

# DIZ Doepke-Info-Zeitung

The free customer newsletter by Doepke Schaltgeräte GmbH



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## Our recommendations for a modern house distribution system



Type A

### Residual current circuit-breaker DFS A

- For pulsating and alternating residual currents
- Application areas: socket outlet circuits, conventional lighting

Type A KV

### Residual current circuit-breaker DFS A KV

- For pulsating and alternating residual currents
- KV = short-time delayed, with surge current resistant
- Significantly less faulty tripping due to inrush currents from consumers such as: LED and fluorescent lamps or switched-mode power supplies
- Recommended in DIN VDE 0100-530

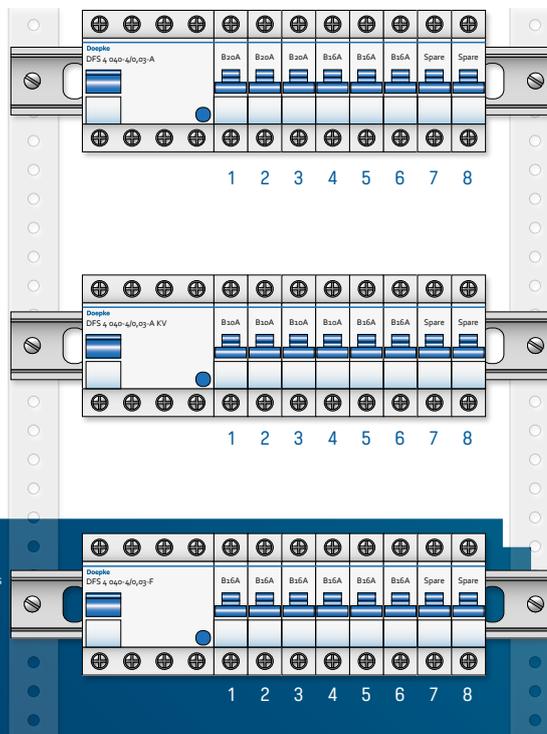
Type F

### Residual current circuit-breaker DFS F

- For pulsating and alternating residual currents + residual currents with mixed frequencies
- Short-time delayed and lightning-resistant
- New addition to DIN VDE 0100-530
- Consumers with single-phase frequency converters: washing machines, heating or heat pumps, air conditioners

#### Tip: Type A and F in EV design:

Buyers are increasingly opting for electric vehicles in the private sector: Doepke also has residual current circuit-breakers in an EV (electric vehicle) design specifically for protecting against the DC residual currents that can occur when charging electric vehicles.



### Miniature circuit-breakers DLS 6

Example assignment B 16 A / B 20 A:

- Electric oven
- with hob
- Socket outlets
- Freezer
- Refrigerator
- Spare
- Spare

### Miniature circuit-breakers DLS 6

Example assignment B 10 A / B 16 A:

- LED lighting
- LED lighting
- Socket outlets
- Fluorescent lamps
- ICT/switched-mode power supplies
- Solar power systems
- Spare
- Spare

### Miniature circuit-breakers DLS 6

Example assignment B 16 A:

- Washing machine
- Heating pump
- Heat pump
- Air conditioners
- Vacuum cleaner systems
- Other devices with 1-phase FCs
- Spare
- Spare

\*The general installation and manufacturer's instructions must also be observed  
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## Using electricity safely in the modern household

### Future-proof residual current protection: DFS Type F and DFS Type A KV

Many modern electrical devices use single-phase frequency converters for continuous speed control. In the event of a fault, these frequency converters can also generate residual currents with mixed frequencies other than 50 Hz. This happens in washing machines, heating and heat pumps, air conditioners and vacuum cleaner systems, to name a few. Mixed frequency-sensitive type F residual current circuit-breakers are more than a match for this challenge – which is why they were included in DIN VDE 0100-530 in June

2018. The DFS Type F from Doepke reliably detects not only pulsed and alternating residual currents, but also residual currents with mixed frequencies. Furthermore, it is short-time delayed, has greater surge current resistance and is more lightning-resistant. The mixed frequency-sensitive type F therefore significantly minimises the risk of false tripping in the event of thunderstorms, for example. As a two- and four-pole residual current circuit-breaker, the type F is available in many variants.

It is perfect for the home, workshop, office and – in the EV design – for electromobility charging devices, as well. The use of short-time delayed residual current circuit-breakers is also mentioned in the standard for the first time. If you do not plan on having any consumers with single-phase frequency converters in your electrical circuitry, then DFS Type A KV's are particularly well suited for preventing false tripping in LED lighting or switched-mode power supplies in the event of inrush currents and surge currents. ■

# Well connected: cooperation is everything

## Our networks and cooperation partners

We have many years of experience in the development and application of residual current protection technology – our products protect lives. In order to build on our expertise and to pass on and share our knowledge, we need partners such as associations, networks and industry stakeholders.

