

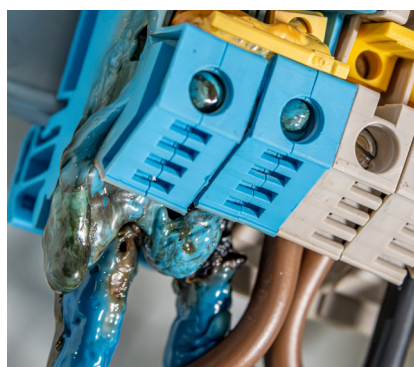
Flyer Set: Doepke products





Focus on the neutral conductor switching devices with mains monitoring

New!



One of the most common causes of damage to electronic equipment is an interruption of the neutral conductor. If the line conductors are loaded asymmetrically, this results in a neutral point shift, which in turn causes overvoltage or under-voltage. The consequences may include damage or malfunction of connected electronic devices, or, in the worst case, fires.

The solution: safety through mains monitoring

Residual current circuit-breakers (DFS) and main switches (DHS) of the NU series monitor all line conductors and the neutral conductor on the supply side. The DHS NUS main switch additionally monitors the neutral rail using a dedicated sensor. In the event of a fault, all mains conductors are disconnected on NU devices, while on the DHS NUS only the line conductors are disconnected.

Product name	Item number
DFS 6 040-4 / 0,03 - A NU	09134801
DFS 6 063-4 / 0,03 - A NU	09144801
DFS 6 040-4 / 0,03 - B SK NU	09134899
DFS 6 063-4 / 0,03 - B SK NU	09144899
DHS 6 - 063 NU	09900019
DHS 6 - 063 NUS	09900020



DFS Type AC

*The origin of the residual current circuit-breaker:
Type AC residual current circuit-breakers provide reliable protection against AC residual currents only, independent of the mains voltage. Made in Germany and individually tested, the DFS AC devices from Doepke guarantee safety.*

Key facts:

- minimal power dissipation
- large terminals measuring up to 50 mm²
- double-sided two-tier terminals for large conductor cross-sections and busbar
- rated currents up to 125 A
- high short-circuit resistance

Areas of application:

- lighting circuits with incandescent lamps
- heating coils, electric heaters, hotplates

IEC standards:

- Product: IEC 61008-1
- Set-up: IEC 60364 Parts 4-41 and 5-53





DFS Type A

The standard protection for a wide range of applications:

The DFS A devices from Doepke provide reliable protection against pulsating and AC residual currents of the power frequency, independent of the mains voltage. Made in Germany and individually tested, they guarantee safety and are available in various designs for maximum versatility.

Key facts:

- minimal power dissipation
- large terminals measuring up to 50 mm²
- double-sided two-tier terminals for large conductor cross-sections and busbar
- rated currents up to 125 A
- high short-circuit resistance
- covers a wide range of needs thanks to various designs with remote-tripping function, special voltages/frequencies, models for mining applications, models for points heating systems, selective models and much more

Areas of application:

- for socket-outlet circuits and classic lighting, circuits with fan motors, dimmer switches, residential and functional buildings

IEC standards:

- Product: IEC 61008-1
- Set-up: IEC 60364 Parts 4-41 and 5-53





DFS Type F

The future-proof residual current protection for homes and businesses: The DFS F devices provide reliable protection against pulsating and AC residual currents, as well as residual currents with mixed frequencies, independent of the mains voltage. This makes them the best way to protect modern homes and commercial premises alike. Made in Germany and individually tested for guaranteed protection.

Key facts:

- minimal power dissipation
- large terminals measuring up to 50 mm²
- double-sided two-tier terminals for large conductor cross-sections and busbar
- short-time delayed and lightning-resistant
- rated currents up to 125 A
- high short-circuit resistance

Areas of application:

- for circuits with consumers with single-phase frequency converters (such as washing machines, air conditioning units, drill hammers) or single-phase switched-mode power supplies (LED lighting).

