

Main Catalogue



**50 Years
of Innovation
and German
Quality**

Residual Current Circuit-Breakers (RCCB)

Circuit-Breakers with Residual Current Device (CBR)

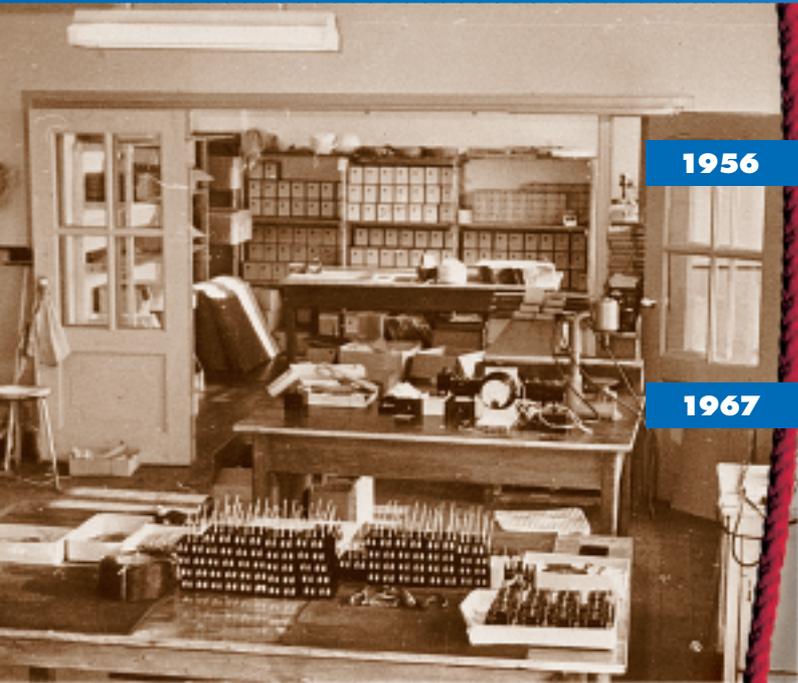
Residual Current Monitors (RCM)

RCCBs with integral Overcurrent Protection (RCBO)

Miniature Circuit-Breakers (MCB)

Further DIN-Rail Mounted Devices

Twilight Switches



1956

50 years Doepke:

1956-2006

For 50 years the reliable partner of the electrical profession, specialist dealers, trade and industry.

In 1956, with only modest means but boundless energy and determination, the founding fathers of our company carried out pioneering work in the field of electrical installations.

The first residual current circuit-breakers were developed, manufactured and marketed.

From that day forward these devices were to protect people and animals from dangerous contact voltages.

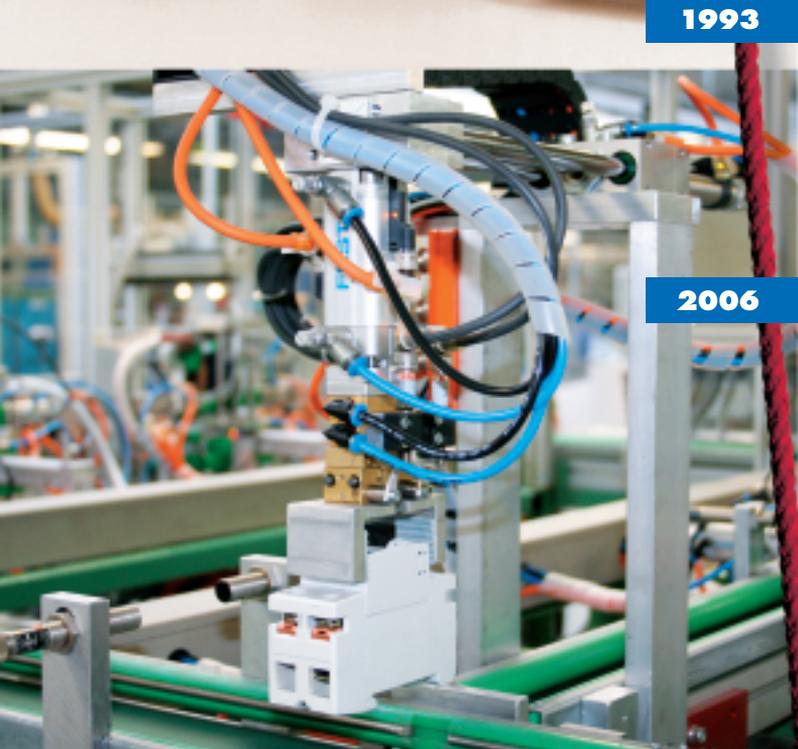


1972

Since these beginnings our company has become renowned as a specialist for residual current circuit-breakers and special solutions in residual current protection technologies – and not just at home, but across the globe!

Over 15 trade agencies in Germany, plus more than 30 overseas, are working on our behalf.

In addition, subsidiaries in Great Britain and Dubai are providing the gateways to future growth markets.



1986

You will thus find in our product range not only the most extensive RCCB programme worldwide, but also other types of RCDs, such as RCBOs, RCMs and CBRs. Further components, including MCBs, surge voltage arresters, dimmers, twilight switches and meters, complete our programme to meet almost every requirement of conventional electrical installation, as well as for the simple implementation of complex installations, e. g. with central and group switching functions, visualisation of the operating status, or for remote operation, one of our two building automation systems, SI or Dupline – perhaps in combination with our biometric door access control system FIS, will provide the perfect solution.

1993

Today we can offer the right solution for almost any application in each and every one of these diverse fields.

2006

50 Years Innovation a Tradition

The headquarters of our company, Doepke Schaltgeräte GmbH & Co. KG, is located in the idyllic town of Norden, at the western end of Germany's North Sea coastline.

This is also the seat of administration, management, development and production with over 200 employees.

One of our recipes for success lies in this mutual arrangement of the working environment and the harmonious cooperation that it engenders.



The residual current circuit-breakers as well as all electronic components are manufactured at our Norden works.

Our second facility at Bickenriede in Thuringia, which was founded in 1992, is responsible for the production of miniature circuit-breakers.

From the initial idea up to the finished device, we offer products and system solutions complete from one source.

All in-house departments contribute jointly – at each and every phase of production – to the high product quality and the perfect interplay of the components: from the development, construction and tooling stages, via pressroom and plastic injection departments, the trip devices and electronics manufacturing, right up to the final testing.

This adds up to an in-house production involvement of over 90 %.

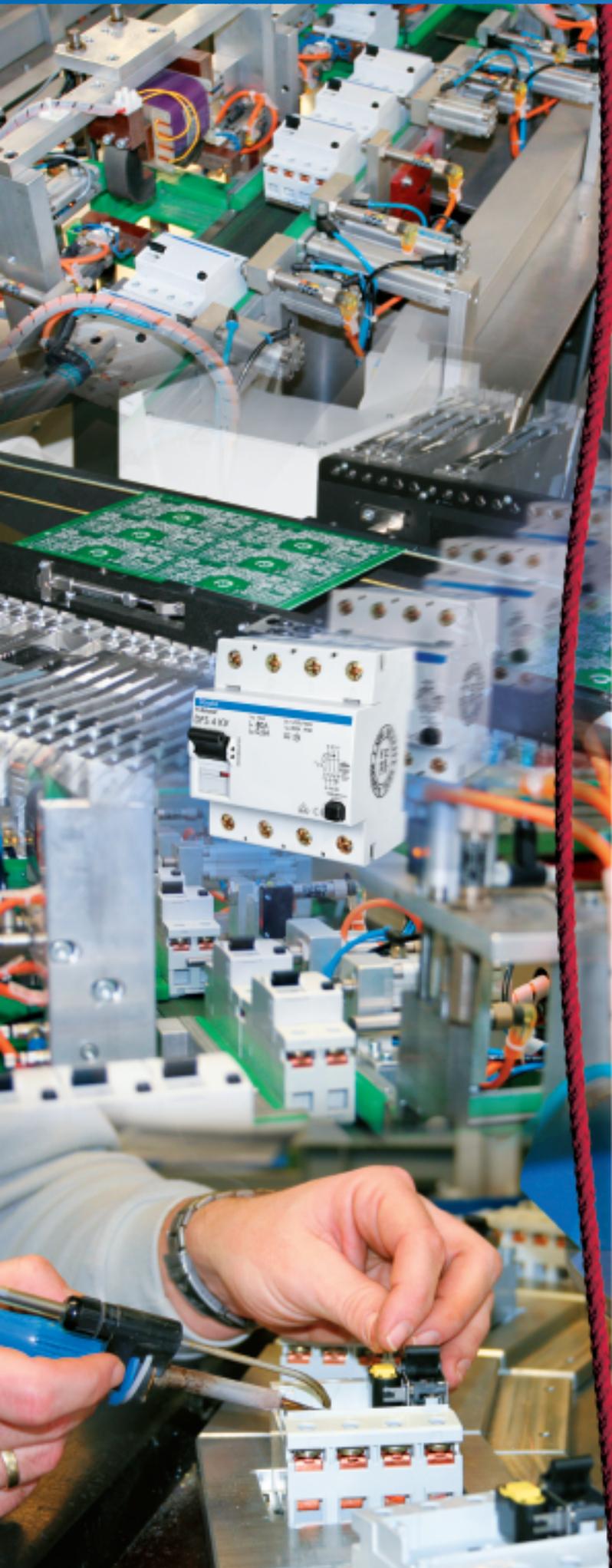
Since 1995 our quality management system has been certified for conforming to DIN EN ISO 9001.

Our entire enterprise has thus been awarded an „independent“ quality seal of approval.



In addition to meeting international IEC and European EN safety standards, our products also offer the general advantages of uniform design in distribution, ease of handling, and short installation times for the electrician.





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2006

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Efficient

Reliable

Flexible

Future-orientated

Independent



**50 Years
of Innovation
and German Quality**

Residual Current Circuit-Breaker DFS 2 A

sensitive to residual currents Type A



Designation	Article-No.
16 A	
DFS2 016-2/0,01-A	XX 112 601
DFS2 016-2/0,03-A	XX 114 601
DFS2 016-2/0,10-A	XX 115 601
DFS2 016-2/0,30-A	XX 116 601
DFS2 016-2/0,50-A	XX 117 601
25 A	
DFS2 025-2/0,01-A	XX 122 601
DFS2 025-2/0,03-A	XX 124 601
DFS2 025-2/0,10-A	XX 125 601
DFS2 025-2/0,30-A	XX 126 601
DFS2 025-2/0,50-A	XX 127 601
40 A	
DFS2 040-2/0,01-A	XX 132 601
DFS2 040-2/0,03-A	XX 134 601
DFS2 040-2/0,10-A	XX 135 601
DFS2 040-2/0,30-A	XX 136 601
DFS2 040-2/0,50-A	XX 137 601
63 A	
DFS2 063-2/0,03-A	XX 144 601
DFS2 063-2/0,10-A	XX 145 601
DFS2 063-2/0,30-A	XX 146 601
DFS2 063-2/0,50-A	XX 147 601
80 A	
DFS2 080-2/0,03-A	XX 154 601
DFS2 080-2/0,10-A	XX 155 601
DFS2 080-2/0,30-A	XX 156 601
DFS2 080-2/0,50-A	XX 157 601
100 A	
DFS2 100-2/0,03-A	XX 164 601
DFS2 100-2/0,10-A	XX 165 601
DFS2 100-2/0,30-A	XX 166 601
DFS2 100-2/0,50-A	XX 167 601
125 A	
DFS2 125-2/0,03-A	XX 174 601
DFS2 125-2/0,10-A	XX 175 601
DFS2 125-2/0,30-A	XX 176 601
DFS2 125-2/0,50-A	XX 177 601

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

Features:

- 2-pole
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 2 A is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Applications:

Power supply of domestic and utility buildings as well as industrial installations with TN-S and TN-C-S systems. In IT nets the RCCBs in the DFS 2 A series can be provided for disconnecting in the event of a second fault.

They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 2 terminal cover, sealable



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Residual Current Circuit-Breakers (RCCB), 2-pole

Residual Current Circuit-Breaker DFS 2 AC sensitive to residual currents Type AC

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

Features:

- 2-pole
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC residual currents (Type AC)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 2 AC is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Applications:

Power supply of domestic and utility buildings as well as industrial installations with TN-S and TN-C-S systems. In IT nets the RCCBs in the DFS 2 AC series can be provided for disconnecting in the event of a second fault.

