

# Strong and steadfast in a tough environment

- DFS HD — stainless steel latch and special alloys protect against corrosion
- resistant to corrosive gases and humidity
- high operating temperature range up to 60°C



# Special ambient conditions require special measures

Installers of electrical installations have to take care that the equipment used also works safely and reliably in tough ambient conditions, like extreme temperature fluctuations or the effects of corrosive gases. Protection equipment must also be protected in these cases. This is often done using special distribution boards with interiors that should provide the most optimal climatic conditions for problem-free, standard-compliant operation of the residual current circuit-breakers.

## Modular DIN rail components need the right micro-climate

These distribution boards offer good protection against mechanical influences and dust, for example. Nevertheless there are cases where even the best encapsulation just physically cannot keep harmful environmental influences at bay. Aggressive corrosive gases in particular, which spread through the air and work in combination with humidity to trigger chemical reactions, can attack metal. And the protective housings can't stay closed forever – at some point they will need to be opened for repair work or maintenance at the very least. Air exchange cannot be avoided then.

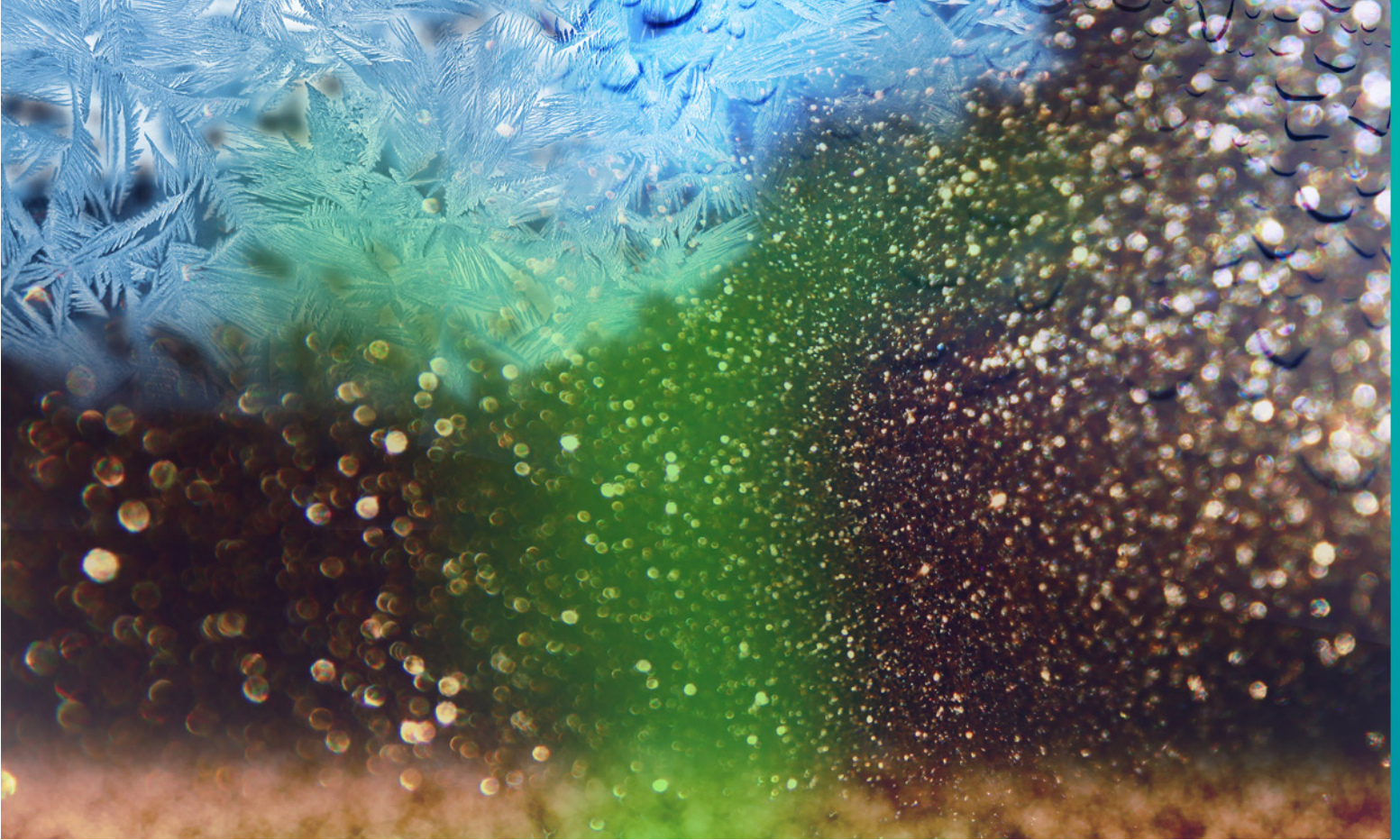
Moreover, the interior of very leak-tight distribution boards often suffers from thermal problems. While these distribution boards prevent undesired air circulation, they also stop any cooling. On the other hand, condensation and therefore the deposit of corrosive acids on cold components – especially metal parts – cannot be completely avoided. But it is precisely these metal parts that are crucial for the circuit-breaker to function properly: consider the latch and the trip, for example. Heating elements in the device are not an ideal solution because they rely on an electrical power supply. But the Doepke DFS HD is protected all the time thanks to its special design – even when disconnected from power. This is ideal, for example, in times when the building-site distribution board is between sites and not in use.