IEC standards:

- **Product:** IEC 61008-1, IEC 62423
- **Set-up:** IEC 60364 Parts 4-41 and 5-53





DFS Type B

*The all-rounder for construction sites, commercial and industrial premises: The DFS B devices from Doepke offer reliable, AC-DC sensitive residual current protection **up to 150 kHz**. They are the ideal solution for all devices that can generate smooth residual direct currents in the event of a fault, as well as for consumers with frequency-modulated outputs.*

Key facts:

- detects residual currents of all types **up to 150 kHz**
- minimal power dissipation
- large terminals measuring up to 50 mm²
- double-sided two-tier terminals for large conductor cross-sections and busbar
- short-time delayed and lightning-resistant
- LED operation indicator
- rated currents up to 125 A
- high short-circuit resistance
- diverse range of products

Areas of application:

- construction sites, industrial and commercial premises, electric circuits for cranes, pumps, fans, compressors, vibrators, lifts, escalators

IEC standards:

- Product: IEC 61008-1, IEC 62423
- Set-up: IEC 60364 Parts 4-41 and 5-53





DFS Type A KV

Safe and reliable system availability:

The short-time delayed DFS A KV devices have extremely low sensitivity to excessive inrush currents or surge currents during thunderstorms. This reduces false tripping and increases the operating time of the electrical installation.

Key facts:

- protection against pulsating and AC residual currents, independent of mains voltage
- short-time delayed and lightning-resistant
- high immunity against surge currents and mains-voltage-operated secondary current impulses
- minimal power dissipation
- large terminals measuring up to 50 mm²

Areas of application:

- installations with long cable lengths behind the RCCB,
- installations with a large number of fluorescent lamps, LED lighting, computer installations and solariums

IEC standards:

- **Product:** IEC 61008-1
- **Set-up:** IEC 60364 Parts 4-41 and 5-53





HD (heavy duty)

The specialist for harsh environments:

The HD residual current circuit-breakers from Doepke are highly resistant to heat, cold, moisture, corrosive gases and dust.

Key facts:

- exceptional protection thanks to special alloys and stainless steel switch mechanism
- non-stop protection, including in the de-energised state
- high operating temperature range up to 60 °C
- virtually all DFS devices are available in the HD special design

Areas of application:

- building-site distribution boards, electrical distribution systems in industrial premises, agricultural facilities, swimming pools, paint shops, printing shops, cold stores, electric charging stations

IEC standards:

- Product: IEC 61008-1
- Set-up: IEC 60364-5-51



Frost



Heat



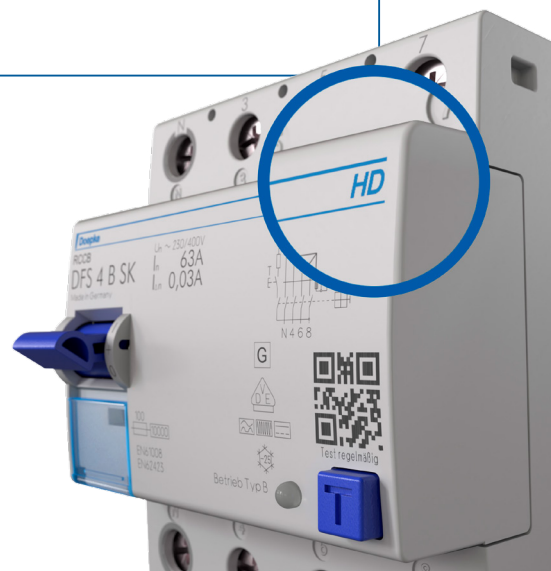
Dust



Moisture



Corrosive gases



DFS 4 A HT

Heat-resistant safety: The DFS 4 A HT (high temperatures) is particularly resistant to high temperatures. The switch functions reliably up to an ambient temperature of 75 °C with no limitations. Made in Germany and individually tested for guaranteed protection.

Key technical facts:

- pulsating current-sensitive and AC current-sensitive
- delivers its full rated current of 40 A at temperatures up to 75 °C
- no derating at temperatures up to 75 °C
- resistant to cold, dust, corrosive gases and moisture

Areas of application:

- outdoor distributors exposed to high levels of solar radiation, electric charging stations and wall boxes (if fitted with 6 mA DC protection), pitch heating in stadiums, electrical installations in hot locations

IEC standards:

- Product: IEC 61008-1
- Set-up: IEC 60364 Parts 4-41 and 5-53





DFS 4 040-4/0.01-A

Safety for hot tubs and bathing facilities: Where people, water and electricity meet, 10 mA residual current circuit-breakers are there to ensure maximum safety.

