

DIZ

DOEPKE-INFO-ZEITUNG

FREE CUSTOMER NEWSLETTER BY DOEPKE SCHALTGERÄTE GMBH

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The correct address

gives you all the information you need at a glance

Wouldn't it be nice if, in an electrician's daily work, the required device information was available directly on site? If data sheets or operating instructions are not available, they can now be accessed on a mobile phone.

All that's needed to start is a smartphone with a QR code app: All the residual current circuit breakers of the DFS series possess a QR code behind which an internet address is hidden. If this code is scanned with a QR code reader, one can go directly to the relevant product page: each DFS has its own homepage, so to speak. There is a lot of information on this page – from the article number, via the technical information all the way through to the specifications.

In this way, it's possible to obtain information on the relevant device simply, conveniently and without any risk of confusion. For example, you can directly test your scanner app with the QR code of our DIZ on the last page.



Timely maintenance increases plant availability: Thanks to the DCTR, electrical faults can be detected at an early stage and early and cost-saving countermeasures taken.

Preventive maintenance with a DCTR

Savings potential thanks to early detection of insidious faults

If a complex electrical system is to be operated in a fail-safe manner and thus economically, it's necessary to have detailed knowledge of its condition.

The aim is to detect so-called creeping faults ahead of time and thus pre-

vent plant failures and any associated commercial losses. Repairs can be planned at an early stage and can be carried out economically, minimizing downtime and avoiding damage caused by sudden plant failures. It's also in the interests of the insurance industry that damage caused by

unexpected plant failures is avoided. This is referred to as preventive maintenance.

For example, one can imagine a single, large transformer with large cross section cables in the infeed for

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▼ Continued from Page 1: Preventive maintenance with a DCTR

which a residual current is displayed. This information alone is of little help in locating the error. If the idea of "monitoring" is to be pursued consistently, appropriate decentralised transformers must be used in the plant so as to be able to locate an error more precisely. Such an arrangement provides an indication of where in the plant the fault lies or where there is a risk of a system failure. This may even prevent the entire system from being shut down. Depending on the system configuration, the DCTR residual current monitor provides good service.

The 4-20 mA output signal can be integrated into a central monitoring and information system for further processing via a commercially available evaluation unit. These possible uses ensure permanent system monitoring with the best possible protection against fire hazards in accordance with DIN VDE 0100-420 and VDE 0100-530.

The potential-free internal relay offers, in addition, the possibility of switching external acoustic or optical



Example application: Logging different residual currents shows a clear upward trend and suggests the need for maintenance or repair work.

signals. Insofar as the plant regulations permit, the relay can also be used to switch off a circuit breaker, since, in accordance with VDE 0100 Part 420, residual current monitors (RCM) may be used in connection with a circuit breaker to prevent electrical fires caused by insulation faults, insofar as residual current circuit breakers are rejected for technical reasons.

Inspection periods for regular insulation measurements can be extended through the use of the DCTR and thus long-term insight into the plant can be extended or even (depending

on the hazard assessment) completely eliminated. With comparatively small investment and plant costs, a plant's availability can be increased.

The DCTR can be used to display residual currents up to 300 mA. It is available as Type A for cross-sectional diameters of 35 mm, 70 mm and 105 mm, and as Type B for diameters of 35 mm and 70 mm. 20 mm variants are being planned. ■

Holger Freese
Product Management



AC-DC sensitive residual current protection for building sites

Building trades professional association (Berufsgenossenschaft der Bauwirtschaft [BG Bau]) promotes retrofitting

More and more electrical devices can produce smooth DC currents which cannot be detected by conventional residual current circuit breakers. The same applies also to building sites. Taking into account a current draft standard, BG Bau is supporting the retrofitting of building site distribution boards with AC-DC sensitive Type B residual current circuit breakers.

In many construction site plants, protection by means of all-current-sensitive residual current circuit breakers is already mandatory, since only in this way can multi-phase frequency-controlled devices be reliably operated. A new draft of DIN VDE 0100-704 now provides for the protection of three-phase current sockets up to 63 A with AC-DC sensitive residual current circuit breakers.

As part of the occupational health and safety scheme, BG Bau is promoting the conversion and retrofitting of building site distribution boards by paying 25% of the purchase price (up to €300 per fitting). The residual current circuit breakers must have VDE approval and be of Type B (Series B + MI switches are also being promoted). Further information can be found at www.bgbau.de. ■



www.bgbau.de/.../jrcd_typ_b

STANDARDISATION

DIN VDE 0100-704

Construction of low voltage plants – Part 704: Construction sites:

In the current draft 2016-12 of the plant regulations for the construction of special purpose production sites and plants (here for building sites) it is planned that power outlet circuits up to and including 32 A and other circuits which supply handheld electrical equipment up to 32 A inclusive must be protected by residual current protective devices (RCDs) with a rated continuous residual current ≤ 30 mA. Power outlet circuits over 32 A must be protected by RCDs with a rated continuous residual current ≤ 500 mA.

For three-phase current sockets up to and including 63 A, it is planned that these must generally be protected with Type B RCDs. Electrical equipment with frequency converters can generate smooth DC currents in the event of a fault, which are not detected by Type A or Type F RCDs and which can also lead to ineffectiveness. Smooth DC residual currents > 6 mA cause magnetic saturation of the internal summation current transformer of Type A RCDs. This saturation can lead to the detection of alternating fault currents in other electric circuits (which are protected by the same switch).