This is why we are an active member of the ZVEI (Central Association of the Electrical Engineering and Electronics Industry), one of the most important industrial associations in Germany. Our Managing Director Andreas Müller is a board member of the Regional Office for Lower Saxony/Bremen and a council member in the associated Electrical Installation Systems Division (EIS) as well as a representative for trade fairs. The most notable of these is Light + Building. Our Head of Marketing Johann Meints takes care of the GET Nord trade fair for the EIS.

Doepke is also a hands-on member of the Elektro+ initiative, which has set itself the task of educating people about electrical safety.

We are also involved in the ZHEV (Central

Association for German Electrical and Information Technology Trade). At ArGe Medien, represented by Johann Meints, we help shape public relations in the electrical trade.

In 2019 we became a member of the initiative 'Elektromarken. Starke Partner' ('Elektromarken. Starke Partner').

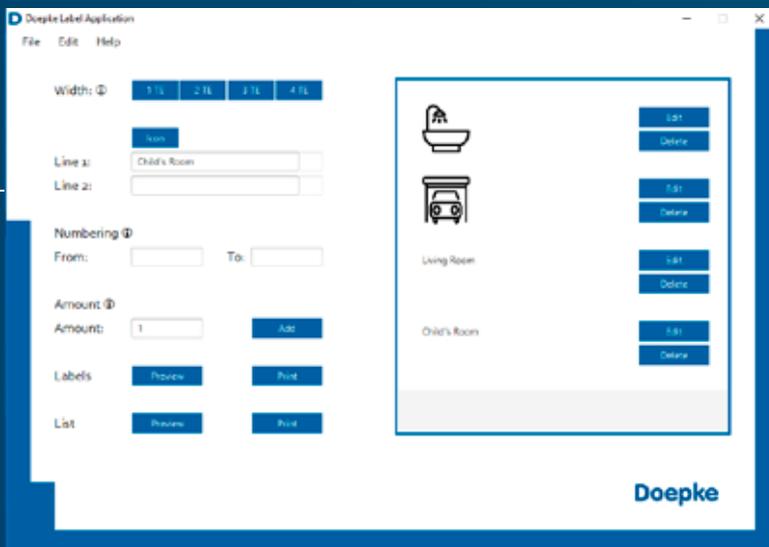
The aim of the initiative is to pool together the dependable expertise and proven quality of the German electrical industry and to bring it into the public eye.

It also presents the ELMAR Brand Award, which honours electrical companies for special achievements in the trade, innovative market concepts and strong brand awareness.

The application documents for ELMAR 2019 can be downloaded from the following website: [www.elektromarken.de/downloads](http://www.elektromarken.de/downloads). Warning: The closing date for applications is 15 July 2019. ■



Membership of Elektromarken signed!  
Strong partners: Thomas Sell (Sales Executive Theben), Andreas Müller (Managing Director Doepke), Johann Meints (Head of Marketing Doepke) and Christopher Mennekes (Managing Director Mennekes).  
Image source: 'Elektromarken. Starke Partner' initiative



## Modern design and intuitive operation

### New labelling software for residual current and miniature circuit-breakers

Having a quick overview of everything in the distribution box is safe, practical and efficient. And if the switch labels look good too, it's likely that our new labelling software for DFS/DLS residual current and miniature circuit-breakers was used. The new version replaces the old

Access application and bridges the gap

between new-and-improved and tried-and-tested. First and foremost, it is the modern design and simplified, intuitive operation that users find important and appealing. The software can produce labels of different sizes for the switches of the DFS and DLS series. The user has various labelling options: they can

choose to enter words or circuit numbers or, if they prefer a more visual approach, there is a range of icons to choose from. If need be, the software can provide consecutive labelling and even create and print out tabular distributor lists for documentation purposes. You can download the labelling software free from our website. ■

## On the test bench – no stone left unturned

### Piece-by-piece testing for guaranteed quality

Our residual current circuit-breakers have an essential task: they must protect people and animals from dangerous residual currents. Therefore, in order to ensure that they are always working as they should, each and every Doepke residual current circuit-breaker is subjected to comprehensive tests before shipment.

Our test bench is a test bay or line in our plant in Norden.



The test bay – developed in-house at Doepke – allows us to perform various automated functional tests. Before a residual current

circuit-breaker is allowed to leave our plant, it must go through a series of functional tests – depending on the type of switch, this can be up to 24 different tests. Of course, every switch must prove that it keeps within its individual tripping threshold and maximum tripping time in the presence of a residual current. This individual testing is a legal requirement.

Our devices must also pass a string of addi-

tional tests. This includes a jamming test, in which the test button is checked for smooth mechanical operation. In the fixed toggle test,

the switch toggle is mechanically blocked. Nevertheless, the switch must trip in the presence of a residual current. We also test that. During counter-switching, the switch is initially turned off even though there is a residual current. The residual current circuit-breaker is then switched on and must trip within the legally prescribed time. A high-voltage test at 1.5 kV is also a legal requirement. We also perform this test, but we go one step further and test our residual current circuit-breakers at a voltage of 3 kV. We also test the tripping thresholds with different types of current (AC, DC, EG, NP, etc.) and frequencies and we check for consistent tripping behaviour.