Doepke offers these devices in a two-pole version and now also a four-pole version with a rated current of 40 A.

Key facts:

- pulsating current-sensitive and AC current-sensitive Type A residual current circuit-breaker
- increased level of protection for wet rooms
- rated currents up to 40 A for pump motors in swimming pools and hot tubs
- made in Germany and individually tested for guaranteed protection

Areas of application:

- wherever people, water and electricity are found in one place: swimming pools, hot tubs, bathing facilities

IEC standards:

- Product: IEC 61008-1
- Set-up: IEC 60364-7-701





DFS Audio

Safety without loss of sound: The DFS Audio provides reliable protection against pulsating and AC residual currents, as well as residual currents with mixed frequencies. Acoustically, it acts as if it were not there at all, ensuring flawless sound. Great news for sound engineers, musicians and audiophiles alike.

Key facts:

- short-time delayed and lightning-resistant
- minimal power dissipation
- unrestricted current flow thanks to high-quality components (solid silver-plated terminals and internal conductors made of high-purity, low-oxygen copper)
- extremely low-impedance design
- no inductive fractions in regular operation
- visual appeal: vinyl black with pearl white lettering and gold-plated connecting screws

Areas of application:

- recording and television studios concert halls, electric circuits for high-end hi-fi equipment

IEC standards:

- Product: IEC 61008-1
- Set-up: IEC 60364 Parts 4-41 and 5-53

"I never imagined that an RCCB could have such an

impact on the sound."

(Michael Helmke, electrician and audiophile)

"It's truly **impressive**. A bigger sound stage, more PRaT (pace, rhythm and timing) and **the bass is to die for.**"

(Rocoo, Spain, user on whatsthebesteforum.com)



www-doepke.de



DFS 4 EV

Safe electric mobility: When charging electric cars, residual direct currents greater than 6 mA may occur. These are not reliably detected by Type A or F residual current circuit-breakers. The EV RCCBs from Doepke have an additional device for detecting these residual currents, thus offering compact safety for charging stations and wall boxes.

Key facts:

- reliable protection against residual currents, even residual direct currents greater than 6 mA
- preserves the protective function of upstream residual current devices
- compact solution in a single device
- available as Type A and Type F, in an HD version for harsh environments, with an emergency switching-off function for centrally switching off multiple charging devices
- made in Germany and individually tested for guaranteed protection

Areas of application:

- charging stations and wall boxes for electric vehicles

IEC standards:

- Product:** IEC 61008-1, IEC 62955
- Set-up:** IEC 60364-7-722



With DFS EV: all-round protection even for upstream RCCBs



Type A RCD: no protection against residual direct currents, upstream residual current devices can become "blind"



$I\Delta n_{DC} = 6 \text{ mA}$



DFS PV

The DFS PV was specially developed for keeping photovoltaic installations safe. In these installations, inverters convert the generated direct current into alternating current. This can also result in smooth residual direct currents, which are reliably detected by the AC-DC sensitive DFS PV.

Key facts:

- meets the regulatory requirements for operating facilities at risk of fire
- high system availability thanks to short-time delay optimised for photovoltaic installations
- easy allocation in the control cabinet thanks to clear labelling
- energy-efficient thanks to minimal power dissipation
- also available in N-right, HD and two-pole version, as well as a compact RCBO (DRCBO PV)

Areas of application:

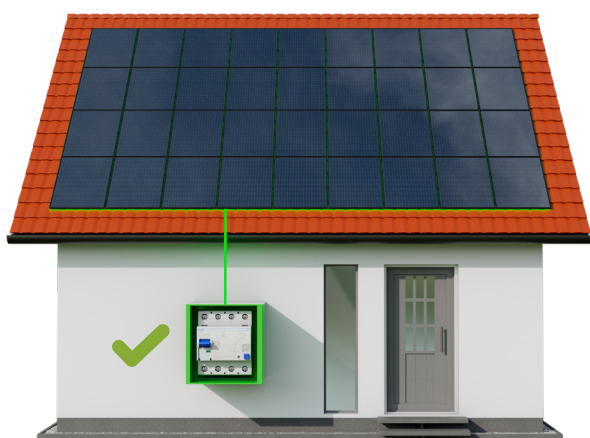
- circuits for photovoltaic installations