## No compromises when it comes to functional protection

Residual current circuit-breakers that are already designed for such adverse ambient conditions, such as the HD ('heavy duty') versions from Doepke, are the better solution here because they are more reliable. Thanks to their special design, these HD circuit-breakers are especially protected against corrosion. The trip in particular – the core component of the residual current circuit-breaker – is extremely durable and not sensitive to environmental



All DFS devices are available as HD (Heavy Duty) version.



influences, regardless of where it is used. The trip is supported by other high-quality components, like the latch made from robust stainless steel. The Doepke HD residual current circuit-breakers can withstand the most extreme temperature fluctuations and keep on working reliably, even when the temperature inside the sealed distribution board housing changes drastically.

Choose the circuit-breaker specialist and save yourself and your customer the hassle of implementing additional protective measures or paying unnecessary costs due to avoidable damage or downtime!

**Always available, even when the temperature rises**

When it comes to installations exposed to direct sunlight in extreme climates, such as in building-site distribution boards, cold stores or charging columns for electric vehicles, the ambient temperature range becomes an especially important consideration. All Doepke HD residual current circuit-breakers cover an extremely broad spectrum of operating temperatures.

**Versatile application**

HD residual current circuit-breakers can be used in a wide range of applications that go far beyond the industrial world. Corrosive gases in relevant concentrations can be found in many fields, such as in agriculture, companies that work with solvents (like printing and paint shops) and in swimming pools and spas.

When choosing a Doepke HD circuit-breaker, there's no need to consider limitations in the technical data: in principle all Doepke residual current circuit-breakers are available in an HD version as well – in type A as well as AC-DC sensitive type B.

# Premium stainless steel: quality pays for itself

When it comes to residual current circuit-breakers, the latch in particular must be reliable. If it corrodes, the function of the entire protective device is put at risk. Almost any alloy will pass factory tests and function well at first. Quality disparities only manifest themselves after long-term use. But you can always rely on Doepke HD latches: they are made of robust, durable stainless steel and keep on working 100% reliably in aggressive environments even years after they are commissioned.

## Standards and guidelines

### DIN EN 61008-1 (VDE 0664 Part 10)

Definition of general requirements for operating RCCBs, but limited to temperature, humidity and the magnetic field.

### VDE 0100 Part 510

The installer of an electrical installation is responsible for choosing equipment that is suitable for the relevant ambient conditions, including additional protection if necessary.

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Partner



## Doepke

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