Only when a residual current circuit-breaker has passed all required tests does it have its individual serial number and label inscribed by a laser. We document the test results in a database and keep them for a minimum of ten years. You can request the data for each individual switch many years after manufacture. During the manufacturing process, we regularly carry out random type tests in order to determine the endurance, switching power and temperature resistance of our switches. ■

## Doepke's Dasy twilight switch protects chickens

If you need more security at twilight, then our Dasy twilight switches are the right choice for you: they switch the lighting on automatically when the daylight is no longer sufficient, and then switch it back off as soon as it becomes light again.

But with a bit of creativity, you can find other uses for them: Jann Eilers, our Head of Technical Construction, is using the Dasy to protect his chickens. Instead of controlling the lighting with the twilight switch, he is using it to control the flap on the chicken coop. In the morning when the sun rises, the Dasy actuates a motor which raises the flap, and the chickens can roam free.

In the evening when it gets dark, the Dasy actuates the motor again and the flap closes. "Initially, I had to play around a bit with the brightness values on the Dasy to adapt them to the rhythm of the chickens," says Jann Eilers. But now, the automated flap for the chicken coop works without a hitch and protects the residents from foxes, weasels and the like. ■



# Our electrical finds

Be it cable chaos, a curious installation or even ‘chindogu’ – the electrical curiosities we encounter have one thing in common: they catch the eye and are out of the ordinary. Chindogu, by the way, is Japanese and means ‘unusual gadget’. The term refers to inventions that the world doesn’t really need but finds very amusing. We want to make you stare in amazement, shake your head or laugh out loud, so we are going to share our favourite electrical finds with you in a regular feature.

“You don’t have to look far to find interesting electrical creations,” claims Thomas Seidel of the eponymous electrical engineering company in Quedlinburg, who sent us the photo.

“This photo was taken this year in a school centre and shows how ingenious some electricians are,” says Thomas Seidel.



Do you have an entertaining electrical find to show us? If so, please take a photo of it and send it to us at: [kommunikation@doepke.de](mailto:kommunikation@doepke.de)  
Important: We can only consider photos that you have taken yourself. ■

## Pinni’s travels: Pinni on Nordstrandischmoor

Far away from the hubbub of the mainland, between the ebb and flow of the mud flats off the coast of Schleswig-Holstein, is the small island of Nordstrandischmoor.

Believe it or not, only about 20 people live here on four warfs, or dwelling mounds. There is also a school and a restaurant.

Back in the 1630s, a handful of fishing and peat-cutting families settled here and gradually made the island more liveable. However, numerous storm surges repeatedly destroyed many of the houses and the area of the island



has since shrunk by one third. Thanks to the construction of stone coastal defences in 1926, further shrinkage was prevented. The railway linking the island to the mainland, which was also constructed that same year, was used by our colleague Bernd Poppinga with Pinni in his rucksack. ■

## Marketing gets new talent



On 1 September 2018, the marketing department welcomed two new arrivals: Catrin Frieden, who works in the Marketing Service, and Colin Baß, a Media Designer.

Catrin Frieden (23 years old) is the new contact partner for trade fair planning and social media. The skilled visual marketing designer previously studied in Oldenburg

and has already been working at the company for one year. For family, partner and the new job at Doepke, she decided to move back to her home in East Frisia.

Catrin is a horse-lover and enjoys riding through the East Frisian countryside during evenings after work.

Colin Baß (32 years old) made the move from Dortmund to be close to his family on the coast. He also brought his wife, two daughters and cat named Linus with him for a slower pace of life in the North.

For several years, he illustrated a variety of documents with 3D graphics for an agency in Bochum. He is also responsible for 3D animation and photo technology here at Doepke, and he will soon be in charge of video design, as well. He also actively supports our company football team. ■

## Future Day 2019



On this year’s Future Day, we welcomed 18 girls and boys from classes 5–8. After a factory tour with Ralf Bruns, the pupils were split into three groups and learned about the different departments.

The children practised soldering in Development, and in Tool Manufacture they were allowed to work with a variety of tools and

machines. They even made a bottle opener. Finally, in Production, they turned a residual current circuit-breaker into a ‘money-saving switch’ – i. e. a piggy bank.

Needless to say, a fun morning was had by all! ■

### PUBLISHER

## Doepke

Schaltgeräte GmbH  
Stellmacherstraße 11  
26506 Norden

@ — info@doepke.de  
T — +49 (0) 49 31 18 06-0  
F — +49 (0) 49 31 18 06-101

www — doepke.de

### QUOTE OF THE QUARTER

*It isn't where  
you came from,  
it's where you're  
going that counts.*

*Ella Fitzgerald*

### DATES/NOTES

#### de-Normentagung

10–11 July 2019, Munich

#### Doepke works holidays

15–26 July 2019 Our Production department will be closed during this time. You can contact all other departments as usual.

#### efa, Hall 5, stand G 21

18–20 September 2019, Leipzig