IEC standards:

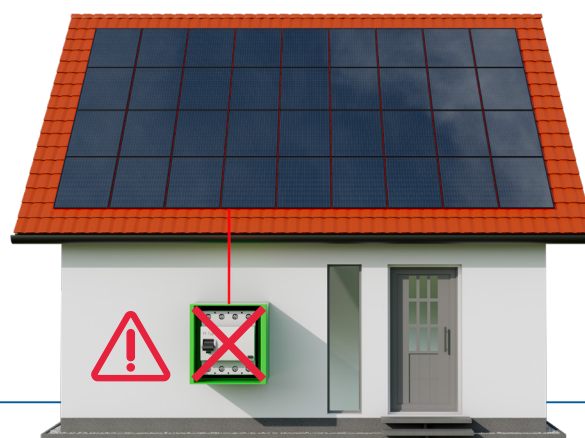
- Product: IEC 61008-1, IEC 62423
- Set-up: IEC 60364 Parts 4-41 and 5-53



With DFS PV: all-round protection and greater system availability thanks to short-time delay



Type A RCD: no protection against smooth residual direct currents, risk of false tripping when switching on





DFS HP

The DFS HP was specially developed for keeping heat pumps safe. Three-phase frequency converters in heat pumps can cause smooth residual direct currents – these are reliably detected by the AC-DC sensitive DFS HP. Made in Germany and individually tested for guaranteed protection.

Key facts:

- meets the requirements of most heat pump manufacturers
- high system availability thanks to short-time delay optimised for heat pump installations
- easy allocation in the control cabinet thanks to clear labelling
- energy-efficient thanks to minimal power dissipation
- also available in N-right, HD and two-pole version, as well as a compact RCBO (DRCBO HP)

Areas of application:

- electric circuits with a heat pump

IEC standards:

- Product: IEC 61008-1, IEC 62955
- Set-up: IEC 60364 Parts 4-41 and 5-53



With DFS HP: all-round protection and greater system availability thanks to short-time delay



Type A RCD: no protection against smooth residual direct currents, risk of false tripping when switching on





Doepke

Emergency switching off

In case of emergency: switch off! Our DFS residual current circuit-breakers and DHS switch-disconnectors with emergency switching-off function completely disconnect installation components and consumers from the electrical supply at all poles when a connected emergency stop button is pressed.

Key facts:

- emergency switching-off circuit secure against wire breakage
- remains closed in the event of a voltage drop
- supports the connection of multiple emergency stop buttons
- available as Type A or Type B residual current circuit-breaker and as switch-disconnector
- EV design optimised for wall boxes and charging stations
- optionally available remote actuator for conveniently switching devices back on (FANA)

Areas of application:

- for electrical experimental equipment in schools, laboratories and research institutions, charging stations, especially in underground car parks

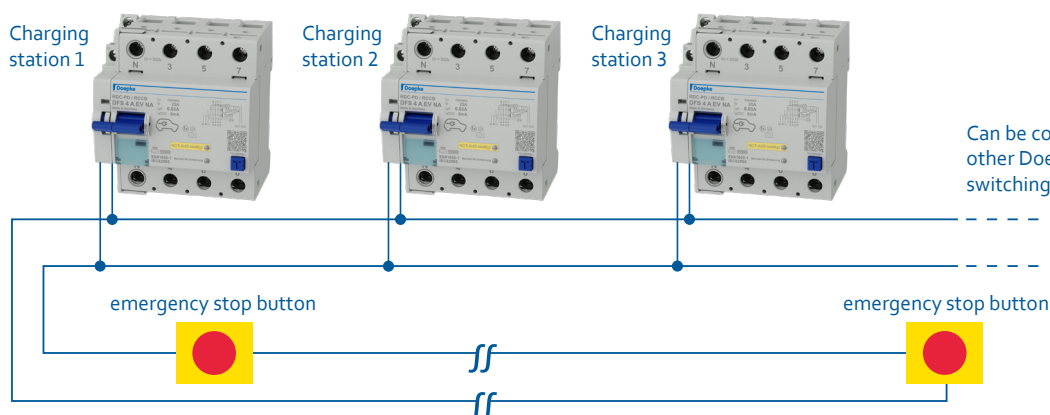
IEC standards:

