

DIZ

DOEPKE-INFO-ZEITUNG

FREE CUSTOMER NEWSLETTER BY DOEPKE SCHALTGERÄTE GMBH

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...let's meet in person!

How about meeting in Berlin, Hamburg or Nuremberg this year?

We will be exhibiting at the upcoming specialist trade fairs **belektro (Berlin)**, **GET Nord (Hamburg)** and **SPS/IPC/Drives (Nuremberg)**, which are all taking place in October and November of this year.

The **belektro**, which will be held from 17 to 19 October, is the German capital's trade fair for electrical engineering and light. Between the hours of 9:00 am and 5:00 pm professional visitors to **belektro 2012** will gain a comprehensive market overview of new products, technologies and trends in the building automation, electronics and installation sector. Specialist tradesman, building contractor, apprentice, student or representative from the housing industry, facility management, science or technology – the **belektro** is the ideal place for a direct exchange of experiences. The last **belektro (2010)** involved 219 exhibitors from ten countries. Almost all of the 14,500 visitors were professionals - as much as 95.7%. Visit us at **stand 204 in hall 1.2**. Further information about the trade fair can be found online at www.belektro.de.

Valuable information from insiders, exchange at the highest level and pioneering concepts for the future – this is all part of the programme at **GET Nord**, the only combined specialist trade fair for electronics, sanitation, heating and air conditioning technology in the north of Germany, which opens its doors at the Hamburg trade fair grounds between 9:00 am and 6:00 pm from 22 to 24 November.

The central theme of the programme is "Network your success": Around 500 German and international exhibitors will present a uniquely wide range of products, systems and services, including lots of brand manufacturers.

This variety means that the **GET Nord** is a must for a professional audience: More than 40,000 visitors from trade, business, industry and the service sector will learn about the most recent trends and innovations here. Visit us in **hall B5, stand 120**. Further information about the trade fair and other exhibitors can be found at www.get-nord.de.

SPS/IPC/Drives is Europe's leading specialist trade fair for electrical automation.

From 27. – 29.11.2012, automation providers from around the world will meet in Nuremberg. Between 9:00 am and 6:00 pm on the Tuesday and Wednesday, and until 5:00 pm on the Thursday, you can find out all about products, innovations and trends in the sector. The trade fair and conference offer you the perfect platform to look for the right solutions for your automation tasks.

SPS/IPC/Drives includes the entire spectrum of electrical automation through to complete systems and integrated automation solutions. Find out more about our products, which are predestined for use in automation and drive technology. **Stand 4-261, hall 4**. Further information can be found online at mesago.de/sps.



Johann Meints
Marketing Manager

Hot off the press

The price list 1/2013 has just been released



- » with the type F residual current circuit breakers, which recognise mixed frequency residual currents.
- » with the new remote drives for RCCBs, which can be operated directly with mains voltage.

The price list can be ordered via email from bestellung@doepke.de or from your sales agency.



Type F mixed frequency-sensitive residual current circuit breaker

Type F residual currents can increasingly occur in almost any existing electrical installation

Washing machines, compactors, hammer drills, heating and thermal pumps, control gear in lighting systems and welding devices:

Some of these devices are very much everyday commodities. As a result of the increased use of electronic equipment in private households, residual currents may occur which are not sufficiently detected by type A residual current circuit breakers (RCCBs).

The reason for this is: In the listed devices there is increasing use of single-phase operated frequency converters e. g. in order to regulate the number of revolutions. In the event of errors, these frequency converters can generate residual currents with mixed frequencies other than 50 Hz.

In contrast to type A RCCBs, the new type F RCCBs from Doepke detect not only alternating residual currents and pulsing direct residual currents of mains frequency, but also residual currents consisting of mixed frequencies, in which case the main part is always 50 Hz. However, smooth direct residual currents cannot be detected.



The link between conventional and all current-sensitive residual current circuit breakers: the DFS 4 F, which is sensitive to mixed frequencies

Therefore type F RCCBs meet all of the requirements for type A RCCBs and in addition also detect residual currents with mixed frequencies other than 50 Hz.

It is therefore ensured that there is no obstacle to tripping on the 50 Hz part if low-frequency and high-frequency parts are also present in the residual current. This cannot be guaranteed with sufficient certainty with type A RCCBs. In addition, type F RCCBs have increased immunity against surge currents, which may also occur when

switching on PCs, lighting systems and motors. Type F RCCBs from Doepke are also lightning-resistant, which is indeed not a requirement of the standards but offers a clear advantage. As in the case of a type A RCCB, the operation of a type F RCCB is also not dependent on auxiliary voltage.