They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 2 terminal cover, sealable



Designation	Article-No.
16 A	
DFS2 016-2/0,01-AC	XX 112 602
DFS2 016-2/0,03-AC	XX 114 602
DFS2 016-2/0,10-AC	XX 115 602
DFS2 016-2/0,30-AC	XX 116 602
DFS2 016-2/0,50-AC	XX 117 602
25 A	
DFS2 025-2/0,01-AC	XX 122 602
DFS2 025-2/0,03-AC	XX 124 602
DFS2 025-2/0,10-AC	XX 125 602
DFS2 025-2/0,30-AC	XX 126 602
DFS2 025-2/0,50-AC	XX 127 602
40 A	
DFS2 040-2/0,01-AC	XX 132 602
DFS2 040-2/0,03-AC	XX 134 602
DFS2 040-2/0,10-AC	XX 135 602
DFS2 040-2/0,30-AC	XX 136 602
DFS2 040-2/0,50-AC	XX 137 602
63 A	
DFS2 063-2/0,03-AC	XX 144 602
DFS2 063-2/0,10-AC	XX 145 602
DFS2 063-2/0,30-AC	XX 146 602
DFS2 063-2/0,50-AC	XX 147 602
80 A	
DFS2 080-2/0,03-AC	XX 154 602
DFS2 080-2/0,10-AC	XX 155 602
DFS2 080-2/0,30-AC	XX 156 602
DFS2 080-2/0,50-AC	XX 157 602
100 A	
DFS2 100-2/0,03-AC	XX 164 602
DFS2 100-2/0,10-AC	XX 165 602
DFS2 100-2/0,30-AC	XX 166 602
DFS2 100-2/0,50-AC	XX 167 602
125 A	
DFS2 125-2/0,03-AC	XX 174 602
DFS2 125-2/0,10-AC	XX 175 602
DFS2 125-2/0,30-AC	XX 176 602
DFS2 125-2/0,50-AC	XX 177 602



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Residual Current Circuit-Breaker DFS 2 A KV / DFS 2 AC KV

sensitive to residual currents Type A and Type AC, increased surge-current resistant



10000 KV EN 61008

Designation	Article-No.
16 A	
DFS2 016-2/0,03-A KV	XX 114 609
DFS2 016-2/0,10-A KV	XX 115 609
DFS2 016-2/0,30-A KV	XX 116 609
DFS2 016-2/0,50-A KV	XX 117 609
25 A	
DFS2 025-2/0,03-A KV	XX 124 609
DFS2 025-2/0,10-A KV	XX 125 609
DFS2 025-2/0,30-A KV	XX 126 609
DFS2 025-2/0,50-A KV	XX 127 609
40 A	
DFS2 040-2/0,03-A KV	XX 134 609
DFS2 040-2/0,10-A KV	XX 135 609
DFS2 040-2/0,30-A KV	XX 136 609
DFS2 040-2/0,50-A KV	XX 137 609
63 A	
DFS2 063-2/0,03-A KV	XX 144 609
DFS2 063-2/0,10-A KV	XX 145 609
DFS2 063-2/0,30-A KV	XX 146 609
DFS2 063-2/0,50-A KV	XX 147 609
80 A	
DFS2 080-2/0,03-A KV	XX 154 609
DFS2 080-2/0,10-A KV	XX 155 609
DFS2 080-2/0,30-A KV	XX 156 609
DFS2 080-2/0,50-A KV	XX 157 609
100 A	
DFS2 100-2/0,03-A KV	XX 164 609
DFS2 100-2/0,10-A KV	XX 165 609
DFS2 100-2/0,30-A KV	XX 166 609
DFS2 100-2/0,50-A KV	XX 167 609
125 A	
DFS2 125-2/0,03-A KV	XX 174 609
DFS2 125-2/0,10-A KV	XX 175 609
DFS2 125-2/0,30-A KV	XX 176 609
DFS2 125-2/0,50-A KV	XX 177 609

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations. Due to their response delay the series DFS 2 A KV / DFS 2 AC KV RCCBs are considerably less sensitive to pulsed, transient residual currents than RCCBs without delay feature. They thus permit the uninterrupted running of installations where residual current surges can arise from switching actions or lightning strikes. The tripping times for non-delayed RCCBs as demanded by national and international design regulations are also met by the devices of the DFS 2 A KV / DFS 2 AC KV series. They can therefore always be used in place of a standard circuit-breaker.

Features:

- 2-pole
- Limited sensitivity to residual current surges
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Sensitive to AC residual currents (Type AC)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 2 A KV / DFS 2 AC KV is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Residual Current Circuit-Breakers (RCCB), 2-pole

Applications:

Power supply of domestic and utility buildings, as well as industrial installations with TN-S and TN-C-S systems, where transient leakage currents would unnecessarily trip standard RCCBs, such as e.g.:

- Installations with long cable length downstream of the RCCB
- Lighting systems with many fluorescent lamps (> 20 lamps)
- Computer installations
- Solaria
- X-ray equipment
- Installations with very long supply cables to loads

They cannot be used in TN-C nets or in installations in which electronic equipment can give rise to DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 2 terminal cover, sealable



Designation	Article-No.
16 A	
DFS2 016-2/0,03-AC KV	XX 114 610
DFS2 016-2/0,10-AC KV	XX 115 610
DFS2 016-2/0,30-AC KV	XX 116 610
DFS2 016-2/0,50-AC KV	XX 117 610
25 A	
DFS2 025-2/0,03-AC KV	XX 124 610
DFS2 025-2/0,10-AC KV	XX 125 610
DFS2 025-2/0,30-AC KV	XX 126 610
DFS2 025-2/0,50-AC KV	XX 127 610
40 A	
DFS2 040-2/0,03-AC KV	XX 134 610
DFS2 040-2/0,10-AC KV	XX 135 610
DFS2 040-2/0,30-AC KV	XX 136 610
DFS2 040-2/0,50-AC KV	XX 137 610
63 A	
DFS2 063-2/0,03-AC KV	XX 144 610
DFS2 063-2/0,10-AC KV	XX 145 610
DFS2 063-2/0,30-AC KV	XX 146 610
DFS2 063-2/0,50-AC KV	XX 147 610
80 A	
DFS2 080-2/0,03-AC KV	XX 154 610
DFS2 080-2/0,10-AC KV	XX 155 610
DFS2 080-2/0,30-AC KV	XX 156 610
DFS2 080-2/0,50-AC KV	XX 157 610
100 A	
DFS2 100-2/0,03-AC KV	XX 164 610
DFS2 100-2/0,10-AC KV	XX 165 610
DFS2 100-2/0,30-AC KV	XX 166 610
DFS2 100-2/0,50-AC KV	XX 167 610
125 A	
DFS2 125-2/0,03-AC KV	XX 174 610
DFS2 125-2/0,10-AC KV	XX 175 610
DFS2 125-2/0,30-AC KV	XX 176 610
DFS2 125-2/0,50-AC KV	XX 177 610



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Residual Current Circuit-Breaker DFS 2 A S / DFS 2 AC S

sensitive to residual currents Type A and AC, selective



10000 EN 61008

Designation	Article-No.
40 A	
DFS2 040-2/0,10-A S	XX 135 605
DFS2 040-2/0,30-A S	XX 136 605
DFS2 040-2/0,50-A S	XX 137 605
63 A	
DFS2 063-2/0,10-A S	XX 145 605
DFS2 063-2/0,30-A S	XX 146 605
DFS2 063-2/0,50-A S	XX 147 605
80 A	
DFS2 080-2/0,10-A S	XX 155 605
DFS2 080-2/0,30-A S	XX 156 605
DFS2 080-2/0,50-A S	XX 157 605
100 A	
DFS2 100-2/0,10-A S	XX 165 605
DFS2 100-2/0,30-A S	XX 166 605
DFS2 100-2/0,50-A S	XX 167 605
125 A	
DFS2 125-2/0,10-A S	XX 175 605
DFS2 125-2/0,30-A S	XX 176 605
DFS2 125-2/0,50-A S	XX 177 605

Function:

Selective, mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

In order to be tripped, the selective RCCB requires the residual current to flow for a longer time than is the case with RCCBs without delay feature. This enables a selective disconnection when two circuit-breakers are connected in series in installations with graded distributions, i.e. with two series-connected RCCBs (e.g. 0.5 A S and 0.3 A) a fault will trip only that RCCB in whose immediately downstream section of the installation the short-to-earth has occurred. Due to their long switch-off times and high residual current rating, selective RCCBs can provide only fire protection and protection in the event of an indirect contact (fault protection). This means that they are unable to provide protection in the event of direct contact (personal protection).

Features:

- 2-pole
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.1 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Sensitive to AC residual currents (Type AC)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 2 A S / DFS 2 AC S is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Residual Current Circuit-Breakers (RCCB), 2-pole

Applications:

Main distributions in widely dispersed power supply nets with TN-S and TN-C-S systems, e.g. for

- camping sites
- marinas
- allotment sites
- exhibition grounds
- etc.

Selective RCCBs will in most cases protect the cables from the main distribution to the sub-distribution points.

They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Notes:

To ensure the selectivity of the RCCB, the rated residual current of the DFS 2 A S / DFS 2 AC S should be chosen at least one level higher than that of the downstream non-delay circuit-breaker.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 2 terminal cover, sealable



Designation	Article-No.
40 A	
DFS2 040-2/0,10-AC S	XX 135 606
DFS2 040-2/0,30-AC S	XX 136 606
DFS2 040-2/0,50-AC S	XX 137 606
63 A	
DFS2 063-2/0,10-AC S	XX 145 606
DFS2 063-2/0,30-AC S	XX 146 606
DFS2 063-2/0,50-AC S	XX 147 606
80 A	
DFS2 080-2/0,10-AC S	XX 155 606
DFS2 080-2/0,30-AC S	XX 156 606
DFS2 080-2/0,50-AC S	XX 157 606
100 A	
DFS2 100-2/0,10-AC S	XX 165 606
DFS2 100-2/0,30-AC S	XX 166 606
DFS2 100-2/0,50-AC S	XX 167 606
125 A	
DFS2 125-2/0,10-AC S	XX 175 606
DFS2 125-2/0,30-AC S	XX 176 606
DFS2 125-2/0,50-AC S	XX 177 606



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Residual Current Circuit-Breaker DFS 2 A FT / DFS 2 AC FT

sensitive to residual currents Type A and Type AC, with remote-trip function



10000 FT EN 61008

Designation	Article-No.
16 A	
DFS2 016-2/0,01-A FT	XX 112 621
DFS2 016-2/0,03-A FT	XX 114 621
DFS2 016-2/0,10-A FT	XX 115 621
DFS2 016-2/0,30-A FT	XX 116 621
DFS2 016-2/0,50-A FT	XX 117 621
25 A	
DFS2 025-2/0,01-A FT	XX 122 621
DFS2 025-2/0,03-A FT	XX 124 621
DFS2 025-2/0,10-A FT	XX 125 621
DFS2 025-2/0,30-A FT	XX 126 621
DFS2 025-2/0,50-A FT	XX 127 621
40 A	
DFS2 040-2/0,01-A FT	XX 132 621
DFS2 040-2/0,03-A FT	XX 134 621
DFS2 040-2/0,10-A FT	XX 135 621
DFS2 040-2/0,30-A FT	XX 136 621
DFS2 040-2/0,50-A FT	XX 137 621
63 A	
DFS2 063-2/0,03-A FT	XX 144 621
DFS2 063-2/0,10-A FT	XX 145 621
DFS2 063-2/0,30-A FT	XX 146 621
DFS2 063-2/0,50-A FT	XX 147 621
80 A	
DFS2 080-2/0,03-A FT	XX 154 621
DFS2 080-2/0,10-A FT	XX 155 621
DFS2 080-2/0,30-A FT	XX 156 621
DFS2 080-2/0,50-A FT	XX 157 621
100 A	
DFS2 100-2/0,03-A FT	XX 164 621
DFS2 100-2/0,10-A FT	XX 165 621
DFS2 100-2/0,30-A FT	XX 166 621
DFS2 100-2/0,50-A FT	XX 167 621
125 A	
DFS2 125-2/0,03-A FT	XX 174 621
DFS2 125-2/0,10-A FT	XX 175 621
DFS2 125-2/0,30-A FT	XX 176 621
DFS2 125-2/0,50-A FT	XX 177 621

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations. In the FT version the connection points of the internal test button of the RCCB are additionally connected to two terminals. The test circuit of the RCCB can therefore be activated by means of external switch contacts. An auxiliary contact, which will close when the RCCB switches off, is also available at two further terminals. The FT add-on module comes ready connected to the RCCB.

Features:

- 2-pole
- The technical properties of the basic RCCB remain unaffected by the FT option
- Extensive type selection for all RCCBs of the DFS 2... and DFS 4... model ranges
- Integrated auxiliary switch function
- Narrow design: 0.5 module and RCCB width

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Residual Current Circuit-Breakers (RCCB), 2-pole

Applications:

- Remote disconnection of installations and installation components
- Tripping of RCCB by alarm systems or similar

Notes:

- Do not use as emergency shutdown!
- The auxiliary contact data equate to those of the DHi variant
- Not suitable for operative switching (see technical data for maximum operations of RCCB)
- The external control device must be designed for a rated current ≥ 0.5 A at the rated voltage of the RCCBs.