- Product: IEC 61008-1, IEC 60947-3
- Set-up: IEC 60364-4-41



Safe and reliable disconnection with the emergency switching-off function. →

Example with the DFS 4 A EV NA:





DFL 8

*Safety for high currents: DFL 8 devices are circuit-breakers with residual current trip (CBR) that provide reliable protection against residual currents at rated currents of **up to 250 A**.*

Key facts:

- high short-circuit switching capacity
- terminals for large line sections up to 185 mm²
- integrated auxiliary switch
- adjustable response delay
- available as Type A and Type B residual current
- with adjustable rated residual current depending on design

Areas of application:

- large crane systems, hospitals with MRI equipment, staggered supply installations with high short-circuit power in functional buildings and industrial facilities

IEC standards:

- **Product:** IEC 60755, IEC 60947-2
- **Set-up:** IEC 60364 Parts 4-41 and 5-53





DPRCD-M

Mobile personal protection: The DPRCD-M offers added safety when 400 V devices are connected to existing installations with unknown protective measures. The compact module must be installed in a suitable enclosure and can then be used as a portable residual current device (PRCD) between the power socket and the consumer.

Key facts:

- AC-DC sensitive residual current protection
- 6 mA DC threshold ensures the protective function of upstream residual current circuit-breakers
- protective conductor and mains conductor monitoring
- all-pole disconnection, including protective earth conductor
- under-voltage release, external residual current detection
- optional anti-clockwise rotating field lock
- short-time delayed and lightning-resistant
- can be used in enclosures from a wide range of manufacturers
- recommended by the German Social Accident Insurance Institution for the Construction Sector (BG BAU)

Areas of application:

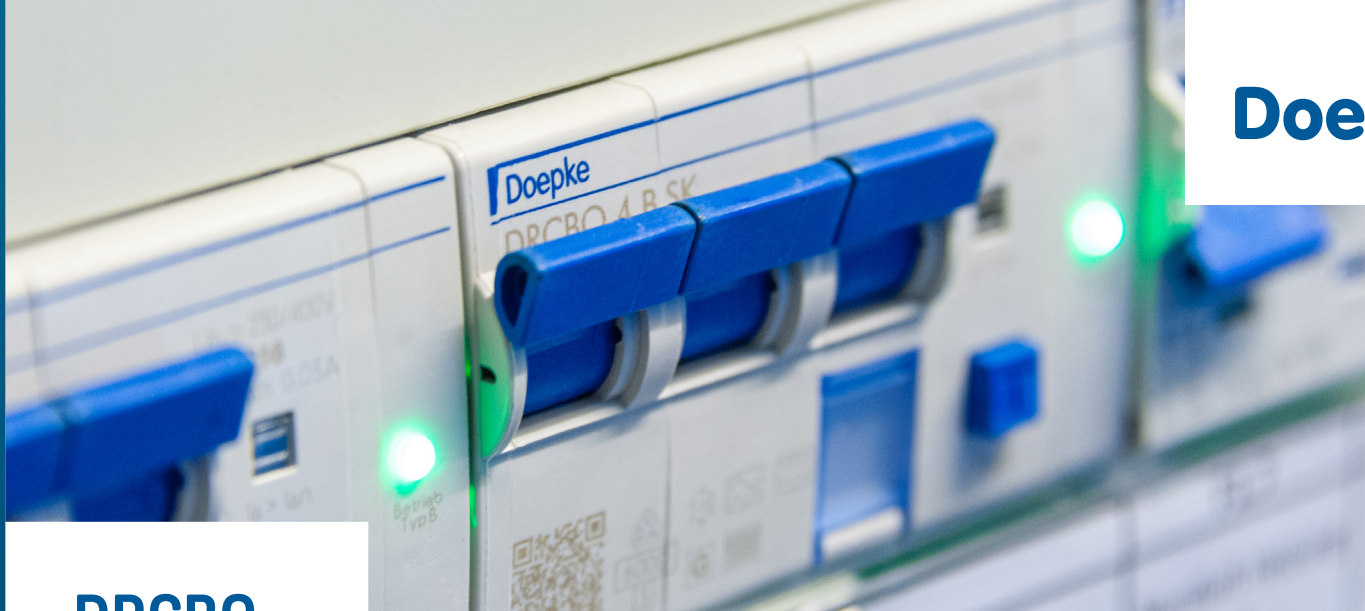
- funfairs, trade fairs, concerts, event technology, rescue operations, construction sites

