

## AMCHARD-Chassis Mount EN Series Product Installation and Common Application Failure Instructions

Before using the EN Series power supply, pay special attention to the following warnings and precautions. Incorrect installation, operation, or product use may result in dangers such as electric shock, power supply damage, or fire. Please read carefully and confirm the relevant warnings and precautions.

### Warnings:

Handle the power supply gently. Avoid impact or dropping, which may cause product failure.

**DO NOT open the product case or touch internal components.** Avoid exposing the product to electrostatic discharge (ESD) or mechanical stress, which may cause failure.

For products with built-in DIP switches: The factory default setting is for **230VAC**. It is recommended **NOT** to adjust the switch casually afterwards. Incorrect switching may damage the product. Refer to the technical manual's operating instructions carefully or consult our technical personnel before operation.

**DO NOT** approach or touch the heatsink or power supply case while it is operating. This avoids potential bodily injury if the power supply malfunctions.

### 1. Installation Precautions

#### 1.1 Bottom Mounting:

The power supply base has screw holes. Customers can use appropriate screws according to the application environment.

**Pay attention to the screw penetration depth** to avoid piercing the internal insulation sheet, causing leakage or failure. Specific specifications should follow the product technical manual and customer application environment. As shown in Fig. 1 (EN200 example), the recommended screw penetration depth should **not exceed 4mm**.

#### 1.2 Side Mounting:

The power supply sides have screw holes. Customers can use appropriate screws according to the application environment (similar to DIN rail mounting). **Pay attention to the screw penetration depth** to avoid piercing the internal insulation sheet, causing leakage or failure. Specific specifications should follow the product technical manual and customer application environment. As shown in Fig. 1 (EN200 example), the recommended screw penetration depth should **not exceed 4mm**.

#### 1.3 Heat Dissipation:

Chassis mount power supplies primarily use natural convection and/or fan cooling for heat dissipation. **DO NOT cover the product.** Ensure adequate ventilation around it. Poor heat dissipation can cause component overheating, leading to power supply failure.

#### 1.4 Screw Tightening Torque:

Ensure screws are aligned with the holes. Tighten screws to the **recommended torque** specified in the "Technical Manual → Outline Drawing → Recommended Torque" section. Avoid cross-threading or stripping caused by misalignment. Example: EN200 recommended max torque is **0.9N·m** (see Fig. 1).

Installation location	Screw Specifications	L(Suggest)	Torque(max)
①-⑧	M4	4mm	0.9N*m

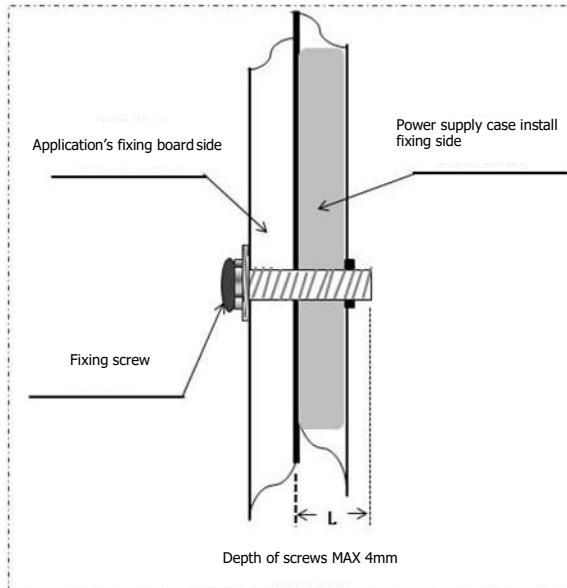


Fig. 1 EN200 Mounting Screw Specifications and Torque

## 2. Environmental Precautions

**2.1 Dry & Ventilated Environment:** EN series products should be used in a dry, well-ventilated environment. For **damp/humid environments**, consult our sales or FAE for recommendations, such as power supplies with **conformal coating (3-proof paint)** or models specifically designed for such conditions. Moisture ingress in standard products can reduce insulation strength and alter impedance, causing failure.



**2.2 Avoid Corrosive Atmospheres:** Keep EN series products away from corrosive gases or liquids to prevent component corrosion and failure.