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Designation	Article-No.
16 A	
DFS2 016-2/0,01-AC FT	XX 112 622
DFS2 016-2/0,03-AC FT	XX 114 622
DFS2 016-2/0,10-AC FT	XX 115 622
DFS2 016-2/0,30-AC FT	XX 116 622
DFS2 016-2/0,50-AC FT	XX 117 622
25 A	
DFS2 025-2/0,01-AC FT	XX 122 622
DFS2 025-2/0,03-AC FT	XX 124 622
DFS2 025-2/0,10-AC FT	XX 125 622
DFS2 025-2/0,30-AC FT	XX 126 622
DFS2 025-2/0,50-AC FT	XX 127 622
40 A	
DFS2 040-2/0,01-AC FT	XX 132 622
DFS2 040-2/0,03-AC FT	XX 134 622
DFS2 040-2/0,10-AC FT	XX 135 622
DFS2 040-2/0,30-AC FT	XX 136 622
DFS2 040-2/0,50-AC FT	XX 137 622
63 A	
DFS2 063-2/0,03-AC FT	XX 144 622
DFS2 063-2/0,10-AC FT	XX 145 622
DFS2 063-2/0,30-AC FT	XX 146 622
DFS2 063-2/0,50-AC FT	XX 147 622
80 A	
DFS2 080-2/0,03-AC FT	XX 154 622
DFS2 080-2/0,10-AC FT	XX 155 622
DFS2 080-2/0,30-AC FT	XX 156 622
DFS2 080-2/0,50-AC FT	XX 157 622
100 A	
DFS2 100-2/0,03-AC FT	XX 164 622
DFS2 100-2/0,10-AC FT	XX 165 622
DFS2 100-2/0,30-AC FT	XX 166 622
DFS2 100-2/0,50-AC FT	XX 167 622
125 A	
DFS2 125-2/0,03-AC FT	XX 174 622
DFS2 125-2/0,10-AC FT	XX 175 622
DFS2 125-2/0,30-AC FT	XX 176 622
DFS2 125-2/0,50-AC FT	XX 177 622



Dimensions
Wiring diagram

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Residual Current Circuit-Breaker DFS 4 A

sensitive to residual currents Type A



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Designation	Article-No.
16 A	
DFS4 016-4/0,01-A	XX 112 901
DFS4 016-4/0,03-A	XX 114 901
DFS4 016-4/0,30-A	XX 116 901
DFS4 016-4/0,50-A	XX 117 901
25 A	
DFS4 025-4/0,01-A	XX 122 901
DFS4 025-4/0,03-A	XX 124 901
DFS4 025-4/0,10-A	XX 125 901
DFS4 025-4/0,30-A	XX 126 901
DFS4 025-4/0,50-A	XX 127 901
40 A	
DFS4 040-4/0,03-A	XX 134 901
DFS4 040-4/0,10-A	XX 135 901
DFS4 040-4/0,30-A	XX 136 901
DFS4 040-4/0,50-A	XX 137 901
63 A	
DFS4 063-4/0,03-A	XX 144 901
DFS4 063-4/0,10-A	XX 145 901
DFS4 063-4/0,30-A	XX 146 901
DFS4 063-4/0,50-A	XX 147 901
80 A	
DFS4 080-4/0,03-A	XX 154 901
DFS4 080-4/0,10-A	XX 155 901
DFS4 080-4/0,30-A	XX 156 901
DFS4 080-4/0,50-A	XX 157 901
100 A	
DFS4 100-4/0,03-A	XX 164 901
DFS4 100-4/0,10-A	XX 165 901
DFS4 100-4/0,30-A	XX 166 901
DFS4 100-4/0,50-A	XX 167 901
125 A	
DFS4 125-4/0,03-A	XX 174 901
DFS4 125-4/0,10-A	XX 175 901
DFS4 125-4/0,30-A	XX 176 901
DFS4 125-4/0,50-A	XX 177 901

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

Features:

- 4-pole
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 A is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Applications:

Power supply of domestic and utility buildings as well as industrial installations with TN-S and TN-C-S systems. In IT nets the RCCBs in the DFS 4 A series can be provided for disconnecting in the event of a second fault.

They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable



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Accessories

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Residual Current Circuit-Breakers (RCCB), 4-pole

Residual Current Circuit-Breaker DFS 4 AC sensitive to residual currents Type AC

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

Features:

- 4-pole
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC residual currents (Type AC)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 AC is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Applications:

Power supply of domestic and utility buildings as well as industrial installations with TN-S and TN-C-S systems. In IT nets the RCCBs in the DFS 4 AC series can be provided for disconnecting in the event of a second fault.

They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable



Designation	Article-No.
16 A	
DFS4 016-4/0,01-AC	XX 112 902
DFS4 016-4/0,03-AC	XX 114 902
25 A	
DFS4 025-4/0,01-AC	XX 122 902
DFS4 025-4/0,03-AC	XX 124 902
DFS4 025-4/0,10-AC	XX 125 902
DFS4 025-4/0,30-AC	XX 126 902
DFS4 025-4/0,50-AC	XX 127 902
40 A	
DFS4 040-4/0,03-AC	XX 134 902
DFS4 040-4/0,10-AC	XX 135 902
DFS4 040-4/0,30-AC	XX 136 902
DFS4 040-4/0,50-AC	XX 137 902
63 A	
DFS4 063-4/0,03-AC	XX 144 902
DFS4 063-4/0,10-AC	XX 145 902
DFS4 063-4/0,30-AC	XX 146 902
DFS4 063-4/0,50-AC	XX 147 902
80 A	
DFS4 080-4/0,03-AC	XX 154 902
DFS4 080-4/0,10-AC	XX 155 902
DFS4 080-4/0,30-AC	XX 156 902
DFS4 080-4/0,50-AC	XX 157 902
100 A	
DFS4 100-4/0,03-AC	XX 164 902
DFS4 100-4/0,10-AC	XX 165 902
DFS4 100-4/0,30-AC	XX 166 902
DFS4 100-4/0,50-AC	XX 167 902
125 A	
DFS4 125-4/0,03-AC	XX 174 902
DFS4 125-4/0,10-AC	XX 175 902
DFS4 125-4/0,30-AC	XX 176 902
DFS4 125-4/0,50-AC	XX 177 902



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Residual Current Circuit-Breaker DFS 4 A KV / DFS 4 AC KV

sensitive to residual currents Type A and Type AC, increased surge-current resistant



Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations. Due to their response delay the series DFS 4 A KV / DFS 4 AC KV RCCBs are considerably less sensitive to pulsed, transient residual currents than RCCBs without delay feature. They thus permit the uninterrupted running of installations where residual current surges can arise from switching actions or lightning strikes. The tripping times for non-delayed RCCBs as demanded by national and international design regulations are also met by the devices of the DFS 4 A KV / DFS 4 AC KV series. They can therefore always be used in place of a standard circuit-breaker.

Features:

- 4-pole
- Limited sensitivity to residual current surges
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Sensitive to AC residual currents (Type AC)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 A KV / DFS 4 AC KV is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Designation	Article-No.
16 A	
DFS4 016-4/0,01-A KV	XX 112 909
DFS4 016-4/0,03-A KV	XX 114 909
DFS4 016-4/0,10-A KV	XX 115 909
DFS4 016-4/0,30-A KV	XX 116 909
DFS4 016-4/0,50-A KV	XX 117 909
25 A	
DFS4 025-4/0,01-A KV	XX 122 909
DFS4 025-4/0,03-A KV	XX 124 909
DFS4 025-4/0,10-A KV	XX 125 909
DFS4 025-4/0,30-A KV	XX 126 909
DFS4 025-4/0,50-A KV	XX 127 909
40 A	
DFS4 040-4/0,03-A KV	XX 134 909
DFS4 040-4/0,10-A KV	XX 135 909
DFS4 040-4/0,30-A KV	XX 136 909
DFS4 040-4/0,50-A KV	XX 137 909
63 A	
DFS4 063-4/0,03-A KV	XX 144 909
DFS4 063-4/0,10-A KV	XX 145 909
DFS4 063-4/0,30-A KV	XX 146 909
DFS4 063-4/0,50-A KV	XX 147 909
80 A	
DFS4 080-4/0,03-A KV	XX 154 909
DFS4 080-4/0,10-A KV	XX 155 909
DFS4 080-4/0,30-A KV	XX 156 909
DFS4 080-4/0,50-A KV	XX 157 909
100 A	
DFS4 100-4/0,03-A KV	XX 164 909
DFS4 100-4/0,10-A KV	XX 165 909
DFS4 100-4/0,30-A KV	XX 166 909
DFS4 100-4/0,50-A KV	XX 167 909
125 A	
DFS4 125-4/0,03-A KV	XX 174 909
DFS4 125-4/0,10-A KV	XX 175 909
DFS4 125-4/0,30-A KV	XX 176 909
DFS4 125-4/0,50-A KV	XX 177 909

Residual Current Circuit-Breakers (RCCB), 4-pole

Applications:

Power supply of domestic and utility buildings, as well as industrial installations with TN-S and TN-C-S systems, where transient leakage currents would unnecessarily trip standard RCCBs, such as e.g.:

- Installations with long cable length downstream of the RCCB
- Lighting systems with many fluorescent lamps (> 20 lamps)
- Computer installations
- Solaria
- X-ray equipment

They cannot be used in TN-C nets or in installations in which electronic equipment can give rise to DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable



Designation	Article-No.
16 A	
DFS4 016-4/0,01-AC KV	XX 112 910
DFS4 016-4/0,03-AC KV	XX 114 910
DFS4 016-4/0,10-AC KV	XX 115 910
DFS4 016-4/0,30-AC KV	XX 116 910
DFS4 016-4/0,50-AC KV	XX 117 910
25 A	
DFS4 025-4/0,01-AC KV	XX 122 910
DFS4 025-4/0,03-AC KV	XX 124 910
DFS4 025-4/0,10-AC KV	XX 125 910
DFS4 025-4/0,30-AC KV	XX 126 910
DFS4 025-4/0,50-AC KV	XX 127 910
40 A	
DFS4 040-4/0,03-AC KV	XX 134 910
DFS4 040-4/0,10-AC KV	XX 135 910
DFS4 040-4/0,30-AC KV	XX 136 910
DFS4 040-4/0,50-AC KV	XX 137 910
63 A	
DFS4 063-4/0,03-AC KV	XX 144 910
DFS4 063-4/0,10-AC KV	XX 145 910
DFS4 063-4/0,30-AC KV	XX 146 910
DFS4 063-4/0,50-AC KV	XX 147 910
80 A	
DFS4 080-4/0,03-AC KV	XX 154 910
DFS4 080-4/0,10-AC KV	XX 155 910
DFS4 080-4/0,30-AC KV	XX 156 910
DFS4 080-4/0,50-AC KV	XX 157 910
100 A	
DFS4 100-4/0,03-AC KV	XX 164 910
DFS4 100-4/0,10-AC KV	XX 165 910
DFS4 100-4/0,30-AC KV	XX 166 910
DFS4 100-4/0,50-AC KV	XX 167 910
125 A	
DFS4 125-4/0,03-AC KV	XX 174 910
DFS4 125-4/0,10-AC KV	XX 175 910
DFS4 125-4/0,30-AC KV	XX 176 910
DFS4 125-4/0,50-AC KV	XX 177 910



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Residual Current Circuit-Breaker DFS 4 A S / DFS 4 AC S

sensitive to residual currents Type A and Type AC, selective



Designation	Article-No.
16 A	
DFS4 016-4/0,10-A S	XX 115 905
DFS4 016-4/0,30-A S	XX 116 905
DFS4 016-4/0,50-A S	XX 117 905
25 A	
DFS4 025-4/0,10-A S	XX 125 905
DFS4 025-4/0,30-A S	XX 126 905
DFS4 025-4/0,50-A S	XX 127 905
40 A	
DFS4 040-4/0,10-A S	XX 135 905
DFS4 040-4/0,30-A S	XX 136 905
DFS4 040-4/0,50-A S	XX 137 905
63 A	
DFS4 063-4/0,10-A S	XX 145 905
DFS4 063-4/0,30-A S	XX 146 905
DFS4 063-4/0,50-A S	XX 147 905
80 A	
DFS4 080-4/0,10-A S	XX 155 905
DFS4 080-4/0,30-A S	XX 156 905
DFS4 080-4/0,50-A S	XX 157 905
DFS4 080-4/1,00-A S	XX 158 905
100 A	
DFS4 100-4/0,10-A S	XX 165 905
DFS4 100-4/0,30-A S	XX 166 905
DFS4 100-4/0,50-A S	XX 167 905
DFS4 100-4/1,00-A S	XX 168 905
125 A	
DFS4 125-4/0,10-A S	XX 175 905
DFS4 125-4/0,30-A S	XX 176 905
DFS4 125-4/0,50-A S	XX 177 905
DFS4 125-4/1,00-A S	XX 178 905

Function:

Selective, mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

In order to be tripped, the selective RCCB requires the residual current to flow for a longer time than is the case with RCCBs without delay feature. This enables a selective disconnection when two circuit-breakers are connected in series in installations with graded distributions, i.e. with two series-connected RCCBs (e.g. 0.5 A S and 0.3 A) a fault will trip only that RCCB in whose immediately downstream section of the installation the short-to-earth has occurred. Due to their long switch-off times and high residual current rating, selective RCCBs can provide only fire protection and protection in the event of an indirect contact (fault protection). This means that they are unable to provide protection in the event of direct contact (personal protection).

Features:

- 4-pole
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.1 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Sensitive to AC residual currents (Type AC)
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 A S / DFS 4 AC S is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Residual Current Circuit-Breakers (RCCB), 4-pole

Applications:

Main distributions in widely dispersed power supply nets with TN-S and TN-C-S systems, e.g. for

- camping sites
- marinas
- allotment sites
- exhibition grounds
- etc.

Selective RCCBs will in most cases protect the cables from the main distribution to the sub-distribution points.

