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Model: BR-312

Brand: Standard Motor Products

1. PRODUCT OVERVIEW

The Standard Motor Products BR-312 Circuit Breaker Switch is an essential component designed for automotive electrical systems. It provides protection against overcurrents, safeguarding electrical circuits and components from damage. This circuit breaker is engineered to deliver consistent, trouble-free performance and is manufactured from high-quality materials to ensure ultimate durability and reliability.



Image 1.1: Front view of the Standard Motor Products BR-312 Circuit Breaker Switch, showing the 12V 12A rating and part number

markings.

Key Features:

- Designed to deliver trouble-free, consistent performance.
- Manufactured from high-quality materials for ultimate durability.
- Engineered to meet or exceed strict quality requirements.
- Suitable for various vehicle and lifestyle applications.

2. SAFETY INFORMATION

Before attempting any installation or maintenance, please read and understand all safety warnings and instructions. Failure to follow these instructions may result in electrical shock, fire, serious injury, or property damage.

- **Disconnect Power:** Always disconnect the vehicle's battery or the power source to the circuit before installing, removing, or servicing the circuit breaker.
- **Professional Installation:** Installation of electrical components should ideally be performed by a qualified professional to ensure proper function and safety.
- **Proper Tools:** Use appropriate insulated tools for electrical work.
- **Personal Protective Equipment (PPE):** Wear safety glasses and insulated gloves when working with electrical systems.
- **Correct Rating:** Ensure the circuit breaker's voltage and current ratings match the requirements of the circuit it is protecting. Using an incorrectly rated breaker can lead to circuit damage or fire.
- **Avoid Overloading:** Do not attempt to bypass or overload the circuit breaker. It is designed to protect the circuit from excessive current.

3. SETUP AND INSTALLATION

This section provides general guidance for the installation of the BR-312 Circuit Breaker Switch. Specific vehicle wiring diagrams and service manuals should be consulted for detailed instructions relevant to your application.



Image 3.1: Side view of the Standard Motor Products BR-312 Circuit Breaker Switch, highlighting the electrical terminals for connection.

Installation Steps:

1. **Identify Circuit:** Determine the specific electrical circuit that requires protection and the appropriate location for the circuit breaker.
2. **Disconnect Power:** Crucially, disconnect the negative terminal of the vehicle's battery or the main power supply to the circuit to prevent accidental electrical discharge.
3. **Mount Breaker:** Securely mount the BR-312 circuit breaker in a dry, accessible location, away from excessive heat or moisture. Ensure it is firmly attached to prevent vibration-induced damage.
4. **Connect Wiring:** Connect the circuit wires to the appropriate terminals on the circuit breaker. Ensure all connections are clean, tight, and properly insulated. Refer to the vehicle's wiring diagram for correct polarity and connection points.
5. **Verify Connections:** Double-check all wiring connections for correctness and security.
6. **Restore Power:** Reconnect the vehicle's battery or power supply.
7. **Test Functionality:** Test the circuit to ensure the breaker is functioning correctly and providing the intended protection.

Note: If you are unsure about any step of the installation process, it is highly recommended to seek assistance from a certified automotive electrician or technician.

4. OPERATING INSTRUCTIONS

The Standard Motor Products BR-312 Circuit Breaker Switch operates automatically to protect electrical circuits. It is designed to interrupt the flow of current when an overload or short circuit condition occurs, preventing damage to the wiring and connected components.

- **Automatic Tripping:** When the current flowing through the circuit exceeds the breaker's rated capacity (e.g., 12A for this model), the breaker will automatically "trip" or open the circuit, cutting off power.
- **Resetting the Breaker:** After the breaker trips, identify and resolve the cause of the overload or short circuit. Once the issue is resolved, the breaker can typically be reset manually by pressing a button or flipping a lever (if applicable to the specific design of the BR-312, which is generally an auto-reset type for automotive applications, but some may have a manual reset). For auto-reset types, the breaker will automatically reset once it cools down or the fault is cleared.
- **Persistent Tripping:** If the breaker continues to trip immediately after being reset, it indicates an unresolved electrical fault. Do not repeatedly reset the breaker without addressing the underlying issue, as this can cause further damage or fire.

5. MAINTENANCE

The BR-312 Circuit Breaker Switch is designed for long-term reliability with minimal maintenance. However, periodic inspection can help ensure its continued optimal performance.

- **Visual Inspection:** Periodically inspect the circuit breaker and its connections for any signs of corrosion, loose wiring, or physical damage.
- **Cleanliness:** Keep the area around the circuit breaker clean and free from dirt, dust, and moisture, which can interfere with its operation.
- **Avoid Overloading:** Ensure that the electrical circuits protected by the BR-312 are not consistently overloaded. Frequent tripping indicates an underlying issue that needs to be addressed, not a fault with the breaker itself.
- **Replacement:** If the circuit breaker shows signs of damage, consistent malfunction, or fails to reset, it should be replaced immediately with a new one of the same specifications.

6. TROUBLESHOOTING

This section outlines common issues and potential solutions for the BR-312 Circuit Breaker Switch.

Problem	Possible Cause	Solution
Breaker trips frequently.	Overloaded circuit, short circuit, faulty component in the circuit.	Reduce load on the circuit. Inspect wiring for shorts. Test connected components for faults. Do not repeatedly reset without addressing the cause.
Breaker does not reset (if manual reset type).	Persistent overload/short, internal damage to breaker.	Ensure the fault is cleared. If it still doesn't reset, the breaker may be damaged and requires replacement.
No power to the circuit, but breaker is not tripped.	Loose connection, faulty wiring, internal breaker failure.	Check all connections to the breaker and within the circuit. Test the breaker for continuity. If faulty, replace the breaker.
Breaker feels hot to the touch.	Overload, loose connections, internal resistance.	Immediately disconnect power. Investigate for overload or loose connections. Replace if heat persists after addressing these issues.

Always disconnect power before performing any troubleshooting steps involving electrical connections. If you are unable to resolve the issue, consult a qualified professional.

7. SPECIFICATIONS

Attribute	Detail
Brand	Standard Motor Products
Model Number	BR-312
Switch Type	Breaker Switch
Item Dimensions (L x W x H)	1.5 x 1.16 x 2.88 inches
Item Weight	14.1 ounces
Connectivity Protocol	X-10 (Note: This might be a generic specification from Amazon's data, typically circuit breakers don't use X-10 protocol. Focus on the core function.)
Unit Count	1.0 Count
Number of Items	1
UPC	091769003005
Manufacturer	Standard Motor Products
Date First Available	September 26, 2006

8. WARRANTY AND SUPPORT

Specific warranty details for the Standard Motor Products BR-312 Circuit Breaker Switch are not provided within this

product data. For information regarding warranty coverage, terms, and conditions, please contact Standard Motor Products directly or refer to their official website.

For technical support or further assistance with installation and troubleshooting, it is recommended to consult a qualified automotive technician or contact Standard Motor Products customer service.

You may find contact information on the official Standard Motor Products website: www.smpcorp.com

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