

How many seconds does the residual current device RCD trip in the secondary distribution box



Overview

Trip: When the induced voltage exceeds the threshold (corresponding to the rated residual current — typically 30mA), it energises a trip coil that releases a mechanical latch, opening the main contacts and disconnecting the supply. The entire process takes less than 40 milliseconds. A residual current device will disconnect a circuit when it detects that the flow of current is not in balance between the line and the neutral conductor and that imbalance has reached a pre-set level / 'trip current rating'. What does an RCD do?

Also known as a ground. A residual-current device (RCD), residual-current circuit breaker (RCCB) or ground fault circuit interrupter (GFCI) is an electrical safety device, more specifically a form of Earth-leakage circuit breaker, that interrupts an electrical circuit when the current passing through line and neutral. It detects earth leakage current and disconnects the supply in milliseconds — before the current through your body can cause a fatal electric shock. This guide explains how RCDs work, why 30mA matters, and when BS 7671 requires them. In simple terms, it protects people from electric shock and prevents electrical fires caused by faulty wiring or equipment.



Article Content

Aug 01, 2025

Inevitable in almost all electrical switchboards

The magic of residual current device Technology that RCD uses is so simple and so magical. The residual current device continually measures the

May 28, 2026

RCD (Residual Current Device) Testing Procedure

Learn how to test an RCD (Residual Current Device) to ensure safety & optimum performance in electrical installations. Contains essential checks and

Dec 12, 2025

What Is a Residual Current Device (RCD) and How

The residual current device mechanism compares the residual current in the main circuit RCD with the residual tripping current. If the residual current exceeds or

Jan 06, 2026

How to connect a residual-current device?

To properly understand the operation and connection of residual-current devices, it is worth to consider the design of RCDs. It

Jun 15, 2026

Residual Current Devices (RCDs) Explained

Generic term covering devices incorporating residual current protection so in fact all the coming types are types of RCDs in other words the

Jan 12, 2026

Application guide Residual Residual current devices ent devices

Introduction Residual current devices (RCD) have always played an important role in circuit protection by detecting leakage to ground for equipment in many installations. RCD's are used in unison with a

Jan 07, 2026

How does RCD work? | Schneider Electric Australia

The difference in current is called "residual current" the resulting alternating flux in the magnetic toroid consequently induces an electromotive force in the secondary

Aug 17, 2025

What Is a Residual Current Device (RCD) and How It

Learn what a Residual Current Device (RCD) is, how it works, types of RCDs, their purpose, benefits, and why they are essential for electrical safety

Aug 17, 2025

Residual Current Devices

They are designed to trip quickly and have a maximum disconnection time of 300 milli-seconds (which is 0.3 seconds) with a trip current of 1 x their

Feb 04, 2026

Changes to RCD testing in BS 7671:2018+A2:2022

The early style Residual Current Devices (RCDs) were highly effective protective devices but they have proven to be less reliable in modern buildings as a

Mar 05, 2026

WHITE PAPER Residual current devices (RCDs) Protection against

The use of RCDs with a rated residual operating current not exceeding 30 mA is a key protection element for increasing safety in low voltage (LV) electrical circuits, even though it can't be the only

Jan 19, 2026

RCD Testing: How to Test a Residual-Current Device

RCD testing is the procedure to check if your residual current device is in good condition. Find out how to do it with our testing guide.

May 08, 2026

What Is a Residual Current Device (RCD) and How It

A Residual Current Device (RCD) is a crucial electrical safety component that protects workers and equipment from dangerous earth leakage

Sep 13, 2025

RCD Trips: Your Complete Guide to Safety, Causes,

Residual Current Devices (RCDs) are a safety component used in modern electrical systems to safeguard individuals against electric shock and

Jun 02, 2026

RCD Switch – Simply explained | Siemens

The rapid tripping of the RCD prevents people from being exposed to a dangerous current (greater than 30 mA). It is important to regularly check that the RCD is functioning correctly to ensure safety in

Apr 11, 2026

RCD Protection

What is RCD Protection? RCD protection (Residual Current Device protection) is a critical safety mechanism in electrical installations. It monitors the electric current flowing through circuits

May 22, 2026

Residual-current device

OverviewPurpose and operationApplicationRCBOTypical designCharacteristicsTesting of correct operationLimitations

A residual-current device (RCD), residual-current circuit breaker (RCCB) or ground fault circuit interrupter (GFCI) is an electrical safety device, more specifically a form of Earth-leakage circuit breaker, that interrupts an electrical circuit when the current passing through line and neutral conductors of a circuit is not equal (the term residual relating to the imbalance), therefore indicating current leaking to ground, or to an unint

Nov 14, 2025

Understanding the Principles of a Residual Current

How Does an RCD Work? At the heart of an RCD lies a current transformer, a critical component designed to sense current differences. Under normal conditions, the

Sep 07, 2025

What Is an RCD? | Residual Current Device Explained

Trip: When the induced voltage exceeds the threshold (corresponding to the rated residual current — typically 30mA), it energises a trip coil that releases a mechanical latch, opening

Oct 26, 2025

Residual Current Device (RCD) Explained | CHINT global

When it comes to safety from electrocution and electrical fires, the residual current device RCD is a necessity. Discover how they work in this guide.

May 06, 2026

Which type of residual current device (RCD) you should

Residual current device (RCD) It is not quite clear when and by whom the first residual current device (RCD) was developed, but it certainly appeared

Jan 13, 2026

5 Ways Residual Current Devices (RCDs) Ensure Safety

Understand Residual Current Devices (RCDs) and how they prevent electrical shocks. Learn about RCD types, applications, working principles, and

Jan 30, 2026

How do RCDs work | What is an RCD residual current

What is an RCD and How Does it Work? RCDs, or Residual Current Devices, are essential safety devices that can help protect you from the dangers

Aug 27, 2025

What is an RCD (Residual Current Device)?

According to AS/NZS 3760, the tripping time for a Type 1 – 10mA RCD should be 40ms. Similarly, the tripping time for a Type 2 – 30mA RCD should be 300ms. An

Jan 09, 2026

RCD Test

The Residual Current Device operates on the principle of continuously monitoring the balance of currents between the Line conductor and the Neutral conductor. If this

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.regen-power.co.za>

Email: info@regen-power.co.za

Phone: +49 176 845 2036

Address: Taunusanlage 15, 60325 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