They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Notes:

To ensure the selectivity of the RCCB, the rated residual current of the DFS 4 A S / DFS 4 AC S should be chosen at least one level higher than that of the downstream non-delay circuit-breaker.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable



Designation	Article-No.
16 A	
DFS4 016-4/0,10-AC S	XX 115 906
DFS4 016-4/0,30-AC S	XX 116 906
DFS4 016-4/0,50-AC S	XX 117 906
25 A	
DFS4 025-4/0,10-AC S	XX 125 906
DFS4 025-4/0,30-AC S	XX 126 906
DFS4 025-4/0,50-AC S	XX 127 906
40 A	
DFS4 040-4/0,10-AC S	XX 135 906
DFS4 040-4/0,30-AC S	XX 136 906
DFS4 040-4/0,50-AC S	XX 137 906
63 A	
DFS4 063-4/0,10-AC S	XX 145 906
DFS4 063-4/0,30-AC S	XX 146 906
DFS4 063-4/0,50-AC S	XX 147 906
80 A	
DFS4 080-4/0,10-AC S	XX 155 906
DFS4 080-4/0,30-AC S	XX 156 906
DFS4 080-4/0,50-AC S	XX 157 906
DFS4 080-4/1,00-AC S	XX 158 906
100 A	
DFS4 100-4/0,10-AC S	XX 165 906
DFS4 100-4/0,30-AC S	XX 166 906
DFS4 100-4/0,50-AC S	XX 167 906
DFS4 100-4/1,00-AC S	XX 168 906
125 A	
DFS4 125-4/0,10-AC S	XX 175 906
DFS4 125-4/0,30-AC S	XX 176 906
DFS4 125-4/0,50-AC S	XX 177 906
DFS4 125-4/1,00-AC S	XX 178 906



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Residual Current Circuit-Breaker DFS 4 A FT / DFS 4 AC FT

sensitive to residual currents Type A and Type AC, with remote-trip function



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Designation	Article-No.
16 A	
DFS4 016-4/0,01-A FT	XX 112 921
DFS4 016-4/0,03-A FT	XX 114 921
25 A	
DFS4 025-4/0,01-A FT	XX 122 921
DFS4 025-4/0,03-A FT	XX 124 921
DFS4 025-4/0,10-A FT	XX 125 921
DFS4 025-4/0,30-A FT	XX 126 921
DFS4 025-4/0,50-A FT	XX 127 921
40 A	
DFS4 040-4/0,03-A FT	XX 134 921
DFS4 040-4/0,10-A FT	XX 135 921
DFS4 040-4/0,30-A FT	XX 136 921
DFS4 040-4/0,50-A FT	XX 137 921
63 A	
DFS4 063-4/0,03-A FT	XX 144 921
DFS4 063-4/0,10-A FT	XX 145 921
DFS4 063-4/0,30-A FT	XX 146 921
DFS4 063-4/0,50-A FT	XX 147 921
80 A	
DFS4 080-4/0,03-A FT	XX 154 921
DFS4 080-4/0,10-A FT	XX 155 921
DFS4 080-4/0,30-A FT	XX 156 921
DFS4 080-4/0,50-A FT	XX 157 921
100 A	
DFS4 100-4/0,03-A FT	XX 164 921
DFS4 100-4/0,10-A FT	XX 165 921
DFS4 100-4/0,30-A FT	XX 166 921
DFS4 100-4/0,50-A FT	XX 167 921
125 A	
DFS4 125-4/0,03-A FT	XX 174 921
DFS4 125-4/0,10-A FT	XX 175 921
DFS4 125-4/0,30-A FT	XX 176 921
DFS4 125-4/0,50-A FT	XX 177 921

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations. In the FT version the connection points of the internal test button of the RCCB are additionally connected to two terminals. The test circuit of the RCCB can therefore be activated by means of external switch contacts. An auxiliary contact, which will close when the RCCB switches off, is also available at two further terminals.

Features:

- 4-pole
- The technical properties of the basic RCCB remain unaffected by the FT option
- Extensive type selection for all RCCBs of the DFS 2... and DFS 4... model ranges
- Integrated auxiliary switch function
- Narrow design: 0.5 module and RCCB width

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Residual Current Circuit-Breakers (RCCB), 4-pole

Applications:

- Remote disconnection of installations and installation components
- Tripping of RCCB by alarm systems or similar

Notes:

- Do not use as emergency shutdown!
- The auxiliary contact data equate to those of the DHi variant
- Not suitable for operative switching
- The contacts of the external control device must be designed for the rated voltage of the RCCBs.



Designation	Article-No.
16 A	
DFS4 016-4/0,01-AC FT	XX 112 922
DFS4 016-4/0,03-AC FT	XX 114 922
25 A	
DFS4 025-4/0,01-AC FT	XX 122 922
DFS4 025-4/0,03-AC FT	XX 124 922
DFS4 025-4/0,10-AC FT	XX 125 922
DFS4 025-4/0,30-AC FT	XX 126 922
DFS4 025-4/0,50-AC FT	XX 127 922
40 A	
DFS4 040-4/0,03-AC FT	XX 134 922
DFS4 040-4/0,10-AC FT	XX 135 922
DFS4 040-4/0,30-AC FT	XX 136 922
DFS4 040-4/0,50-AC FT	XX 137 922
63 A	
DFS4 063-4/0,03-AC FT	XX 144 922
DFS4 063-4/0,10-AC FT	XX 145 922
DFS4 063-4/0,30-AC FT	XX 146 922
DFS4 063-4/0,50-AC FT	XX 147 922
80 A	
DFS4 080-4/0,03-AC FT	XX 154 922
DFS4 080-4/0,10-AC FT	XX 155 922
DFS4 080-4/0,30-AC FT	XX 156 922
DFS4 080-4/0,50-AC FT	XX 157 922
100 A	
DFS4 100-4/0,03-AC FT	XX 164 922
DFS4 100-4/0,10-AC FT	XX 165 922
DFS4 100-4/0,30-AC FT	XX 166 922
DFS4 100-4/0,50-AC FT	XX 167 922
125 A	
DFS4 125-4/0,03-AC FT	XX 174 922
DFS4 125-4/0,10-AC FT	XX 175 922
DFS4 125-4/0,30-AC FT	XX 176 922
DFS4 125-4/0,50-AC FT	XX 177 922



Dimensions
Wiring diagram

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Residual Current Circuit-Breaker DFS 4 A V500

sensitive to residual currents Type A, rated voltage 500 V



10000 DE V500 25 EN 61008

Designation	Article-No.
16 A	
DFS4 016-4/0,01-A V500	XX 112 945
DFS4 016-4/0,03-A V500	XX 114 945
DFS4 016-4/0,50-A V500	XX 117 945
25 A	
DFS4 025-4/0,01-A V500	XX 122 945
DFS4 025-4/0,03-A V500	XX 124 945
DFS4 025-4/0,10-A V500	XX 125 945
DFS4 025-4/0,30-A V500	XX 126 945
DFS4 025-4/0,50-A V500	XX 127 945
40 A	
DFS4 040-4/0,03-A V500	XX 134 945
DFS4 040-4/0,10-A V500	XX 135 945
DFS4 040-4/0,30-A V500	XX 136 945
DFS4 040-4/0,50-A V500	XX 137 945
63 A	
DFS4 063-4/0,03-A V500	XX 144 945
DFS4 063-4/0,10-A V500	XX 145 945
DFS4 063-4/0,30-A V500	XX 146 945
DFS4 063-4/0,50-A V500	XX 147 945
80 A	
DFS4 080-4/0,03-A V500	XX 154 945
DFS4 080-4/0,10-A V500	XX 155 945
DFS4 080-4/0,30-A V500	XX 156 945
DFS4 080-4/0,50-A V500	XX 157 945

Function:

Mains voltage-independent residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in accordance with the requirements of IEC 60 364-4-41 and the corresponding national regulations.

Features:

- 4-pole
- Suitable for nets with voltages from 200 V to max. 500 V
- Type range with
 - rated currents from 16 A to 80 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Mains and aux. voltage-independent tripping
- Sensitive to AC and pulsating DC residual currents (Type A)
- Highly short-circuit proof
- 3 or 4-pole connection
- 4 module widths
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 A V500 is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Residual Current Circuit-Breakers (RCCB), 4-pole

Applications:

Commercial and industrial installations with TN-S and TN-C-S systems. In IT nets the RCCBs in the DFS 4 A V500 series can be provided for disconnecting in the event of a second fault. They cannot be used in TN-C nets or for the protection of installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable



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Residual Current Circuit-Breaker DFS 4 B NK

sensitive to residual currents Type B



10000 $\Delta^{\circ}E$ $\Delta^{\circ}E$ $\Delta^{\circ}E$ $\Delta^{\circ}E$ EN 61008

Designation	Article-No.
16 A	
DFS4 016-4/0,03-B NK	XX 114 995
DFS4 016-4/0,10-B NK	XX 115 995
DFS4 016-4/0,30-B NK	XX 116 995
DFS4 016-4/0,50-B NK	XX 117 995
25 A	
DFS4 025-4/0,03-B NK	XX 124 995
DFS4 025-4/0,10-B NK	XX 125 995
DFS4 025-4/0,30-B NK	XX 126 995
DFS4 025-4/0,50-B NK	XX 127 995
40 A	
DFS4 040-4/0,03-B NK	XX 134 995
DFS4 040-4/0,10-B NK	XX 135 995
DFS4 040-4/0,30-B NK	XX 136 995
DFS4 040-4/0,50-B NK	XX 137 995
63 A	
DFS4 063-4/0,03-B NK	XX 144 995
DFS4 063-4/0,10-B NK	XX 145 995
DFS4 063-4/0,30-B NK	XX 146 995
DFS4 063-4/0,50-B NK	XX 147 995
80 A	
DFS4 080-4/0,03-B NK	XX 154 995
DFS4 080-4/0,10-B NK	XX 155 995
DFS4 080-4/0,30-B NK	XX 156 995
DFS4 080-4/0,50-B NK	XX 157 995
100 A	
DFS4 100-4/0,03-B NK	XX 164 995
DFS4 100-4/0,10-B NK	XX 165 995
DFS4 100-4/0,30-B NK	XX 166 995
DFS4 100-4/0,50-B NK	XX 167 995
125 A	
DFS4 125-4/0,03-B NK	XX 174 995
DFS4 125-4/0,10-B NK	XX 175 995
DFS4 125-4/0,30-B NK	XX 176 995
DFS4 125-4/0,50-B NK	XX 177 995

Function:

AC-DC sensitive residual current circuit-breaker (RCCB Type B) for providing the protective measure „Automatic disconnection in case of a fault“ in installations with electronic equipment in accordance with the requirements of IEC 60 364-4-41, EN 50178 and the corresponding national regulations.

In addition to mains-independent detection of AC and pulsating DC residual currents the devices of the DFS 4 B NK series are also able to detect smooth DC residual currents. Voltages of > 30V between any two current paths are sufficient for this.

The circuit-breaker is thus classed as Type B as per IEC TR 60755. On top of this the DFS 4 B NK also detects all residual currents of frequencies up to 1 MHz. With its modest requirements in respect of auxiliary voltage supply and the extensive residual current frequency range, the DFS 4 B NK substantially exceeds the requirements of the first design standards for RCCBs of Type B, VDE 0664-100 E, IEC 62423.

The characteristic frequency response of the tripping residual current ensures the same high level of protection over the whole detection frequency range as specified by the rated residual operating current for mains frequency.

Features:

- 4-pole
- AC-DC sensitive for residual currents with frequencies and combination frequencies from 0 Hz (smooth DC current) up to 1 MHz
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Compact design for all rated currents
- VDE test mark approval to VDE 0664 Part 10 / VDE 0664 Part 100 E
- Meets the requirements of IEC 62423 (draft at present)
- High immunity to transient leakage and residual currents due to slow response trip
- Electromagnetic compatibility as per IEC 61543 as well as IEC 61000-6-2 (Resistance to Interference-Industrial Environment)
- High availability also in respect of the supply-dependent detection of smooth DC residual currents and AC residual currents with frequencies other than 50/60 Hz due to full functionality at mains voltages from > 30 V at any 2 current paths
- Mains voltage-independent tripping with residual currents of Type A
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 B NK is tripped by a fault, the switch lever adopts the central position

Residual Current Circuit-Breakers (RCCB), 4-pole

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible
- Input direction from above (N, 1, 3, 5)

Applications:

Commercial and industrial installations with TN-S and TN-C-S systems where electronic power equipment which is not electrically isolated from the mains is used, such as e.g.:

- Frequency converters
- UPS installations
- High-frequency power converters
- Building site power supply cabinets

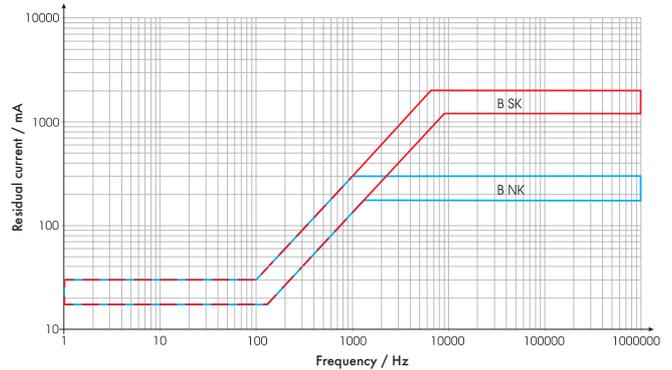
Note:

- Not designed for use in DC networks!

