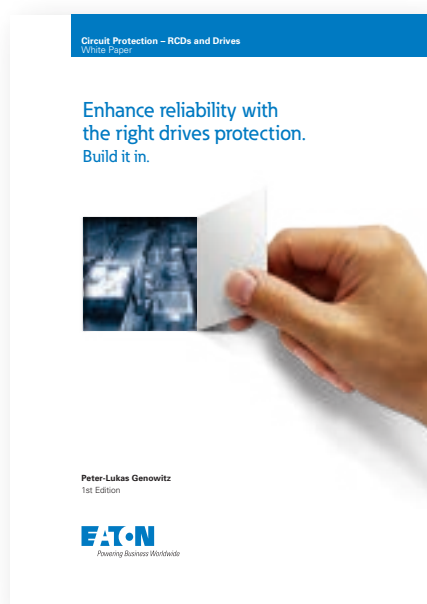




Increasing reliability through a harmonized RCD and drive solution

Build it in.



With demand for manufacturers to improve energy efficiencies across their operations, modern machines are increasingly using frequency controlled drives. However, these can cause problems with electrical protective devices, such as residual current devices (RCDs). Using the wrong type of RCDs in these applications can have devastating effects as there will be unwanted tripping or even the complete loss of the protection function, leading to costly machine downtime, and unsafe equipment.

This white paper presents a harmonized RCD and drives solution to guarantee the highest levels of protection to the machine and the operator while providing an energy efficient motor control solution. It is the third white paper on the topic of residual current by Peter-Lukas Genowitz, Product Manager RCCB at Eaton.



A harmonized solution gives an extra competitive edge to machine builders' equipment designs, offering reduced downtime and lower operating costs to their end-user manufacturing customers – yet adds no risk to their traditional designs. By implementing the right RCDs and drives solution, manufacturers can increase energy efficiencies, while improving uptime and ultimately profitability, at the same time as providing a safe solution for operators.

The paper begins by reviewing the basics of frequency converters, together with the locations, types and components of the fault currents they generate. It then covers RCD types designed especially to give the highest protection levels for operators and equipment from system-

caused earth leakage currents at high frequencies. It further outlines how machine builders can choose the most suitable RCDs for different fault current scenarios. Finally, the paper outlines the advantages of digital RCDs, and offers advice on how to reduce high leakage currents.

It provides valuable information and insight for machine builders looking for support in their strategic approach to reduce their supplier base, and be innovative and successful in their markets.

To learn how a harmonized RCDs and drives solution can provide increased energy efficiency with maximum productivity and machine uptime download the whitepaper here www.eaton.eu/rcd-drives.