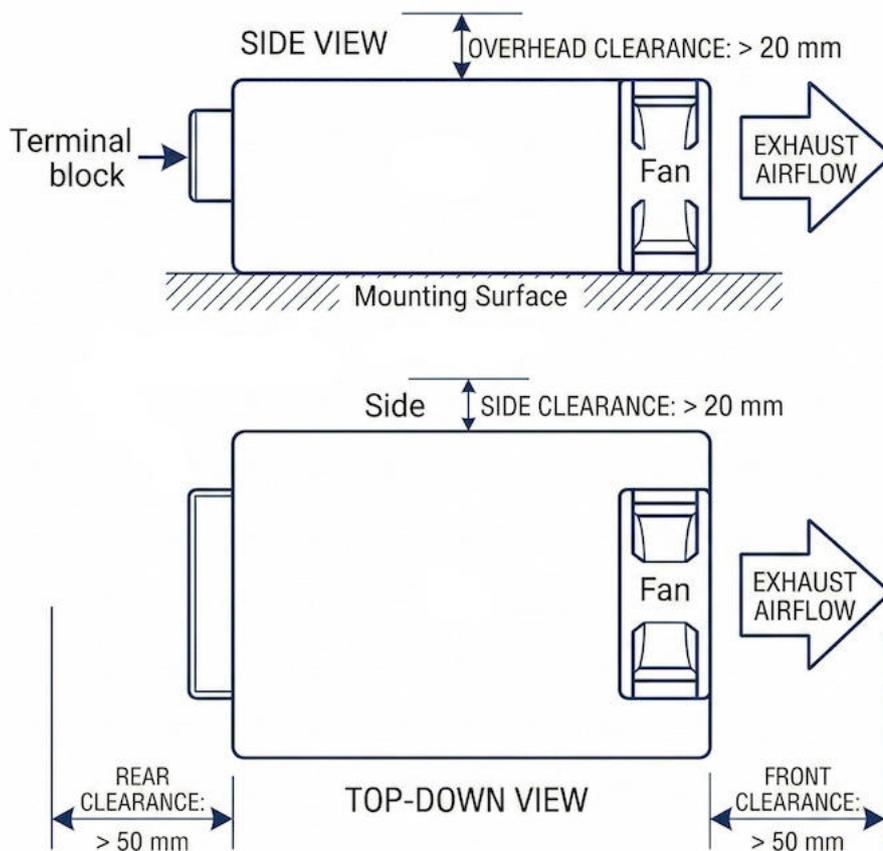
NOTE: The information in this document is subject to change without prior notice. For the most up-to-date technical specifications, please refer to the latest published data sheet.

2. MOUNTING & THERMAL MANAGEMENT

a. COOLING REQUIREMENTS

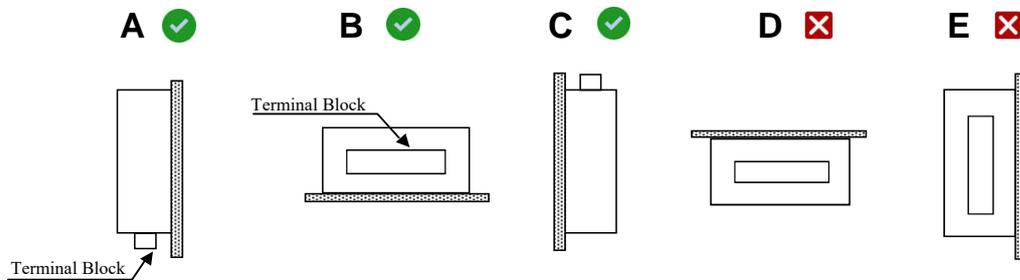
The XPM Series utilizes a forced-air cooling system. To ensure optimal performance and prevent thermal failure, the following clearances must be maintained:

- **Airflow Path:** Minimum 50mm clearance at the front and rear (intake/exhaust) from adjacent components.
- **Lateral Space:** Minimum 20mm clearance from all other surfaces.
- **Environment:** Do not operate in high-dust environments to prevent ventilation blockage.