Currently the new RCCB is already listed in the standard VDE 0100-530 (Installation of low-voltage systems) and it is recommended for certain areas of application in the new BGI 608 (Selection and operation of

electrical systems and equipment on construction and assembly sites). However, type F RCCBs are not suitable for the detection of smooth direct residual currents and therefore in no way replace a type B or B+ RCCB.

It is now not possible to imagine electronic equipment without the use of single-phase frequency converters, particularly in private households, and the tendency is increasing.

Therefore a type F RCCB offers optimum safety in electrical systems in which no smooth direct residual currents can occur in the event of errors.



*Reinhard Esen
Product Manager*

ep forum and PV dialogue at the Belektro 2012

The electrical practitioners' forum will be held at hall 4.2, stand 123 on each day of the trade fair, with the following schedule:

10:00 am	Burkhard Schulze (ZVEH): Current standards for "Protection against electric shock"
11:00 am	Oliver Born (Dehn & Söhne): Lightning and surge protection according to DIN VDE 0100 and 0185-305-4
12:00 pm	Stefan Davids (Doepke): Residual current circuit breakers sensitive to all currents as per DIN VDE 0664 part 400
1:00 pm	Eckhard Körner (Gossen Metrawatt): Measurements for testing protective measures (DIN VDE 0100 part 600, DIN VDE 0105 part 100)
2:00 am	Workshop on epINSTROM: Simple, yet standard-compliant, dimensioning, testing and documentation of low-voltage systems

The PV dialogue will be held at hall 3.2, stand 207 on each day of the trade fair, with the following schedule:

10:00 am	Troubleshooting in PV systems (HT-Instruments)
10:30 am	Own use of PV with the heat pump (Centrosolar)
11:00 am	Use of RCDs in PV systems (Doepke)
11:30 am	Standard-compliant planning and installation of PV systems (Hensel Electric)
12:00 pm	Lightning and surge protection in PV systems (Dehn + Söhne)
12:30 pm	E-Check for photovoltaic systems (LIV BB/NFE)
1:15 pm	Charging infrastructure for E-vehicles (LIV BB/NFE)
1:45 pm	Use of E-vehicles in the electrical trade (Reiner Lemoine Institute)
2:15 pm	Fuelling up on electricity from Berlin to Hamburg (de)

From residual current protection sensitive to all currents to modular differential current monitoring

Protective devices from Doepke combine safety and availability

In the devices of series DFS 4 B, Doepke offers compact type B residual current circuit breakers that are sensitive to all currents. Systems with high operating frequencies result in requirements for protective technology which cannot be met by standard type A circuit breakers. The DFS 4 B series, which is sensitive to all currents, even detects smooth direct residual currents and therefore ensures a high level of safety.

The DFS 4 B series residual current devices, which are sensitive to all currents, comply with these regulations, as well as the relevant national and international standards. They guarantee safe disconnection from the supply even in the case of smooth direct residual currents and alternating residual currents up to 100 Hz, which may occur in these systems. The many different devices in this series enable

targeted selection of the best circuit breaker for each application.

For larger systems, it is advisable to use modular differential current monitoring (DMRCD/DRCM) with an external converter. An adjustable pre-alarm allows intervention even before the system fails and therefore increases system availability, which minimises the financial risk of downtimes in manufacturing operations in particular. The operating frequencies of systems such as photovoltaic systems, frequency converters, high-frequency converters and UPS systems reach the kilohertz level. In these applications, the VDE regulations and safety regulations of the professional association clearly recommend the use of a residual current circuit breaker that is sensitive to all currents.

Modular differential current

monitoring devices also reliably detect alternating residual currents as well as smooth and pulsing direct residual currents, and therefore result in optimum personal and fire safety. In addition, they guarantee increased system availability thanks to an adjustable pre-alarm and main alarm up to a nominal current of 630 A (type A) or 300 A (type B) and a voltage of up to 690 V. In systems with greater current input, such as in commercial distribution boards, building site distribution boards and crane systems, the devices can also be used as selective protective devices.

Device combinations sensitive to pulsing currents made up of a converter and control relay detect differential currents in the frequency range from 50 to 60 Hz. The AC/DC sensitive detection covers smooth DC and AC differential currents up to 100 kHz. Both series have

LED displays and potential-free changeover contacts for the alarm signalling. Modular differential current monitoring devices are particularly suitable for industrial systems, medical technology, IT and communications technology, traffic systems, energy supply, event and media technology, welding technology, agricultural technology and mechanical engineering.

Whether it is a small or large system, compact or modular construction of the protective device: the DFS 4 and DRCM/DMRCD series provide the right solution for every installation requirement.

The experts from Doepke would be happy to help you choose the right circuit breaker.