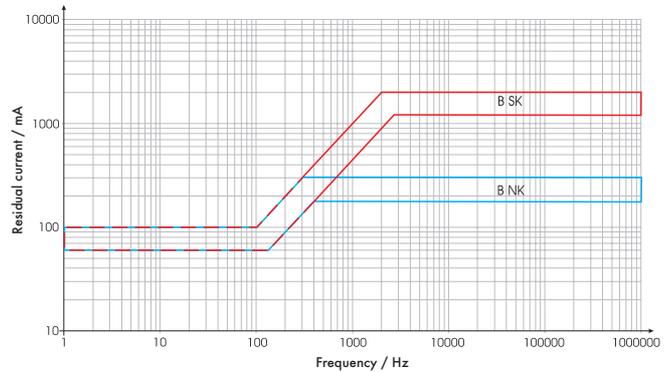
Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable

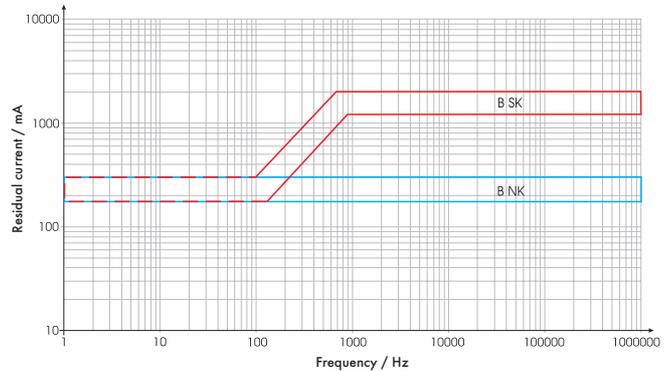
DFS 4B NK and SK / 0,03 A



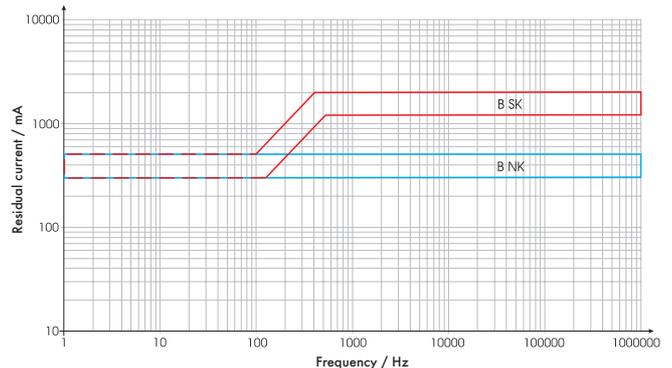
DFS 4B NK and SK / 0,1 A



DFS 4B NK and SK / 0,3 A



DFS 4B NK and SK / 0,5 A



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Residual Current Circuit-Breaker DFS 4 B SK

sensitive to residual currents Type B, with reduced sensitivity for high frequencies



10000 $\Delta^{\circ}E$ $\Delta^{\circ}E$ $\Delta^{\circ}E$ $\Delta^{\circ}E$ $\Delta^{\circ}E$ EN 61008

Designation	Article-No.
16 A	
DFS4 016-4/0,03-B SK	XX 114 998
DFS4 016-4/0,10-B SK	XX 115 998
DFS4 016-4/0,30-B SK	XX 116 998
DFS4 016-4/0,50-B SK	XX 117 998
25 A	
DFS4 025-4/0,03-B SK	XX 124 998
DFS4 025-4/0,10-B SK	XX 125 998
DFS4 025-4/0,30-B SK	XX 126 998
DFS4 025-4/0,50-B SK	XX 127 998
40 A	
DFS4 040-4/0,03-B SK	XX 134 998
DFS4 040-4/0,10-B SK	XX 135 998
DFS4 040-4/0,30-B SK	XX 136 998
DFS4 040-4/0,50-B SK	XX 137 998
63 A	
DFS4 063-4/0,03-B SK	XX 144 998
DFS4 063-4/0,10-B SK	XX 145 998
DFS4 063-4/0,30-B SK	XX 146 998
DFS4 063-4/0,50-B SK	XX 147 998
80 A	
DFS4 080-4/0,03-B SK	XX 154 998
DFS4 080-4/0,10-B SK	XX 155 998
DFS4 080-4/0,30-B SK	XX 156 998
DFS4 080-4/0,50-B SK	XX 157 998
100 A	
DFS4 100-4/0,03-B SK	XX 164 998
DFS4 100-4/0,10-B SK	XX 165 998
DFS4 100-4/0,30-B SK	XX 166 998
DFS4 100-4/0,50-B SK	XX 167 998
125 A	
DFS4 125-4/0,03-B SK	XX 174 998
DFS4 125-4/0,10-B SK	XX 175 998
DFS4 125-4/0,30-B SK	XX 176 998
DFS4 125-4/0,50-B SK	XX 177 998

Function:

AC-DC sensitive residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in installations with electronic equipment in accordance with the requirements of IEC 60 364-4-41, EN 50178 and the corresponding national regulations.

In addition to mains-independent detection of AC and pulsating DC residual currents all devices of the DFS 4 B SK series are also able to detect smooth DC residual currents. Voltages of > 30V between any two current paths are sufficient for this. The circuit-breaker is thus classed as Type B as per IEC TR 60755.

On top of this the DFS 4 B SK also detects all residual currents of frequencies up to 1 MHz. With its modest requirements in respect of auxiliary voltage supply and the extensive residual current frequency range, the DFS 4 B SK substantially exceeds the requirements of the first design standards for RCCBs of Type B, VDE 0664-100 E, IEC 62423.

The frequency response sequence of the tripping residual current of the DFS 4 B SK is such that residual currents with high frequencies, e.g. within the range of the switching frequencies of frequency converters, are detected with a considerably reduced sensitivity. This means that unwanted tripping arising from leakage currents is largely avoided. Protection in cases of indirect contact (fault protection) as per IEC 60 364-4-41 can still be provided even with residual currents of these frequencies. The tripping threshold, although high, is nevertheless defined for all frequencies and always enables a maximum earth resistance to be determined so that, in the event of a fault, an unacceptably high contact voltage is quickly switched off.

Features:

- 4-pole
- AC-DC sensitive for residual currents with frequencies and combination frequencies from 0 Hz up to 1 MHz
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.03 A to 0.5 A
- Compact design for all rated currents
- VDE test mark approval to VDE 0664 Part 10 / VDE 0664 Part 100 E
- Meets the requirements of IEC 62423 (draft at present)
- Highly insensitive to transient leakage and residual currents due to slow response of the trip function (see DFS 4 A KV / DFS 4 AC KV)
- Electromagnetic compatibility as per IEC 61543 as well as IEC 61000-6-2 (Resistance to Interference-Industrial Environment)
- High availability also in respect of the supply-dependent detection of smooth DC residual currents and AC residual currents with frequencies other than 50/60 Hz due to full functionality at mains voltages from > 30 V at any 2 current paths
- Mains voltage-independent tripping with residual currents of Type A
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends

Residual Current Circuit-Breakers (RCCB), 4-pole

Features:

- Switch position indication
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 B SK is tripped by a fault, the switch lever adopts the central position
- View panel for labels

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible
- Input direction from above (N, 1, 3, 5)

Applications:

Commercial and industrial installations with TN-S and TN-C-S systems where electronic power equipment which is not electrically isolated from the mains is used, such as e.g.:

- Frequency converters
- UPS installations
- High-frequency power converters
- Building site power supply cabinets

Note:

- Not designed for use in DC networks!

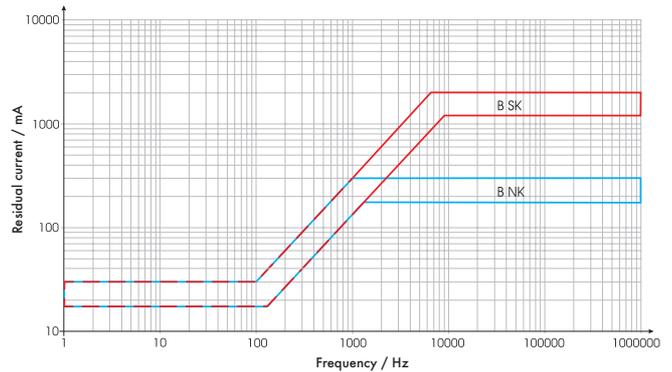
Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable

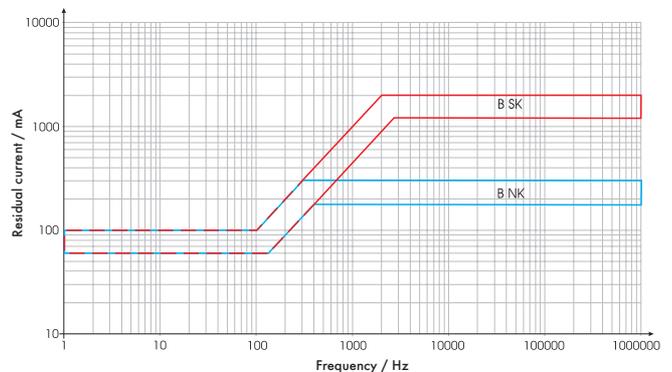


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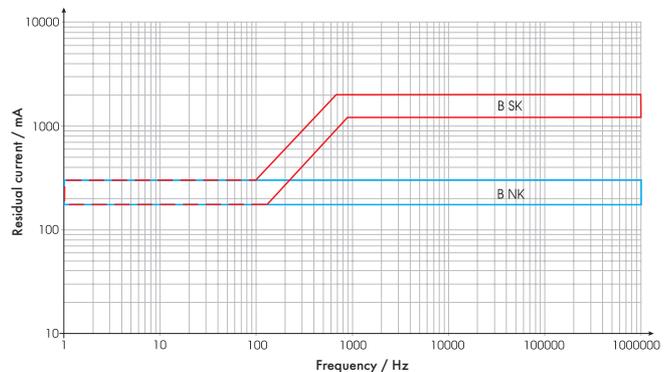
DFS 4B NK and SK / 0,03 A



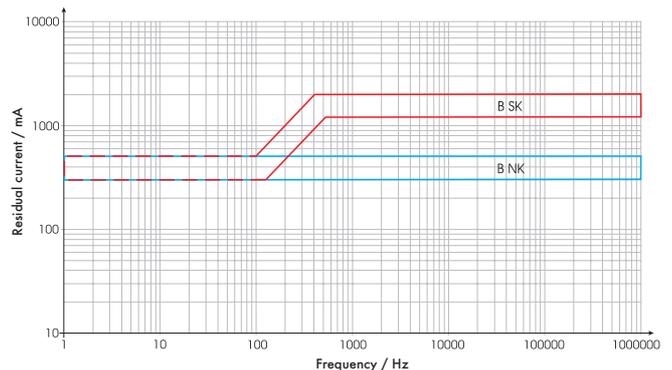
DFS 4B NK and SK / 0,1 A



DFS 4B NK and SK / 0,3 A



DFS 4B NK and SK / 0,5 A



Residual Current Circuit-Breaker DFS 4 B SK S

sensitive to residual currents Type B, with reduced sensitivity for high frequencies, selective



Designation	Article-No.
40 A	
DFS4 040-4/0,30-B SK S	XX 136 999
DFS4 040-4/0,50-B SK S	XX 137 999
63 A	
DFS4 063-4/0,30-B SK S	XX 146 999
DFS4 063-4/0,50-B SK S	XX 147 999
80 A	
DFS4 080-4/0,30-B SK S	XX 156 999
DFS4 080-4/0,50-B SK S	XX 157 999
100 A	
DFS4 100-4/0,30-B SK S	XX 166 999
DFS4 100-4/0,50-B SK S	XX 167 999
125 A	
DFS4 125-4/0,30-B SK S	XX 176 999
DFS4 125-4/0,50-B SK S	XX 177 999

Function:

Selective AC-DC sensitive residual current circuit-breaker (RCCB) for providing the protective measure „Automatic disconnection in case of a fault“ in installations with electronic equipment in accordance with the requirements of IEC 60 364-4-41, EN 50178 and the corresponding national regulations.

In order to be tripped, the selective RCCB requires the residual current to flow for a longer time than is the case with RCCBs without delay feature. This enables a selective disconnection when two circuit-breakers are connected in series in installations with graded distributions, i.e. with two series-connected RCCBs of e.g. $I_{\Delta n} = 0.5 \text{ A S}$ and $I_{\Delta n} = 0.3 \text{ A}$ a fault, even with a high residual current, will only trip that RCCB in whose immediately downstream section of the installation the short-to-earth has occurred.

Due to their long switch-off times and high residual current rating, selective RCCBs can provide only fire protection and protection in the event of an indirect contact (fault protection). This means that they are unable to provide protection in the event of direct contact (personal protection).

In addition to mains-independent detection of AC and pulsating DC residual currents, all devices of the DFS 4 B SK S series are also able to detect smooth DC residual currents. They are thus classed as Type B as per IEC TR 60755.

On top of this the DFS 4 B SK S also detects all residual currents of frequencies up to 100 MHz.

For the AC-DC sensitive function the detection electronics require an auxiliary voltage which is taken off internally at the mains conductors. In the case of a fault this may drop to 30 V and only needs to be present at any two current paths.

With its modest requirements in respect of auxiliary voltage supply and the extensive residual current frequency range it is able to detect, the DFS 4 B SK S substantially exceeds the requirements of the first design standards for RCCBs of Type B, VDE 0664-100 E, IEC 62423.

The frequency response sequence of the tripping residual current of the DFS 4 B SK S is such that residual currents with high frequencies, e.g. within the range of the timing frequencies of frequency converters, are detected with a considerably reduced sensitivity. This means that unwanted tripping arising from leakage currents is largely avoided. Protection in cases of indirect contact (fault protection) as per IEC 60 364-4-41 can still be provided even with residual currents of these frequencies. The tripping threshold, although high, is nevertheless defined for all frequencies and always enables a maximum earth resistance to be determined so that, in the event of a fault, an unacceptably high contact voltage is quickly switched off.

Residual Current Circuit-Breakers (RCCB), 4-pole

Features:

- 4-pole
- Selective towards all non-delayed RCCBs (Types AC, A or B) with residual currents of any frequency within the detection range as well as with Type B residual currents
- Extensive type range with
 - rated currents from 16 A to 125 A
 - rated residual operating currents from 0.3 A to 0.5 A
- Compact design for all rated currents
- For installations with high leakage currents in the frequency range > 1 kHz
- Highly insensitive to transient leakage and residual currents due to high surge current resistance
- Electromagnetic compatibility as per IEC 61543 as well as IEC 61000-6-2 (Resistance to Interference-Industrial Environment)
- High availability also in respect of the supply-dependent detection of smooth DC residual currents and AC residual currents with frequencies other than 50/60 Hz due to full functionality at mains voltages from > 30 V at any 2 current paths
- Mains voltage-independent tripping with residual currents of Type A
- Highly short-circuit proof
- Double-deck terminals for large wire diameter and rail connection at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three functions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position); when the DFS 4 B SK S is tripped by a fault, the switch lever adopts the central position

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible
- Input direction from above (N, 1, 3, 5)

Applications:

Commercial and industrial installations where electronic power equipment is used or may be connected, such as e.g.:

- Frequency converters
- UPS installations
- High-frequency power converters
- Building site power supply cabinets

Note:

- Not designed for use in DC networks!
- Selective RCCBs will in most cases protect the cable up to the sub-distribution point.
- To ensure selectivity towards non-delay RCCBs, the rated residual current of the DFS 4 B SK S should be chosen at least one level higher than that of the downstream non-delay circuit-breaker

Accessories:

- DHi auxiliary switch
- DFA remote actuator (for remote tripping, enabling and disabling)
- KA-DFS 4 terminal cover, sealable



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Moulded Case Circuit-Breaker DFL 8 A

with voltage independent, high sensitive residual current trip Type A



10000 DVE -25 EN 61008

Designation	Article-No.
100 A	
DFL 8 100-4/0,03-A	XX 164 781
125 A	
DFL 8 125-4/0,03-A	XX 174 781
160 A	
DFL 8 160-4/0,03-A	XX 184 781
200 A	
DFL 8 200-4/0,03-A	XX 204 781
250 A	
DFL 8 250-4/0,03-A	XX 214 781

Function:

Circuit-breaker with integrated magnetic and thermal overload trip as well as mains voltage-independent and pulsating current sensitive residual current trip (CBR as per IEC 60947).