**2.3 Operating Temperature:** The operating ambient temperature must comply with the "**Temperature Derating**

**Curve**" in the product technical manual. Excessive temperatures can shorten product lifespan or cause failure. Fig. 2 shows the EN200 "Temperature Derating Curve".

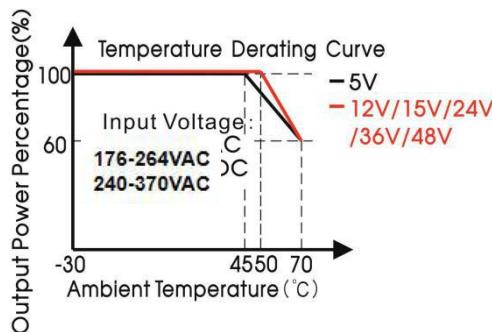


Fig. 2 EN200 Temperature Derating Curve

### 3. Wiring Precautions

**3.1 Polarity Check:** Before wiring, confirm the input and output terminals are **NOT** reversed. Reversal will inevitably cause product failure.

**3.2 Terminal Tightening Torque:** Tighten terminal screws to the **recommended torque** specified in the "Technical Manual → Outline Drawing → Recommended Torque" section. **Avoid over-tightening** (causes stripped threads) and **under-tightening** (causes poor contact between terminal and wire). Example: EN200 recommended torque is **0.8N·m** (see figure below).

Wire diameter selection: 22-12AWG

The magnitude of connector torque: M3.5, 0.8N/m

**3.3 Wire Stripping Length:** Strip wires to an **appropriate length**. **Too long:** Exposed copper may extend beyond the terminal clamp, risking leakage, case electrification, or short circuits (safety hazard). **Too short:** The terminal may clamp onto the wire insulation, causing poor contact.

**3.4 Grounding (PE):** The product **MUST** be grounded (PE connection) to prevent safety hazards like electric shock under fault conditions.

### 4. Input Precautions

**4.1 Input Voltage Check:** Before connection, check the mains input voltage. Ensure the input voltage is within the product's **rated voltage range**. Avoid connecting to only two phases of a three-phase system. Overvoltage will cause failure.

**4.2 Voltage & Load Range:** The input voltage and applied load must be within the range shown in the "**Input Voltage Derating Curve**". **Low voltage** can cause poor startup, overheating under load, and failure. **High voltage** causes excessive electrical stress and failure. Fig. 3 shows the EN600 "Input Voltage Derating Curve".

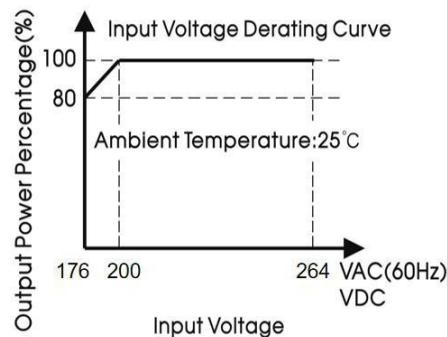


Fig. 3 EN600 Input Voltage Derating Curve

## 5. Load Precautions

**5.1 Load Power:** The actual load power should be **less than the rated power**, leaving a margin.

**Recommended:** Use at **80%** of rated power.

**5.2 Backfeed Voltage / Special Loads:** If the load can generate **backfeed voltage** or is a **special load** (inductive, capacitive, etc.), consult our sales or FAE. We recommend using power supplies with **backfeed protection (Oring function)** or adding an external backfeed protection circuit.

**5.3 Hot-Swap / Inductive Loads (Motors):** Loads requiring **hot-plugging** or **inductive loads (like motors)** can generate high backfeed voltage at the output, damaging the output circuit and causing failure. Consult our sales or FAE. We recommend using power supplies with **backfeed protection (Oring function)** or adding an external backfeed protection circuit.

**5.4 Large Capacitive/Inductive Loads:** These can easily trigger the output **over-current protection (OCP)**. For such loads, select products where OCP operates in **constant current (hiccup) mode**, increase the power margin based on actual usage, or consult our sales/FAE for suitable product recommendations.

## 6. Parallel Operation Precautions

**Parallel Use:** standard EN power supplies do **NOT support parallel operation for increased power**. If the load power is too high, consult our sales or FAE for a suitable higher-power product.