IEC standard:

- Product: IEC 61540



$I_{\Delta nDC} = 6 \text{ mA}$



DRCBO

Our DRCBO 3 and 4 RCBOs are the number one choice for reliable protection against residual currents, short-circuits and overloads in electric circuits. With the DRCBO, you save space and can divide up the electrical system so that in the event of a fault, only the affected part of the circuit is switched off.

Key facts:

- available as Type AC, A, F and B residual current
- available with tripping characteristics B and C, DRCBO 3 F also with D characteristics for electric circuits with machines, transformers or capacitors
- DRCBO 4 B: module width of just 2.5 or 4.5 units
- a variety of product versions for numerous areas of application
- simplified troubleshooting and high system availability
- high short-circuit resistance
- easy installation and removal thanks to locking sliders

Areas of application:

- wide range of possible applications in residential buildings, commercial and industrial premises as a space-saving combined solution

IEC standards:

- **Product:** IEC 61009-1, IEC 62423
- **Set-up:** IEC 60364 Parts 4-41 and 5-53

Compact design for
Type B:



Module width of 2.5 instead of 4



Module width of 4.5 instead of 6



DAFDD

DAFDD fire protection switches offer safety on three levels: residual current protection, line protection and protection against arc faults. They detect serial and parallel arc faults, thereby providing comprehensive protection against the risk of fire from the electrical installation.

Key facts:

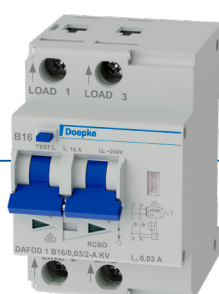
- unites three functions in a single unit: RCCB + MCB + arc fault detection
- reduces the risk of fire from the electrical installation
- module width just 3 units
- integrated overvoltage protection (> 270 V)
- self-monitoring of AFD unit – no manual function test required
- easy troubleshooting thanks to LEDs that indicate what caused the tripping

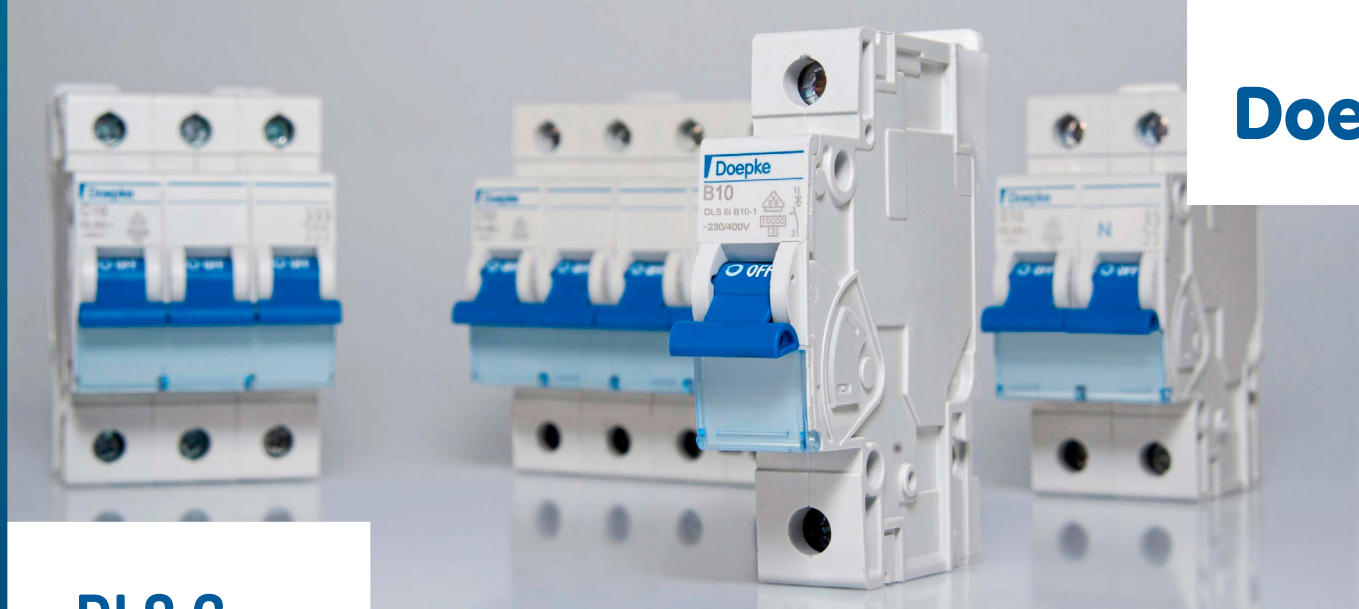
Areas of application:

- bedrooms in care facilities, locations with an elevated fire risk due to the materials stored (e.g. timber processing) or where there is a danger to valuable items (e.g. museums)

IEC standards:

- Product: IEC 62606
- Set-up: IEC 60364-4-42





DLS 6

Reliable safety in the event of short-circuits and overloading: The DLS 6 miniature circuit-breakers protect cables and lines by disconnecting safely, even if the toggle is blocked. With a wide selection of versions and accessories available to choose from, these devices can be used in virtually any area of application.

Key facts:

- made using high-quality materials
- trip-free mechanism guarantees safe disconnection
- label window and clearly legible marking of the ON/OFF position
- very low heat dissipation
- compact dimensions for easy assembly
- can be connected to a large number of additional devices, such as operating current trips and auxiliary/fault sensors

Areas of application:

- line protection in all scenarios: residential, commercial, industrial, infrastructure Red DLS 6i RT: safety lighting, fire alarm systems, smoke and heat ventilation systems

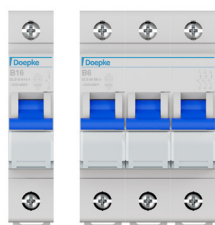
Standards:

- **Product:** IEC 60898-1, DIN EN 60898-1, IEC 60947-2, DIN EN 60947-2
- **Set-up:** IEC 60364



Miniature circuit-breaker product series:

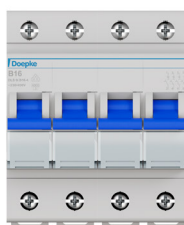
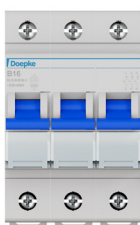
DLS 6h



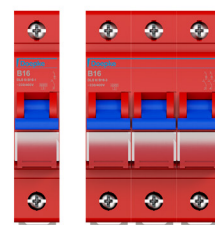
DLS 6hsl



DLS 6i



DLS 6i RT





e.Guard

Predictive maintenance based on smart residual current monitoring. Doepke e.Guard constantly monitors the residual currents of the electrical installation, meaning that even faults with a gradual onset can be detected and action can be taken in good time.

Key facts:

- smart, modular system
- residual current monitors (RCM) + IoT gateway + software (optionally cloud-based)
- e.Guard RCM available as modular DIN rail component or for adapter installation
- available as Type B or Type F residual current
- Type B: detects frequencies from 0 to 100 kHz in 8 frequency ranges
- Type F: detects frequencies from 10 to 100 kHz in 7 frequency ranges
- individually adjustable threshold values
- potential-free contacts for alarms or disconnection
- optional: machine learning for even earlier warnings in the event of changes

Areas of application:

- industrial production facilities, operating facilities at risk of fire, logistics and transport, processing industries, renewable energy

IEC standards:

- Product: IEC 62020-1:2021
- Set-up: IEC 60364-6, IEC 60364-4-41





DRCA 1

RCCBs that trip sporadically are a real headache for commercial and industrial operations – and they cost money too. This tripping is often caused by leakage currents that occur during operation. The residual current analysis system DRCA 1 helps customers to choose the right switches and fine-tune their installations.