The moulded case circuit-breaker serves as overload protection for electrical equipment, cables and leads in conformance with IEC 60 364-4-43 as well as to provide protection against electrical shock by means of a residual current protective system as per IEC 60 364-4-41.

Due to its mains-voltage independent residual current tripping the DFL 8 A also ensures protection even if only one active lead is live and subject to a short to earth.

Features:

- 4-pole
- Range of types with rated currents from 100 A to 250 A at rated residual operating current of 0.03 A (different rated residual operating currents on request)
- High sensitive residual current detection of AC and pulsating DC currents (Type A as per IEC TR 60755)
- Protection of persons through highly sensitive residual current tripping
- High surge current resistance, i.e. little likelihood of unwanted tripping resulting from transient residual currents
- Rated voltage 400 / 690 V AC
- Function range of residual current release 0 – 690 V
- Function range of residual current test circuit 280 – 690 V
- Mains and auxiliary voltage-independent tripping in cases of overload and residual currents
- High short-circuit breaking capacity
- Selectable thresholds for non-delayed and delayed overload tripping
- Terminals up to 95 mm²
- Integrated auxiliary switch

Mounting method:

- Mounting plate
- Any mounting position possible

Circuit-Breakers with Residual Current Device (CBR), 4-pole

Applications:

Power supply of utility buildings and industrial installations with TN-S and TN-C-S systems with high short-circuit capacity. In IT nets the residual current release of CBRs of the DFL 8 A model range can be provided for disconnection in the event of a second short to earth.

The device cannot be used for residual current protection in TN-C nets.

Note:

The DFL 8 A cannot provide comprehensive protection in installations where electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz. For such applications we recommend using our DFL 8 B residual current circuit-breakers.



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Dimensions

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Moulded Case Circuit-Breaker DFL 8 A X

with voltage independent, adjustable residual current trip Type A



10000 DVE 25 EN 61008

Designation	Article-No.
100 A	
DFL 8 100-4/X-A	XX 169 781
125 A	
DFL 8 125-4/X-A	XX 179 781
160 A	
DFL 8 160-4/X-A	XX 189 781
200 A	
DFL 8 200-4/X-A	XX 209 781
250 A	
DFL 8 250-4/X-A	XX 219 781

Function:

Circuit-breaker (CBR as per IEC 60947) with integrated magnetic and thermal overload trip as well as mains voltage-independent and pulsating current sensitive residual current trip.

The moulded case circuit-breaker serves as overload protection for electrical equipment, cables and leads in conformance with IEC 60 364-4-43 as well as to provide protection against electrical shock by means of a residual current protective system as per IEC 60 364-4-41.

The residual operating current as well as the non-operating time can be set on Type DFL 8 A X devices. This enables selective residual current protection to be provided in installations with staggered distributions.

Due to its mains-voltage independent residual current function the DFL 8 A X also ensures protection even if only one active lead is live and is subject to a short to earth.

Features:

- 4-pole
- Range of types with rated currents from 100 A to 250 A
- Setable residual current 0,3 - 0,5 - 1,0 - 3,0 A
- Setable non-operating time 60 - 150 - 300 - 450 ms
- Residual current detection of AC and pulsating DC currents (Type A as per IEC TR 60755)
- High surge current resistance, i.e. little likelihood of unwanted tripping resulting from transient residual currents
- Rated voltage 400 / 690 V AC
- Function range of residual current release 0 - 690 V
- Function range of residual current test circuit 280 - 690 V
- Mains and auxiliary voltage-independent tripping in cases of overload and residual currents
- High short-circuit breaking capacity
- Selectable thresholds for non-delayed and delayed overload tripping
- Terminals up to 95 mm²
- Integrated auxiliary switch

Mounting method:

- Mounting plate
- Any mounting position possible

Circuit-Breakers with Residual Current Device (CBR), 4-pole

Applications:

Staggered power supply installations with TN-S and TN-C-S systems with high short-circuit capacity in utility buildings and industrial installations. In IT nets the residual current release of CBRs of the DFL 8 A X model range can be provided for disconnection in the event of a second short to earth.

The device cannot be used for residual current protection in TN-C nets.

Note:

The DFL 8 A X cannot provide comprehensive protection in installations where electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz. For such applications we recommend using our DFL 8 B or DFL 8 B X residual current circuit-breakers.



Technical data
Dimensions

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Moulded Case Circuit-Breakers DFL 8 B NK and DFL 8 B SK with high sensitive AC-DC residual trip Type B



10000 EN 61008

Designation	Type B NK	Article-No.
100 A		
DFL 8 100-4/0,03-B NK		XX 164 783
125 A		
DFL 8 125-4/0,03-B NK		XX 174 783
160 A		
DFL 8 160-4/0,03-B NK		XX 184 783
200 A		
DFL 8 200-4/0,03-B NK		XX 204 783
250 A		
DFL 8 250-4/0,03-B NK		XX 214 783

Designation	Type B SK	Article-No.
100 A		
DFL 8 100-4/0,03-B SK		XX 164 784
125 A		
DFL 8 125-4/0,03-B SK		XX 174 784
160 A		
DFL 8 160-4/0,03-B SK		XX 184 784
200 A		
DFL 8 200-4/0,03-B SK		XX 204 784
250 A		
DFL 8 250-4/0,03-B SK		XX 214 784

Function:

Circuit-breaker (CBR as per IEC 60947) with integrated magnetic and thermal overload trip as well as AC-DC sensitive residual current trip for Type B residual currents as per IEC TR 60755. The moulded case circuit-breaker serves as overload protection for electrical equipment, cables and leads in conformance with IEC 60 364-4-43 as well as to provide protection against electrical shock by means of a residual current protective system as per IEC 60 364-4-41.

For DC sensitive residual current response the evaluation electronics of the DFL 8 B require an auxiliary voltage which is taken off internally from the main current paths of the circuit-breaker. Reliable tripping due to all Type B residual currents will still be ensured even in the case of faulty supply voltage if there is a 30 V AC minimum voltage at any two current paths.

A voltage-independent detection of Type A residual currents (AC and pulsating DC residual currents) still guarantees protection, if only one wire of a current path has voltage to earth and a fault to earth occurs.

DFL 8 B moulded case circuit-breaker are available with differing frequency response sequences (B NK, B SK) of the tripping current.

Features:

- 4-pole
- Range of types with rated currents from 100 A to 250 A at a rated residual operating current of 0.03 A
- High sensitive residual current detection of smooth DC as well as AC and pulsating DC currents (Type B as per IEC TR 60755)
- Simple adaption to the application by a choice of 2 different frequency characteristics
- Protection of persons through highly sensitive residual current tripping
- High surge current resistance, i.e. little likelihood of unwanted tripping resulting from transient residual currents
- High tolerance to fluctuations in the auxiliary voltage when detecting Type B residual currents
- Mains and auxiliary voltage-independent tripping in cases of Type A residual currents and overloads
- High short-circuit breaking capacity
- Selectable thresholds for non-delayed and delayed overload tripping
- Terminals up to 95 mm²
- Integrated auxiliary switch

Circuit-Breakers with Residual Current Device (CBR), 4-pole

Mounting method:

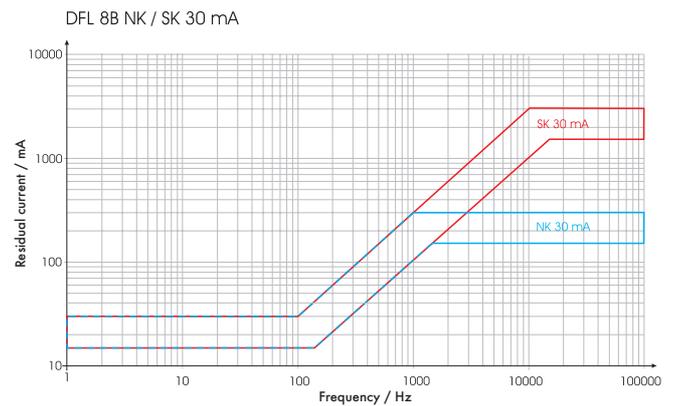
- Mounting plate
- Any mounting position possible

Applications:

Power supply of utility buildings and industrial installations with TN-S and TN-C-S systems with high short-circuit capacity. In IT nets the residual current release of CBRs of the DFL 8 B model range can be provided for disconnection in the event of a second short to earth.

Because of its AC-DC sensitive residual current tripping the DFL 8 B is especially suitable for protecting installations with electronic equipment that is not electrically isolated from the net at the input end.

The device cannot be used for residual current protection in TN-C nets.



Technical data
Dimensions

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Moulded Case Circuit-Breakers DFL 8 B NK X and DFL 8 B SK X with adjustable AC-DC residual current trip Type B



10000 EN 61008

Designation	Type B NK X	Article-No.
100 A		
DFL 8 100-4/B NK X		XX 169 783
125 A		
DFL 8 125-4/B NK X		XX 179 783
160 A		
DFL 8 160-4/B NK X		XX 189 783
200 A		
DFL 8 200-4/B NK X		XX 209 783
250 A		
DFL 8 250-4/B NK X		XX 219 783

Designation	Type B SK X	Article-No.
100 A		
DFL 8 100-4/B SK X		XX 169 784
125 A		
DFL 8 125-4/B SK X		XX 179 784
160 A		
DFL 8 160-4/B SK X		XX 189 784
200 A		
DFL 8 200-4/B SK X		XX 209 784
250 A		
DFL 8 250-4/B SK X		XX 219 784

Function:

Circuit-breaker (CBR as per IEC 60947) with integrated magnetic and thermal overload trip as well as AC-DC sensitive residual current trip for Type B residual currents as per IEC TR 60755. The moulded case circuit-breaker serves as overload protection for electrical equipment, cables and leads in conformance with IEC 60364-4-43 as well as to provide protection against electrical shock by means of a residual current protective system as per IEC 60364-4-41.

The residual operating current as well as the non-operating time can be set on Type DFL 8 B X devices. This enables selective residual current protection to be provided in installations with staggered distributions.

For AC-DC sensitive residual current response the evaluation electronics of the DFL 8 B X require an auxiliary voltage which is taken off internally from the main current paths of the circuit-breaker. Reliable tripping due to Type B residual currents will still be ensured even in the case of faulty supply voltage if there is a 30 V AC minimum voltage at any two current paths. A completely mains voltage-independent detection of Type A residual currents (AC and pulsating DC residual currents) still guarantees protection even if only one wire of a current path has voltage to earth and a short to earth occurs.

DFL 8 B X moulded case circuit-breaker are available with differing frequency response sequences (B NK, B SK) of the tripping current.

Features:

- 4-pole
- Range of types with rated currents from 100 A to 250 A
- Residual current detection of smooth DC as well as AC and pulsating DC currents (Type B as per IEC TR 60755)
- Simple adaption to the application by a choice of 2 different frequency characteristics
- Setable residual current 0,3 - 0,5 - 1,0 A
- Setable non-operating time 60 - 150 - 300 - 450 ms
- High surge current resistance, i.e. little likelihood of unwanted tripping resulting from transient residual currents
- High tolerance to fluctuations in the auxiliary voltage when detecting Type B residual currents
- Mains and auxiliary voltage-independent tripping in cases of Type A residual currents and overloads
- High short-circuit breaking capacity
- Selectable thresholds for non-delayed and delayed overload tripping
- Terminals up to 95 mm²
- Integrated auxiliary switch

Circuit-Breakers with Residual Current Device (CBR), 4-pole

Mounting method:

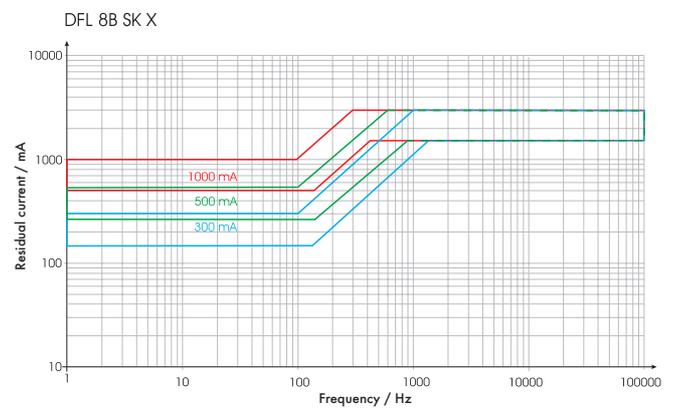
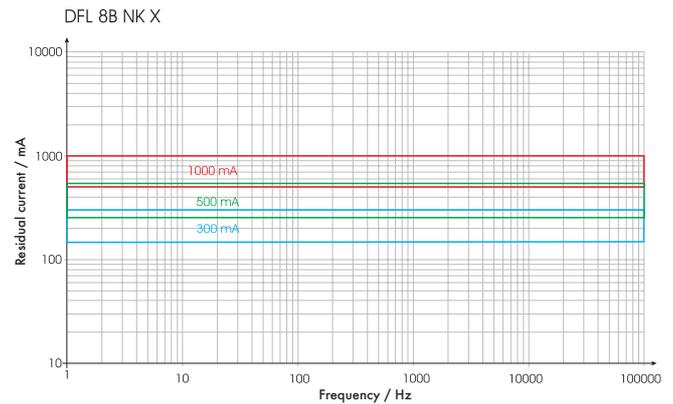
- Mounting plate
- Any mounting position possible

Applications:

Power supply of utility buildings and industrial installations with TN-S and TN-C-S systems with high short-circuit capacity. In IT nets the residual current release of CBRs of the DFL 8 B X model range can be provided for disconnection in the event of a second short to earth.

