BEP RCD20A30MA

BEP Marinco RCD20A30MA Breaker Instruction Manual

Model: RCD20A30MA
Brand: BEP

1. Introduction

This manual provides essential information for the safe installation, operation, and maintenance of the BEP Marinco RCD20A30MA Residual Current Device (RCD) Breaker. This device is designed to protect against electric shock by quickly disconnecting the circuit when it detects an imbalance in the electrical current, indicating a leakage to earth. Please read this manual thoroughly before installation and keep it for future reference. Proper installation and adherence to safety guidelines are crucial for the effective operation and longevity of the RCD breaker.

2. Safety Information

WARNING: Electrical work should only be performed by qualified personnel. Failure to follow these instructions can result in serious injury, death, or equipment damage.

- Always disconnect power before installing, servicing, or removing the RCD breaker.
- Ensure all wiring complies with local and national electrical codes.
- Do not use this device if it appears damaged.
- This RCD is designed for specific current and sensitivity ratings. Do not exceed these ratings.
- Regularly test the RCD as per the instructions in the Maintenance section.
- Protect the device from moisture and extreme temperatures unless specifically rated for such conditions.

3. Product Overview

The BEP Marinco RCD20A30MA is a compact and robust residual current device designed for marine and other demanding environments. It provides critical protection against earth leakage faults.

Figure 1: Front view of the BEP Marinco RCD20A30MA Breaker, showing the main body and connection terminals.

Figure 2: Side view of the BEP Marinco RCD20A30MA Breaker, highlighting its compact design and mounting points.

Key Features:

- 20 Ampere (A) rated current.
- 30 milliampere (mA) residual current sensitivity.
- Designed for circuit protection against earth leakage.
- Robust construction for demanding environments.

4. Setup and Installation

Before beginning installation, ensure the main power supply to the circuit is completely disconnected and verified as de-energized.

Installation Steps:

1. **Mounting:** Select a suitable, dry, and protected location for mounting the RCD breaker. Ensure adequate ventilation and accessibility for future maintenance. Secure the breaker using appropriate fasteners through the designated mounting holes.
2. **Wiring:**
    - Connect the incoming live (phase) wire to the 'L' terminal and the incoming neutral wire to the 'N' terminal on the input side of the RCD.
    - Connect the outgoing live (phase) wire to the 'L' terminal and the outgoing neutral wire to the 'N' terminal on the output side of the RCD, leading to the protected circuit.
    - Ensure all connections are tight and secure to prevent loose contacts and overheating. Use appropriate wire gauges for the 20A rating.
3. **Verification:** Double-check all wiring connections against the circuit diagram. Ensure no bare wires are exposed and that the RCD is correctly oriented for current flow.
4. **Power Restoration:** Once installation is complete and verified, restore power to the circuit.

5. Operating Instructions

The BEP Marinco RCD20A30MA operates automatically to detect and interrupt earth leakage currents. It does not require manual operation for its primary protective function.

Normal Operation:

- When power is supplied and no earth leakage is detected, the RCD will remain in the 'ON' (closed circuit) position, allowing current to flow to the protected circuit.
- In the event of an earth leakage fault exceeding 30mA, the RCD will automatically trip to the 'OFF' (open circuit) position, disconnecting the power supply to prevent electric shock.

Resetting the RCD:

If the RCD trips, it indicates an earth leakage fault. Before resetting, identify and rectify the cause of the fault. Once the fault is cleared:

1. Ensure the power to the affected circuit is off.
2. Push the RCD lever fully to the 'OFF' position.
3. Then, push the lever to the 'ON' position to reset the RCD.
4. If the RCD trips again immediately, the fault has not been cleared or there is a persistent issue. Do not attempt to reset repeatedly without addressing the underlying problem.

6. Maintenance

Regular testing of the RCD is essential to ensure its proper functioning and continued protection.

Monthly Test Procedure:

1. Ensure power is supplied to the RCD and the protected circuit is operational.
2. Locate the 'TEST' button on the front of the RCD.
3. Press the 'TEST' button. The RCD should immediately trip to the 'OFF' position. This confirms the internal tripping mechanism is working.
4. Reset the RCD by pushing the lever fully to 'OFF' and then to 'ON'.
5. If the RCD does not trip when the 'TEST' button is pressed, or if it fails to reset, the device may be faulty and should be replaced immediately by a qualified electrician.

Beyond this monthly test, no other user-serviceable parts or routine maintenance are required. Keep the device clean and free from dust and debris.

7. Troubleshooting

This section outlines common issues and their potential solutions. For complex problems, consult a qualified electrician.

Problem	Possible Cause	Solution
RCD trips frequently or immediately after resetting.	Persistent earth leakage fault in the protected circuit (e.g., faulty appliance, damaged wiring). Overload on the circuit. Faulty RCD.	Disconnect all appliances from the circuit and try resetting. If it holds, reconnect appliances one by one to identify the faulty one. Inspect wiring for damage. If the problem persists with no load, the RCD may be faulty and requires replacement.

Problem	Possible Cause	Solution
RCD does not trip when 'TEST' button is pressed.	RCD is faulty. No power to the RCD.	Verify power supply to the RCD. If power is present and it still doesn't trip, the RCD is faulty and must be replaced immediately.
RCD does not reset.	Persistent earth leakage fault. Internal mechanical fault in the RCD.	Ensure the fault in the circuit has been cleared. If the fault is cleared and it still won't reset, the RCD is likely faulty and needs replacement.

8. Specifications

Technical specifications for the BEP Marinco RCD20A30MA Breaker:

- **Model Number:** RCD20A30MA
- **Rated Current:** 20 Amperes (A)
- **Residual Current Sensitivity:** 30 milliAmperes (mA)
- **Item Weight:** 0.55 Pounds (approximately 0.25 kg)
- **Package Weight:** 16 ounces (approximately 0.45 kg)
- **Brand:** BEP
- **Manufacturer:** Marinco
- **ASIN:** B07NKRVCZ7
- **Date First Available:** February 10, 2019

9. Warranty and Support

For warranty information and technical support, please refer to the official BEP or Marinco website, or contact your authorized dealer. Keep your proof of purchase for warranty claims.

Online Resources:

- Official BEP Website: www.bepmarine.com
- Official Marinco Website: www.marinco.com