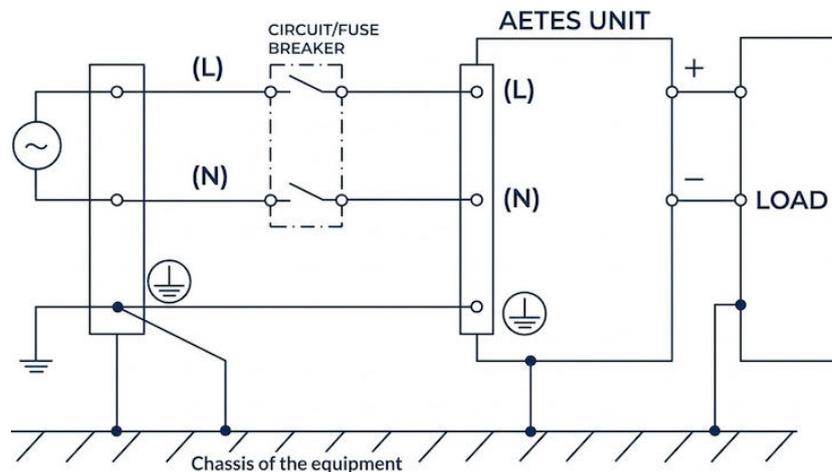
b. MOUNTING ORIENTATIONS

- **Standard (A):** Primary recommended orientation.
- **Permissible (B, C):** Acceptable alternative.
- **Prohibited (D, E):** Do not install in these orientations; doing so will compromise cooling efficiency and life expectancy. For custom mounting requirements, contact AETES Technical Support.



3. WIRING & NOISE REDUCTION

- **Impedance Optimization:** Keep input and output lines as thick and short as possible to minimize impedance.
- **Isolation:** Physically separate input & output wiring to reduce cross-interference.
- **EMI Suppression:** Use twisted-pair or shielded cables to improve noise immunity.



4. EXTERNAL FUSE SELECTION

Due to high inrush current during startup, select fuses based on peak surge values rather than nominal RMS current.

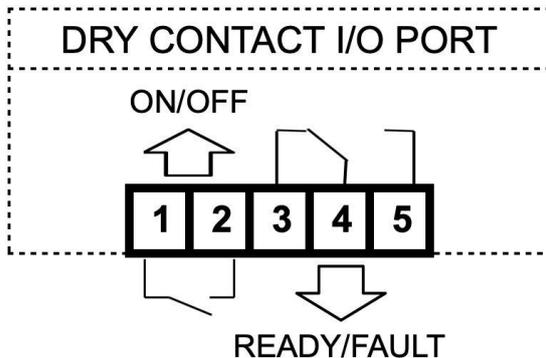
■ **Requirement:** Use only Slow-Blow or Time-Lag fuses.

5. OVER TEMPERATURE PROTECTION (OTP)

This unit features an integrated OTP circuit that shuts down the output if internal temperatures exceed safe thresholds.

■ **Recovery:** To reset the unit, disconnect input power and allow sufficient time for the unit to cool. Once cooled, re-apply power or toggle the "Remote ON/OFF" control.

6. REMOTE ON/OFF & DRY CONTACT TERMINAL



Max. Switching Current:
0.5Amp at 125VAC / 1Amp at 24VDC

Max. Switching Voltage:
125VAC / 60VDC

Connector Type Code:
15EGTK-3.81-05P-14-00AH

7. STATUS INDICATOR (LED)

The multi-color LED provides real-time operational status:

- WHITE: Unit Off
- BLUE: Standby / Ready
- GREEN: Output On
- RED: Fault Condition

8. SYSTEM LIFE EXPECTANCY

The operational life of the unit is primarily determined by the thermal stress on aluminum electrolytic capacitors and the cooling fan. Life expectancy is inversely proportional to ambient temperature. Maintaining operating conditions below maximum ratings will significantly extend the service life of internal components.

9. PRE-SERVICE CHECKLIST

Before contacting technical support for a suspected fault, please verify the following:

- **Input Parameters:** Ensure the rated input voltage is applied and the waveform is sinusoidal (non-sinusoidal waves may cause audible noise).
- **Wiring Integrity:** Confirm correct polarity and ensure wire gauges meet current requirements.
- **Control Logic:** Check the Remote ON/OFF connector's "Open/Closed" state, if the function is active.
- **Load Conditions:** Confirm output current and power are within specified limits.
- **Operational Noise:** Audible noise during dynamic-load operation is a normal characteristic of the switching circuitry.

10. WARRANTY & COMPLIANCE

AETES provides free-of-charge repair for damages occurring under normal operation within the warranty period.

- **Pre-condition:** Users must adhere to all safety and operational instructions.
- **Exclusions:** Unauthorized modifications or usage outside specifications will void the warranty.