Because of its AC-DC sensitive residual current tripping the DFL 8 B X is especially suitable for protecting installations with electronic equipment that is not electrically isolated from the net at the input end.

The device cannot be used for residual current protection in TN-C nets.



Technical data
Dimensions

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Auxiliary or Fault Signalling Switch DHi 2



Designation	Article-No.
DHi 2	XX 913 996

Function:

The DHi 2 can be retrofitted as an auxiliary switch, or fault signalling switch, to a residual current circuit-breaker of model ranges DFS 2 and DFS 4. With the aid of other outputs (buzzer, indicator lamp, etc.) or via the Dupline bus system it enables the operating status of residual current circuit-breakers to be indicated. The function setting is via the setting facility on the DHi 2.

Auxiliary switch

Switches upon connection and disconnection of the residual current circuit-breaker

Fault signalling switch

Switches only when the RCCB is tripped (central position)

Features:

- Auxiliary switch function
- Fault signalling function
- Retrofittable
- Compact design
- Settable
- 1 C-O contact and 1 NCC

Mounting method:

- Clamped on the left side of the residual current circuit-breaker
- Snap-fastening on DIN-rail to EN 50022 in all standard distribution panels
- Any mounting position possible

Applications:

Operating status enquiry of power supplies in domestic and utility buildings as well as industrial installations.

Notes:

The auxiliary switch does not affect the functioning of the residual current circuit-breaker.



Technical data
Dimensions

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Restart Locking Facility WES

for DFS 2 and DFS 4 RCCBs and for DLS 5 MCBs

Function:

To avoid reconnection during maintenance and repair work. Use of the locking facility rules out all possibility of accidental connection of mains voltage, e.g. by unauthorised persons.

Features:

- Quickly fitted, universally applicable
- Without lock
- Dimensions: 17 mm x 29 mm x 3.5 mm
- Material: Stainless steel

Applications:

Power supply of domestic and utility buildings as well as industrial installations.

Accessories:

- Standard padlock (shackle dia. 3.5 mm; not supplied with the device)



Designation	Article-No.
WES	XX 913 993



Dimensions

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Terminal Cover KA-DFS 2 and KA-DFS 4

Function:

To provide a touch-proof covering and to secure with lead-seal the double-deck terminals of DFS 2 and DFS 4 residual current circuit-breakers.

Features:

- Accessory specially designed for system construction
- Material: polycarbonate

Applications:

Power supply of utility buildings and industrial installations.



Designation	Article-No.
KA-DFS 2	XX 200 011
KA-DFS 4	XX 200 012



Dimensions

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Residual Current Monitor DMD 1

with integrated residual current transformer, sensitive to residual currents Type A



Designation	Article-No.
DMD 1	XX 340 228

Function:

Residual current monitor (RCM) sensitive to AC and pulsating DC residual currents for monitoring electrical installations which, in the event of faulty insulation between live conductors and earth, may not be immediately switched off.

The RCM continuously monitors the present residual current of the equipment to be protected and indicates via a LED when the permanently set response threshold is exceeded.

In order to avoid unnecessary signalling of harmless transient residual current pulses, an alarm is given only after the residual current is present for a set minimum time.

Features:

- Visual alarm indicator at front panel
- Safety through reliable detection of AC and pulsating DC residual currents (Type A)
- Permanently set rated residual operating current of 0.03 A
- Compact design
- Integrated 25 mm dia. plug-through transformer
- High electromagnetic noise immunity
- Semiconductor output for operating an external indicator panel or a SIR 16 M relay

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Applications:

Power supplies of utility buildings and industrial installations with TN-S, TN-C-S and IT nets.

Not suitable for use in TN-C nets and DC nets or for monitoring installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Notes:

- RCMs are not suitable for realising the protective measure „Automatic disconnection in case of a fault“ as per IEC 60 364-4-41.

Accessories:

DMD P Indicator and display panel
SIR 16 M (relay, 1 NOC, 16 A)



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Accessories	Page 48

Residual Current Monitors (RCM)

Residual Current Monitor DMD 2

with settable response threshold and bar indication, sensitive to residual currents Type A

Function:

Residual current monitor (RCM) sensitive to AC and pulsating DC residual currents for monitoring electrical installations which, in the event of faulty insulation between live conductors and earth, may not be immediately switched off.

The RCM continuously displays on a LED indicator bar the present residual current and activates a relay contact when the set response threshold is exceeded. The response threshold is continuously adjustable within 4 selectable detection ranges. In order to avoid unnecessary signalling of harmless transient residual current pulses, an alarm is given only after a response delay time which is also adjustable.

Features:

- 4 selectable ranges of triggering residual current with continuously adjustable threshold within the selected range
- Response time continuously adjustable
- Safety through reliable detection of AC and pulsating DC residual currents
- Compact design
- Integrated plug-through transformer
- Electrically isolated change-over contact for alarm signal
- LED indicator bar displays residual current in 10% steps
- High electromagnetic noise immunity

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Applications:

Power supply of utility buildings and industrial installations with TN-S, TN-C-S and IT nets.

They must not be used in TN-C nets and DC nets or for monitoring installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Notes:

- RCMs are not suitable for realising the protective measure „Automatic disconnection in case of a fault“ as per IEC 60 364-4-41.

Accessories:

- DMD P Indicator and display panel



Designation	Article-No.
DMD 2	XX 352 010



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Residual Current Monitor DMD 2 E

for external transformer connection, sensitive to residual currents Type A



Designation	Article-No.
DMD 2E	XX 352 012

Function:

Residual current monitor (RCM) sensitive to AC and pulsating DC residual currents fitted with external transformer connection for monitoring electrical installations which, in the event of faulty insulation between live conductors and earth, may not be immediately switched off.

The RCM continuously displays on a LED indicator bar the present residual current and activates a relay contact when the settable response threshold is exceeded. The response threshold is infinitely adjustable within 4 selectable detection ranges.

In order to avoid unnecessary signalling of harmless transient residual current pulses, an alarm is given only after a response delay time which is also adjustable.

Features:

- Connecting terminals for model range DWP / DWW external residual current transformer
- When the connection to the external residual current transformer is disrupted the alarm-function will be triggered
- 4 selectable ranges of triggering residual current with continuously adjustable threshold within the selected range
- Response time continuously adjustable
- Safety through reliable detection of pulsating DC and AC residual currents
- Compact design for all residual current ratings
- Electrically isolated change-over contact for alarm signal
- LED indicator bar displays residual current in 10% steps
- High electromagnetic noise immunity

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Residual Current Monitors (RCM)

Applications:

Power supplies of utility buildings and industrial installations with TN-S, TN-C-S and IT nets. They must not be used in TN-C and DC nets or for monitoring installations in which electronic equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Notes:

- RCMs are not suitable for realising the protective measure „Automatic disconnection in case of a fault“ as per IEC 60 364-4-41.

Accessories:

DMD P Indicator and display panel
Residual current transformer of model range
DWP / DWW
(35 mm, 70 mm, 105 mm or 140 mm)



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Residual Current Monitors DMD 3 B

with integrated residual current transformer, sensitive to AC-DC residual currents Type B



Designation	Type B NK	Article-No.
DMD 3-1 B NK		XX 352 032
DMD 3-2 B NK		XX 352 033

Designation	Type B SK	Article-No.
DMD 3-1 B SK		XX 352 034
DMD 3-2 B SK		XX 352 035

Function:

AC-DC sensitive residual current monitor (RCM) for monitoring electrical installations with electronic equipment which, in the event of faulty insulation between live conductors and earth, may not be immediately switched off.

The DMD 3 B continuously displays on a LED indicator bar the present residual current and activates a relay contact when the selectable response threshold is exceeded. There is also a preliminary warning via a second contact when the residual current exceeds an adjustable threshold within a range of 10% to 90% of the selected response setting for the main alarm. In order to avoid unnecessary signalling of harmless transient residual current pulses, a main alarm is given only after a response delay time which is also adjustable.

Features:

- High degree of safety through reliable detection of **smooth** and pulsating DC residual currents and AC residual currents up to 100 kHz
- Selectable triggering current of main alarm: 0.03 – 0.1 – 0.3 A or 0.3 – 0.5 – 1 A depending on type
- Preliminary warning with continuously adjustable response threshold between 10% to 90% of main alarm
- Response time continuously adjustable between 0.1 and 1 second
- Compact design for all residual current ratings
- Integrated 25 mm dia. plug-through transformer
- Electrically isolated change-over contacts for preliminary warning and main alarm
- LED indicator bar displays residual current in 10% steps
- High electromagnetic noise immunity

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Residual Current Monitors (RCM)

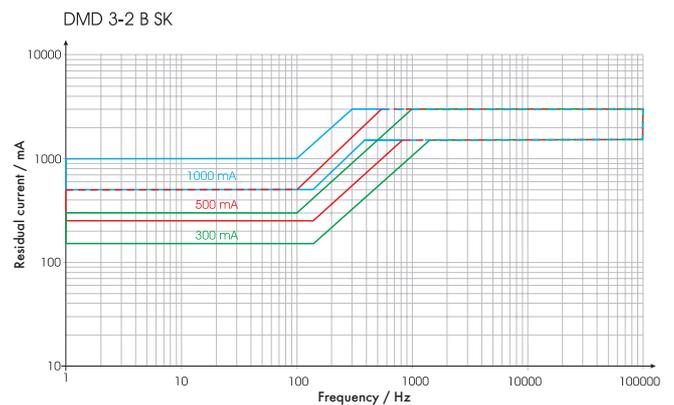
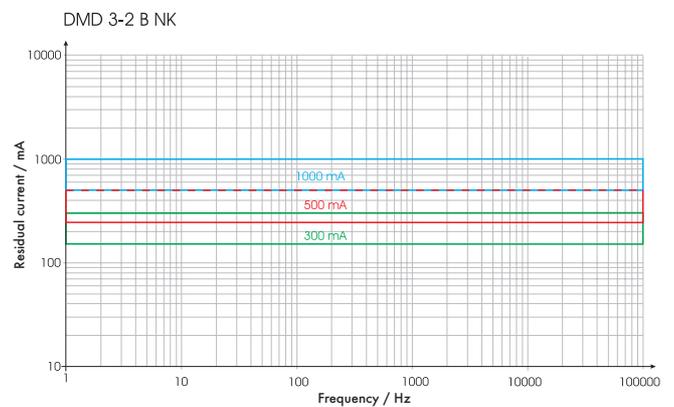
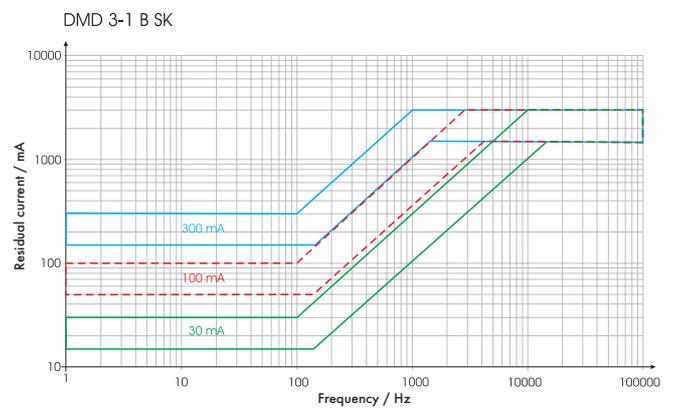
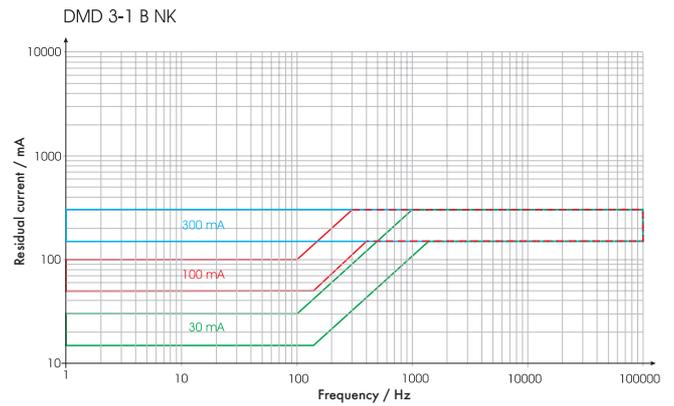
Applications:

Installations with power electronic equipment which is not electrically isolated from mains, such as

- Frequency converters
- UPS installations
- HF transformers
- Pulsed power supply units
- etc.

Notes:

- RCMs are not suitable for realising the protective measure „Automatic disconnection in case of a fault“ as per IEC 60 364-4-41.



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Indicator and Signalling Panel DMD P



Designation	Article-No.
DMD-P	XX 352 011



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Function:

The DMD P indicator and signalling panel is used for the visual and acoustic remote alarm-indication of the switch status of DMD 1, DMD 2 and DMD 2 E residual current monitoring devices. The acoustic signal can be cancelled via the reset button on the panel.