Key facts:

- measures, analyses and evaluates leakage currents from 10 Hz to 100 kHz in commercial and industrial installations
- provides real-time analysis
- enables long-term measurement, logging and evaluation
- helps customers to choose the right RCCB in order to optimise their installation
- increases the availability of the electrical installation

Areas of application:

- electrical installations in commercial and industrial operations with frequency converters, switched-mode power supplies

IEC standard:

- Product: IEC 61010-1





DHS switch-disconnector

Installation protection and safety during maintenance: The Doepke DHS switch-disconnectors and main switches disconnect electrical installations completely from the electrical supply at all poles. They also switch under load or in the event of overload. To protect consumers, with the four-pole version the neutral conductor is switched on in advance and switched off afterwards.

Key facts:

- compact design with 2 NO or 4 NO contact assignment
- high short-circuit current capability and high switching capacity
- large terminals measuring up to 50 mm²
- rated currents up to 125 A
- auxiliary switch available for displaying the switching status
- can be used with remote actuators

Areas of application:

- universal use in commercial, industrial and residential applications; particularly suitable for use in main distribution systems of highly distributed supply networks, e.g. campsites, marinas, allotment gardens and much more

Alternatively, Doepke also offers switch-disconnectors featuring a step function when switching on. The RH series with external certification is available in designs ranging from one-pole to four-pole.

IEC standard:

- Product: DIN EN IEC 60947-3





Installation contactors

Targeted system control: The HS installation contactors are electromagnetically operated switches for the frequent switching of large currents. They ensure a galvanic separation between the control circuit and the connected electric circuit.

Key facts:

- compact design
- high electrical and mechanical endurance
- minimal power dissipation
- welding-resistant contacts
- large number of NC/NO combinations
- the magnetic coil of the HS is suitable for continuous duty

Areas of application:

- for switching lamps, transformers, storage furnaces, motors
- low-noise version for industrial and operating facilities and workshops
- no-noise version for hotels, offices and residential buildings

IEC standards:

- Product: IEC 60947-4-1





Champ float switches

Wherever the water level needs to be kept just right, the Champ float switches from Doepke are the answer. They detect the liquid level and can, for example, control pumps or trigger an alarm if a predetermined level is reached.

Key facts:

- variants for filling, emptying, or filling and emptying
- can be used for everything from simple pumping operations to complex industrial processes
- high switching reliability thanks to low-wear ball guide
- HD design is particularly suitable for use with dirty water containing particles and grease on the surface

Areas of application:

- pumps and drainage systems; cisterns; dirty water, cooling water and wastewater tanks; sewage tanks; drinking troughs; domestic waterworks; liquid tanks in the chemical and agricultural industries





Dasy + Dasy TC

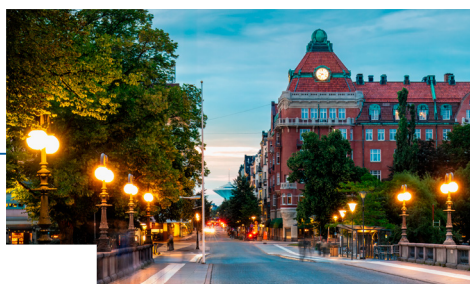
The Dasy twilight switch automatically switch on electrical consumers when it gets dark and switch them off again when it gets light. The DasyTC version has an integrated time release that allows the function to be paused overnight.

Key facts:

- versatile use
- straightforward wall and mast mounting
- easy to set up
- intuitive operation
- rotary switch on the bottom adjusts the switch-on threshold
- reliable switch-off threshold at 1.5 times the switch-on threshold
- delayed switch-off and switch-on prevent reactions to brief shadows or light

Areas of application:

- safe lighting of house façades, driveways, car parks and other outdoor areas
- decorative lighting on display windows, squares, fountains and statues





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