The above draft is available to the public, but is not legally binding. The new edition is expected to be released in May 2018 and will then be binding. Already, the conversion of building site distribution boards to Type B or B+ RCDs is being financially supported by the construction industry's professional association (BG Bau). ■

Günter Grünebast
Head of
Standardisation/
Testing/
Certification



Canton hospital with Doepke technology

Maximum availability of the plant thanks to DRCCB 5 ST

The main distribution board of the dialysis facility in the Baden cantonal hospital (Kantonsspital Baden [KSB]) in Switzerland was equipped with a Doepke DRCCB 5 ST. The dialysis facility is housed in the recently completed cube. The name says it all: The building has been created in the shape of a cube.

The new four-storey building was brought into operation in the summer of 2016 after planning and building began in 2014. It is designed purely for outpatient treatment and is technically state-of-the-art. The cube contains radio-oncology, oncology and nephrology (with dialysis) departments as well as rooms for outpatient operations.

Innovative solution

What was decisive in the use of a DRCCB 5 ST?

An extensive dialysis facility was constructed in the new building of the cantonal hospital in Baden. The project manager was looking for an innovative solution for the installation of residual current circuit breakers. In a product presentation by Demelectric AG's technical sales consultant, the installation company that had been retained recognised that Doepke's self-test residual current circuit breaker was the ideal solution for the dialysis system's requirements.



It looks good even when mounted vertically: Automatic self-testing thanks to DRCCB 5 ST



The exterior is as modern as the inside:

The KSB cube houses the latest technology for maximum safety

Uninterrupted operation

What were the challenges?

The dialysis system must operate continuously, since, after a shut-down of the system, re-activation would require complex calibration in various plant areas. The prescribed semi-annual function tests with the accompanying switch-off of the residual current circuit breakers were therefore a particular challenge for technical maintenance.

Added value for the customer

With the use of the Doepke switches, the functional tests are now carried out fully automatically every 28 days without shutting down the dialysis system. This represents not inconsiderable time and cost savings and, additionally, increases the availability of the entire system. ■

Text: Demelectric AG/www.demelectric.ch

Doepke contact:

Wolfgang Sorg, Tel. +49 176 12255881

Eltefa: Branch meeting in Stuttgart

Doepke presented fire protection and twilight switches

Over 500 national and international exhibitors, bulging halls and some 24,000 satisfied visitors – Eltefa in Stuttgart was a resounding success.

Even though more and more communication is shifting to electronic media and the trend towards digitalisation is unbroken, personal contact at trade fairs is still irreplaceable. This of course also applied to Eltefa in Stuttgart; according to the organisers, every visitor spent, on average, 5.7 hours at the fair – obviously there was a great need to communicate and, of course, much to discover.

Doepke highlights

On the Doepke stand, the new DAFDD fire protection switches were the subject of many enquiries. These devices were well presented through functional demonstrations and visitors to the fair gained a deeper understanding of them. Since this class of product is still relatively



Successful presentation: Trade fair talks at the Doepke stand in Stuttgart

new on the market, many questions could be asked and matters clarified. Another highlight was the new Dasy twilight switch in anthracite as well as a version with an integral timer. Both designs were consistently received

positively. Overall, the fair was very successful. During the talks on the stand it became clear, once again, that contact with a qualified specialist audience is an advantage for all parties. ■



From left to right: Felix G. Hensel, Edgar Eichmann, Andreas Müller and Philipp Hensel

Gulf branch office

The Lennestadt-based company Hensel opened its branch for the Gulf region next to Middle East Electricity (MEE) in Dubai.

Doepke's Managing Director Andreas Müller and Export Manager Edgar Eichmann attended the official inauguration event. During an entertaining gathering, a promising development in the Persian region was initiated and Doepke and Hensel looked forward to good working relations with each other. We wish Hensel a lot of success in the region. ■

Celebrating a quarter of a century: Günter Grünebast

As of the beginning of March Günter Grünebast has been working for Doepke for 25 years. Norden-born, he is responsible for the area of standardisation/certification and is our delegate on various committees.

For more than 20 years, he has been active in the development of building systems technology and residual current protection products. His knowledge in the field of AC-DC sensitive residual current circuit breakers makes him an indispensable specialist in our development department.

Privately, he likes to devote himself to music; he plays keyboards in the progressive rock band "Morphelia", which has already released two albums. They are working on a third



Always well informed: Günter Grünebast. In the background part of his anniversary bow.

one. Other than that, he likes to travel with his wife; their preferred destination is Greece.

We would also like to wish him all the best and look forward to working with him in the future.

Traditional East Frisian sport: bowling

This year we held our Doepke bowling event in Westerende. The tradition has been going on for years and gives great pleasure to everyone. It consists of throwing a ball as far as possible along the road. The next throw is taken from where the preceding ball landed. Two teams

compete to reach a certain distance with as few throws as possible. During the bowling there were cosy breathers with tasty snacks and hot drinks; finally at the Ferienhof Wäcken in Westerende there was curly kale and Snirtjebraten, the local spicy pork delicacy.



A dog's life in the Maldives

Bello has reported on his retirement



We've not heard from him for a long time, and now an old friend gets in touch. Our former trade fair mascot Bello seems to be spending his well-earned retirement in the Maldives.

The picture that shows Bello there was sent to us by Mr Knauer from Nuremberg.

To be exact, it shows the island of Kihaad, which is a secluded spot in the Indian Ocean and, just as in the brochures, has sun, sand and crystal-clear water. The beach is just a little over a kilometre long, the circumference of the island.

It goes without saying that we welcome Bello to this retirement home as well as his shady spot in the tree and thank Mr Knauer for the beautiful picture.

DATES/NOTES

Hanover Fair
24–28 April 2017
Hall 13, Stand C09

Doepke's tendering documents
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www.ausschreiben.de

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QUOTE OF THE QUARTER

*Coming together is a beginning,
Keeping together is progress,
Working together is success.*

Henry Ford