

QO120PDF

Instruction Manual

QO120PAFGF / QO120PDF Circuit Breaker 120V 20A

Brand: Generic | Model: QO120PDF

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the QO120PAFGF / QO120PDF Circuit Breaker. This device is designed to protect electrical circuits from overcurrents and ground faults, ensuring electrical safety in residential and commercial applications. Please read this manual thoroughly before installation or use.

2. SAFETY INFORMATION

WARNING: Risk of electric shock or fire. Installation and servicing must be performed by qualified electrical personnel only. Always turn off power at the main service panel before working on electrical circuits.

- Always de-energize the circuit before installing or removing the circuit breaker.
- Use appropriate personal protective equipment (PPE), such as insulated gloves and safety glasses.
- Ensure the circuit breaker rating matches the circuit requirements.
- Do not use if the product appears damaged.
- Comply with all local and national electrical codes.

3. PRODUCT OVERVIEW

The QO120PDF is a dual function AFCI/GFCI circuit breaker, providing protection against both arc faults and ground faults. It is a 120V, 20A, single-pole plug-in type breaker.





Figure 1: Front view of the QO120PDF Circuit Breaker. Visible features include the toggle switch for ON/OFF operation, the "20" indicating its 20 Amp rating, the "AF/GF" label signifying Arc Fault and Ground Fault protection, and indicator lights (red for "OFF" and green for "Service" or operational status) at the bottom.

Key components include:

- **Toggle Switch:** Controls the ON/OFF state of the circuit.
- **Ampere Rating:** "20" indicates a 20 Amp capacity.
- **AF/GF Label:** Confirms Arc Fault Circuit Interrupter and Ground Fault Circuit Interrupter functionality.
- **Indicator Lights:** Provide visual feedback on the breaker's status (e.g., tripped, end-of-life).

4. SETUP AND INSTALLATION

Installation of the QO120PDF circuit breaker should only be performed by a qualified electrician.

1. **De-energize Power:** Turn off the main power supply to the electrical panel at the utility meter or main disconnect. Verify power is off using a voltage tester.
2. **Identify Slot:** Locate an available slot in the Square D QO load center.
3. **Connect Wires:**
 - Connect the hot wire (typically black) from the circuit to the line terminal of the breaker.
 - Connect the neutral wire (typically white) from the circuit to the neutral terminal of the breaker.
 - Connect the ground wire (typically bare copper or green) from the circuit to the ground bar in the panel.
 - Connect the pigtail neutral wire from the breaker to the neutral bar in the panel.
4. **Install Breaker:** Align the breaker with the bus bar and push firmly until it clicks into place.
5. **Secure Wires:** Ensure all wire connections are tight and secure.
6. **Restore Power:** Close the panel cover and restore power to the main service panel.

For detailed wiring diagrams, refer to the load center's instruction manual or consult a qualified electrician.

5. OPERATING INSTRUCTIONS

The circuit breaker operates with a simple toggle switch and provides visual indicators for its status.

- **Turning ON:** Push the toggle switch firmly to the "ON" position.
- **Turning OFF:** Push the toggle switch firmly to the "OFF" position.
- **Tripped State:** If an overcurrent or fault occurs, the breaker will automatically trip to the center position (between ON and OFF). To reset a tripped breaker, first push the toggle completely to the "OFF" position, then push it to the "ON" position. If it immediately trips again, there is still a fault in the circuit that needs to be addressed.
- **Indicator Lights:**
 - **Green Light:** Indicates normal operation or "Service" mode.
 - **Red Light:** Indicates a tripped condition or "OFF" state.
 - Other colors/patterns may indicate specific fault types or end-of-life. Refer to manufacturer's documentation for detailed indicator codes.

6. MAINTENANCE

Circuit breakers generally require minimal maintenance. However, periodic checks are recommended:

- **Visual Inspection:** Periodically inspect the breaker for any signs of physical damage, discoloration, or loose connections.
- **Test Button (if applicable):** Some AFCI/GFCI breakers have a test button. Pressing this button should trip the breaker, confirming its functionality. If it does not trip, the breaker may be faulty and should be replaced.
- **Cleanliness:** Ensure the area around the breaker is free from dust and debris to prevent overheating.

Note: Do not attempt to repair a damaged circuit breaker. Replace it with a new one of the same type and rating.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Breaker trips frequently.	Overload, short circuit, ground fault, or arc fault in the circuit.	Reduce load on the circuit. Inspect wiring for damage or short circuits. Unplug appliances to identify faulty ones. If problem persists, consult a qualified electrician.
Breaker does not reset.	Persistent fault in the circuit or faulty breaker.	Ensure the toggle is pushed fully to "OFF" before attempting to reset to "ON". Disconnect all loads from the circuit and try resetting. If it still doesn't reset, the breaker may be faulty. Replace the breaker if it's determined to be faulty.
No power to circuit, but breaker is ON.	Loose connection, faulty wiring, or internal breaker failure.	Check all wire connections at the breaker and outlets. Test the breaker with a multimeter (only by qualified personnel). Replace the breaker if necessary.

8. SPECIFICATIONS

Feature	Detail
Model Number	QO120PDF
Brand	Generic (Manufacturer: Square D)
Current Rating	20 Amps
Circuit Breaker Type	Standard (Dual Function AFCI/GFCI)
Mounting Type	Plug-In Mount
Number Of Poles	1
Voltage	120V

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact the manufacturer, Square D, or the seller, C.W. Supplies. Keep your purchase receipt as proof of purchase.

Manufacturer: Square D

Seller: C.W. Supplies

For further assistance, refer to the official Square D website or consult a certified electrician.