*Holger Freese
Product Manager*

Fire safety when upgrading standard photovoltaic systems

This is about money: A question of insurance and rights of recourse

With Doepke's modular residual current device DMRCD 1B+, it is possible to achieve integrated fire protection and 24-hour monitoring of photovoltaic systems.

Defective fire safety in photovoltaic systems can result in questions about the insurance for a building and to recourse claims for trade and repair businesses; therefore it is sensible to take appropriate precautions during the upcoming upgrading of existing systems.

According to the Renewable energy

act [Energieeinspeisegesetz], which came into force at the start of the year, photovoltaic systems with a capacity of 30 to 100 kWp, which were put into operation between 31.12.2008 and 31.12.2011 must be retrofitted with central mains and system protection by the end of 2013. According to VdS 3145, in addition to this for reasons related to fire safety it is recommended that residual current circuit breakers should be used, and specialist electricians should urgently recommend this to their customers.

The modular residual current control relay DMRCD 1B+ in conjunction with a separate disconnecting device approved by Doepke offers the additional advantage of an adjustable pre-alarm response threshold; only the actual alarm will lead to disconnection.

An external differential current converter permanently monitors the feeder line of the PV system and carries out the grid and plant protection together with the basic device DMRCD 1B+, which is sensitive to all currents. Residual

and differential currents, as well as the adjustable pre-alarm response threshold, are displayed on the front of the housing via a 10 LED display.

The combination of DMRCD and disconnecting device offers optimum personal and fire safety as per DIN VDE 0100-410 and VDE 0100-530, whilst at the same time providing high system availability.



*Holger Freese
Product Manager*

PCB specialist: 25-year company anniversary of Anja Janssen

On 19 October, Anja Janssen will celebrate 25 years with the company. The entire staff at Doepke would like to congratulate her.

When she started at the company in 1987, Ms Janssen spent a few years working in the assembly of residual current circuit breakers.



Manual work with care and experience:
Anja Janssen mounting DFS 4 B components

Following the birth of two children and the appropriate childcare leave, Anja Janssen has now been working in electronics production in the SMD and

manual mounting of circuit boards since 2003. In her work, together with her colleagues, she ensures that, for example, our series DFS 4 B all current-sensitive residual current circuit breakers work faultlessly.

Anja Janssen spends a lot of Sundays with her partner at the football pitch cheering on the 1st men's team of FC Ostfria Moordorf. She herself keeps fit by walking.

We wish Anja Janssen continued success for the future.



The angel en route

This summer, among other things, the Doepke angel went to New York: In the photo, as if carried by an enchanted hand, he is flying in front of the building site for the One World Trade Center, which is due to be completed in 2013. Have you taken a photo of the angel on holiday? We look forward to more sightings, which we would love to print. Just send an email to tanja.schueler@doepke.de – preferably with a photo and brief details of where it was taken.

LATEST BROCHURES IN ENGLISH LANGUAGE



DFS 2 & DFS 4 brochure about the RCCBs DFS 2 and DFS 4.
Art. no. 5900153



DFA 2 brochure containing informations about the DFA remote for RCCB.
Art. no. 5900205



DFS HD brochure about the robust HD-type for extreme environments.
Art. no. 5900197



Brochure containing informations about residual current monitoring using DRCM/DMRCD.
Art. no. 5900210



Type F brochure containing informations about the mixed frequency sensitive RCCBs.
Art. no. 5900212

Please order via E-Mail: bestellung@doepke.de or on www.doepke.de.

DIZ in the future?

The Doepke Info Paper (DIZ) provides you with current information from our company on a quarterly basis. You will be sent the paper if you have explicitly opted to receive the DIZ in the past – either directly with us on the premises, at conferences, trade fairs or online.

If you have reconsidered in the meantime and are no longer interested in the DIZ, then just tell us. It is in the interests of all concerned, and not least our environment, that the DIZ doesn't end up in the bin without being read.

Just send us a quick email with "DIZ" in the subject line and your details to bestellung@doepke.de. If you would prefer to call us, then dial +49 (0) 4931 1806-829.

DATES / NOTES

Belektro, Berlin
17.10. - 19.10.2012
Hall 1.2, stand 204

GET Nord, Hamburg
22.11. - 24.11.2012
Hall B5, stand 120

SPS/IPC/Drives, Nuremberg
27.11. - 29.11.2012
Hall 4, stand 4-261

ELTEC, Nuremberg
16.01. - 18.01.2013
Hall 1, stand 1,216

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QUARTERLY QUOTE

*Happiness is tied in one place,
Happiness knows no seasons
Happiness is always found by those,
who rejoice in their life*

Clemens von Brentano