

## ABB TL412CP

# ABB PowerMark Plus Circuit Breaker Panel User Manual

Model: TL412CP

## 1. INTRODUCTION

This manual provides essential information for the safe and proper installation, operation, and maintenance of the ABB PowerMark Plus 125 Amp 4-Space 8-Circuit Single-Phase Indoor Main Lug Circuit Breaker Panel, model TL412CP. This dependable load center is designed for residential applications, ensuring safe and efficient electrical distribution and protection.

For your safety, it is crucial to purchase only genuine, ABB-manufactured electrical products. Counterfeit and non-authentic products may fail to meet safety standards, posing significant risks. Always verify product authenticity and certifications.

## 2. IMPORTANT SAFETY INFORMATION

**WARNING: Risk of Electric Shock or Fire. Installation and servicing of this electrical panel must be performed by qualified, licensed electricians only. Disconnect power at the main service panel before working on or near this equipment.**

- Always ensure the main power supply is disconnected before any installation, maintenance, or troubleshooting.
- This product is intended for indoor use only.
- Do not install in wet or damp locations.
- Ensure all wiring complies with national and local electrical codes.
- This load center is UL listed and ANSI certified, ensuring it meets stringent safety standards.
- Proposition 65 Warning: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## 3. PRODUCT FEATURES

- **Reliable 125 Amp Indoor Main Lug Load Center:** A dependable 125 Amp, 4-Space, 8-Circuit main lug load center designed for residential applications, ensuring safe and efficient electrical distribution.
- **Rust-Resistant Galvanized Steel Box:** Features a galvanized steel box for maintenance-free operation, resisting rust and corrosion.
- **High Conductivity:** The tin-plated copper buss bar supports high conductivity, ensuring reliable and efficient performance.
- **Easy Installation:** Comes with factory-installed main lugs and supports both surface and flush installations. Its one-

piece interior design allows for easy removal and re-installation.

- **Meets Highest Safety Standards:** UL listed and ANSI certified, accommodating standard GFCI and AFCI circuit breakers for top-tier protection.

## 4. SETUP AND INSTALLATION

---

Installation of this circuit breaker panel requires specialized knowledge and adherence to electrical safety standards. It is strongly recommended that installation be performed by a qualified and licensed electrician.

### 4.1 Pre-Installation Checks

- Verify that the product specifications match your electrical system requirements (120/240 VAC, 125 Amp, single-phase, 3-wire).
- Ensure all necessary tools and safety equipment are available.
- Confirm the installation location is dry, accessible, and provides adequate ventilation.

### 4.2 Mounting the Panel

The ABB TL412CP supports both surface and flush installations. The galvanized steel box is designed for durability and ease of mounting.



Figure 4.2.1: Back view of the panel, illustrating mounting points for secure installation.

### 4.3 Wiring Connections

The panel features factory-installed main lugs and a tin-plated copper buss bar for high conductivity. All wiring should be done according to the provided wiring diagram (not included in this manual, refer to product packaging or professional electrician) and local electrical codes.



Figure 4.3.1: Interior view of the panel, highlighting the main lugs and bus bar connections.





Figure 4.3.2: Detailed interior view showing the layout for circuit breaker installation.

#### 4.4 Cover Installation

Once all wiring and circuit breakers are installed, secure the panel cover. The cover protects internal components and prevents accidental contact with live parts.



Figure 4.4.1: Front view of the panel with the protective cover in place.

## 5. OPERATING INSTRUCTIONS

---

The ABB PowerMark Plus panel serves as the central distribution point for your home's electrical circuits. Individual circuit breakers within the panel protect specific circuits from overcurrents and short circuits.

### 5.1 Understanding Circuit Breakers

Each circuit breaker controls a specific circuit in your home. When an overload or short circuit occurs, the breaker will "trip" (move to the OFF or middle position) to interrupt the flow of electricity and prevent damage or fire.

## 5.2 Resetting a Tripped Breaker

1. **Identify the Tripped Breaker:** Locate the breaker that is in the OFF or middle position.
2. **Turn OFF:** Firmly push the breaker handle completely to the OFF position.
3. **Turn ON:** Firmly push the breaker handle completely to the ON position.
4. If the breaker immediately trips again, there may be an electrical fault or overload on the circuit. Do not attempt to reset it repeatedly. Consult a qualified electrician.

It is advisable to label each circuit breaker clearly to identify which areas or appliances they control.

## 6. MAINTENANCE

The ABB PowerMark Plus circuit breaker panel is designed to be largely maintenance-free due to its rust-resistant galvanized steel construction. However, periodic checks are recommended to ensure continued safe operation.

- **Annual Inspection:** It is recommended to have a qualified electrician inspect your electrical panel annually to check for loose connections, signs of wear, or potential issues.
- **Keep Clear:** Ensure the area around the electrical panel is always clear of obstructions to allow for proper ventilation and access.
- **Cleaning:** If necessary, gently wipe the exterior of the panel with a dry, clean cloth. Do not use liquids or abrasive cleaners. Ensure power is off before cleaning.

## 7. TROUBLESHOOTING

Most issues related to a circuit breaker panel involve tripped breakers. If you experience persistent electrical problems, always consult a qualified electrician.

Problem	Possible Cause	Solution
Circuit breaker trips frequently.	Overloaded circuit, short circuit, or ground fault.	Reduce load on the circuit. Unplug appliances. If problem persists, contact a qualified electrician.
No power to an entire section of the house.	Main breaker tripped, or issue with utility supply.	Check if the main breaker is tripped. If not, contact your utility company or a qualified electrician.
Burning smell or unusual noises from panel.	Loose connections, faulty wiring, or damaged components.	<b>IMMEDIATELY turn off main power if safe to do so and contact a qualified electrician. Do not attempt to fix yourself.</b>

## 8. SPECIFICATIONS

Attribute	Value
Brand	ABB
Model Number	TL412CP (Item model number: TL412C)
Product Dimensions	13.6"L x 4.47"W x 3"H

Attribute	Value
AC Adapter Current	125 Amps
Material	Galvanized Steel (Box), Plastic (Cover), Tin-plated Copper (Buss Bar)
Number Of Circuits	8
Phase Type	Single Phase
Voltage	120/240 Volts AC
Certifications	UL Listed, ANSI Certified
UPC	783164208306, 783164396782

## 9. WARRANTY AND SUPPORT

This product comes with a manufacturer's warranty. For specific warranty information, please contact ABB customer service directly or refer to the official ABB website. ABB acquired GE's Industrial Solutions business in 2018 and continues to manufacture GE, GE by ABB, and ABB branded products under a license from GE. For technical support, installation guidance, or any product-related inquiries, please reach out to ABB customer support. **ABB Official Website:** <https://new.abb.com/us>