Features:

- Alarm-indication
 - Visual, by a flashing red LED
 - Acoustic, by intermittent tone
- Acoustic alarm can be cancelled with a reset button

Mounting method:

- Flush-mounted (80 mm x 80 mm x 15 mm)
- Surface-mounted (80 mm x 80 mm x 42 mm)
- IP 20
- Fits into a standard 68 mm dia. installation box
- Max. cable length 100 m

Applications:

Accessory for model ranges DMD 1, DMD 2 and DMD 2 E

Monostable load control relay SIR 16 M



Designation	Article-No.
SIR 16M	XX 500 210



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Function:

The monostable SIR 16 M load relay is a component of the SI system that can also be used as an installation relay for system non-dependent control duties.

Features:

- Low triggering power
- Sturdy switching contact
- Requires little space
- Switch status indication by LED

Mounting method:

- Snap-fastening on DIN-rail to EN 50022 in all standard distribution panels
- Any mounting position possible

Applications:

Universal load switching device in 250V low-voltage mains

Residual Current Transformer DWP / DWW sensitive to residual currents Type A and Type AC

Function:

The residual current transformers of the DWP / DWW model range are run as plug-through transformers and are connected with their secondary and test circuit windings to the respective residual current control devices of Types DMD 2E, DRP or DRW. In order for a signal for triggering the residual current control device to be generated at the secondary winding, which corresponds to the vector total of the load currents, all active conductors except for the protective earth have to be passed through the transformer. With the aid of a residual current control device and an external Type DWP / DWW transformer, it is thus also possible to monitor and protect electrical installations with large diameter supply leads or high currents and voltages.

Features:

- Closely graduated aperture sizes ensure a good match to the cable to be monitored
- Covered labelling window
- Terminals up to 4 mm²

Mounting method:

- Screw fastened via mounting angles – any mounting position possible

Applications:

- Industrial installations

Notes:

The through aperture should ideally be fully filled by the lead to be monitored, so that the latter is centralized in the transformer. In cases of high start-up currents this will prevent spurious tripping as a result of asymmetry of the transformer.



Designation	Article-No.
DWP 35 Type A	XX 340 111
DWP 70 Type A	XX 340 112
DWP 105 Type A	XX 340 113
DWP 140 Type A	XX 340 114
DWW 35 Type AC	XX 341 111
DWW 70 Type AC	XX 341 112
DWW 105 Type AC	XX 341 113
DWW 140 Type AC	XX 341 114



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RCBO FIB / FIC



Designation	Article-No.
6 A	
FIB 06/0,03/1+N-A	XX 952 101
FIB 06/0,30/1+N-A	XX 952 111
FIB 06/0,01/1+N-A	XX 952 141
10 A	
FIB 10/0,03/1+N-A	XX 952 102
FIB 10/0,30/1+N-A	XX 952 112
FIB 10/0,01/1+N-A	XX 952 142
13 A	
FIB 13/0,03/1+N-A	XX 952 103
FIB 13/0,30/1+N-A	XX 952 113
FIB 13/0,01/1+N-A	XX 952 143
16 A	
FIB 16/0,03/1+N-A	XX 952 104
FIB 16/0,30/1+N-A	XX 952 114
FIB 16/0,01/1+N-A	XX 952 144
20 A	
FIB 20/0,03/1+N-A	XX 952 105
FIB 20/0,30/1+N-A	XX 952 115
25 A	
FIB 25/0,03/1+N-A	XX 952 106
FIB 25/0,30/1+N-A	XX 952 116
32 A	
FIB 32/0,03/1+N-A	XX 952 107
FIB 32/0,30/1+N-A	XX 952 117
40 A	
FIB 40/0,03/1+N-A	XX 952 108
FIB 40/0,30/1+N-A	XX 952 118

Function:

Miniature circuit-breakers with mains voltage-independent residual current trip for protecting installations in the event of short-circuits and overloads as per the requirements of IEC 60 364-4-43 as well as for the protection of persons, livestock and property in cases of fault currents to earth as per IEC 60 364-4-41.

Features:

- Overcurrent tripping characteristic B and C
- 2-pole and 4-pole versions
- Sensitive to AC and pulsating DC residual currents (Type A)
- Rated currents (2-pole) 6 A to 40 A
- Rated currents (4-pole) 6 A to 32 A
- Rated residual currents 0.01 A, 0.03 A and 0.3 A

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels
- Any mounting position possible

Applications:

Protection of socket-outlet ring circuits in domestic and utility buildings as well as industrial installations with TN-S and TN-C-S systems. In IT nets RCBOs can be provided for disconnection in the event of a second short-to-earth.

They must not be used in installations with TN-C nets or for protecting circuits in which electronic power equipment can give rise to smooth DC residual currents or residual currents with frequencies other than 50 Hz.

Accessories:

- Hi 11 auxiliary switch 1 NCC / 1 NOC, 0.5 module width, retrofittable (for 2-pole version only)
- FAM remote actuator for 2-pole version only (factory-fitted)



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Accessories

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Residual Current Circuit-Breakers with Overcurrent Protection (RCBO)

Accessories



Designation	Article-No.
6 A	
FIC 06/0,03/1+N-A	XX 952 121
FIC 06/0,30/1+N-A	XX 952 131
FIC 06/0,01/1+N-A	XX 952 151
10 A	
FIC 10/0,03/1+N-A	XX 952 122
FIC 10/0,30/1+N-A	XX 952 132
FIC 10/0,01/1+N-A	XX 952 152
13 A	
FIC 13/0,03/1+N-A	XX 952 123
FIC 13/0,30/1+N-A	XX 952 133
FIC 13/0,01/1+N-A	XX 952 153
16 A	
FIC 16/0,03/1+N-A	XX 952 124
FIC 16/0,30/1+N-A	XX 952 134
FIC 16/0,01/1+N-A	XX 952 154
20 A	
FIC 20/0,03/1+N-A	XX 952 125
FIC 20/0,30/1+N-A	XX 952 135
25 A	
FIC 25/0,03/1+N-A	XX 952 126
FIC 25/0,30/1+N-A	XX 952 136
32 A	
FIC 32/0,03/1+N-A	XX 952 127
FIC 32/0,30/1+N-A	XX 952 137
40 A	
FIC 40/0,03/1+N-A	XX 952 128
FIC 40/0,30/1+N-A	XX 952 138



Designation	Article-No.
6 A	
FIB 06/0,03/3+N-A	XX 955 101
FIB 06/0,30/3+N-A	XX 955 111
10 A	
FIB 10/0,03/3+N-A	XX 955 102
FIB 10/0,30/3+N-A	XX 955 112
13 A	
FIB 13/0,03/3+N-A	XX 955 103
FIB 13/0,30/3+N-A	XX 955 113
16 A	
FIB 16/0,03/3+N-A	XX 955 104
FIB 16/0,30/3+N-A	XX 955 114
20 A	
FIB 20/0,03/3+N-A	XX 955 105
FIB 20/0,30/3+N-A	XX 955 115
25 A	
FIB 25/0,03/3+N-A	XX 955 106
FIB 25/0,30/3+N-A	XX 955 116
32 A	
FIB 32/0,03/3+N-A	XX 955 107
FIB 32/0,30/3+N-A	XX 955 117
40 A	
FIB 40/0,03/3+N-A	XX 955 108
FIB 40/0,30/3+N-A	XX 955 118



Designation	Article-No.
6 A	
FIC 06/0,03/3+N-A	XX 955 121
FIC 06/0,30/3+N-A	XX 955 131
10 A	
FIC 10/0,03/3+N-A	XX 955 122
FIC 10/0,30/3+N-A	XX 955 132
13 A	
FIC 13/0,03/3+N-A	XX 955 123
FIC 13/0,30/3+N-A	XX 955 133
16 A	
FIC 16/0,03/3+N-A	XX 955 124
FIC 16/0,30/3+N-A	XX 955 134
20 A	
FIC 20/0,03/3+N-A	XX 955 125
FIC 20/0,30/3+N-A	XX 955 135
25 A	
FIC 25/0,03/3+N-A	XX 955 126
FIC 25/0,30/3+N-A	XX 955 136
32 A	
FIC 32/0,03/3+N-A	XX 955 127
FIC 32/0,30/3+N-A	XX 955 137
40 A	
FIC 40/0,03/3+N-A	XX 955 128
FIC 40/0,30/3+N-A	XX 955 138

Auxiliary Switch Hi 11 for RCBOs



Designation	Article-No.
Hi 11	XX 950 012

Function:

The Hi 11 can be retrofitted as an auxiliary switch to 2-pole RCBOs of model ranges FIB and FIC. With the aid of other signalling devices (buzzer, indicator lamp, etc.) or via the Dupline bus system it enables the operating status of a residual current circuit-breaker to be indicated.

Features:

- Auxiliary switch function
- Retrofittable
- Compact design
- 1 normally closed contact / 1 normally open contact

Mounting method:

- Clamped on the left side of the residual current circuit-breaker
- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Applications:

Operating status enquiry of power supplies in domestic and utility buildings as well as industrial installations

Note:

The auxiliary switch does not affect the function of the RCBO.



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Remote Trip Module FAM 1

Function:

The FAM 1 can be retrofitted as an external triggering device to 2-pole RCBOs of model ranges FIB and FIC. Triggering by an external contact (push-button, time switch etc.) results in remote switch-off, albeit without remote testing.

Features:

- Retrofittable
- Compact design

Mounting method:

- Clamped on the left side of the combined RCCB/MCB
- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Applications:

Disconnection of power supply circuits in domestic and utility buildings as well as industrial installations by means of fault indicators and alarm systems.

Notes:

- The FAM 1 does not affect the function of the combined RCBO.
- Not suitable for operational switching.

Accessories



Designation	Article-No.
FAM 1	XX 950 011



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Efficient

Reliable

Flexible

Future-orientated

Independent



**50 Years
of Innovation
and German Quality**

Miniature Circuit-Breaker DLS 5

Tripping Characteristic B



10000  EN 60898

Designation	Article-No.
6 A	
DLS5 B06-1	XX 913 049
DLS5 B06-1+N	XX 913 079
DLS5 B06-2	XX 913 109
DLS5 B06-3	XX 913 139
DLS5 B06-3+N	XX 913 359
DLS5 B06-4	XX 913 169
10 A	
DLS5 B10-1	XX 913 051
DLS5 B10-1+N	XX 913 081
DLS5 B10-2	XX 913 111
DLS5 B10-3	XX 913 141
DLS5 B10-3+N	XX 913 361
DLS5 B10-4	XX 913 171
13 A	
DLS5 B13-1	XX 913 052
DLS5 B13-1+N	XX 913 082
DLS5 B13-2	XX 913 112
DLS5 B13-3	XX 913 142
DLS5 B13-3+N	XX 913 362
DLS5 B13-4	XX 913 172
15 A	
DLS5 B15-1	XX 913 060
DLS5 B15-1+N	XX 913 090
DLS5 B15-2	XX 913 120
DLS5 B15-3	XX 913 150
DLS5 B15-3+N	XX 913 370
DLS5 B15-4	XX 913 180
16 A	
DLS5 B16-1	XX 913 053
DLS5 B16-1+N	XX 913 083
DLS5 B16-2	XX 913 113
DLS5 B16-3	XX 913 143
DLS5 B16-3+N	XX 913 363
DLS5 B16-4	XX 913 173

Function:

Miniature circuit-breaker (MCB) for the overload protection of cables and leads as per the requirements of IEC 60364-4-43. Due to its magnetic, non-delayed high-speed tripping with extremely short disconnecting times the DLS 5 ensures minimum loading of the line in the event of a short-circuit. The conducting-state current is well below the figures for the highest current limiting Class 3 as per EN 60898 or IEC 60898. In contrast to standard MCBs the thermal tripping of the DLS 5 is triggered by the lost heat of the magnetic high-speed trip. No additional heat is generated by the thermal trip. During normal operation the current heat loss is therefore minimal.

Features:

- Wide range of types
 - 1 - 4-pole
 - 6 A - 63 A
- High-speed tripping at load currents in excess of 3 - 5 times the rated current
- High short-circuit breaking capacity
- Individual devices can be easily removed from cross-wiring with phase bar.
- Double-deck terminals for large wire diameter and busbar at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three positions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position), i.e. when the DLS 5 is tripped by a fault the lever adopts the central position.

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Miniature Circuit Breakers (MCB)

Applications:

Power supply of domestic and utility buildings as well as industrial installations.

Accessories:

- DHi 1 auxiliary switch
- DFA remote actuator for 1 - 3-pole DLS 5 (for remote tripping, enabling and disabling)
- Contact-protection cover for system construction
- WES (restart locking facility)

Designation	Article-No.
20 A	
DLS5 B20-1	XX 913 054
DLS5 B20-1+N	XX 913 084
DLS5 B20-2	XX 913 114
DLS5 B20-3	XX 913 144
DLS5 B20-3+N	XX 913 364
DLS5 B20-4	XX 913 174
25 A	
DLS5 B25-1	XX 913 055
DLS5 B25-1+N	XX 913 085
DLS5 B25-2	XX 913 115
DLS5 B25-3	XX 913 145
DLS5 B25-3+N	XX 913 365
DLS5 B25-4	XX 913 175
32 A	
DLS5 B32-1	XX 913 056
DLS5 B32-1+N	XX 913 086
DLS5 B32-2	XX 913 116
DLS5 B32-3	XX 913 146
DLS5 B32-3+N	XX 913 366
DLS5 B32-4	XX 913 176
40 A	
DLS5 B40-1	XX 913 057
DLS5 B40-1+N	XX 913 087
DLS5 B40-2	XX 913 117
DLS5 B40-3	XX 913 147
DLS5 B40-3+N	XX 913 367
DLS5 B40-4	XX 913 177
50 A	
DLS5 B50-1	XX 913 058
DLS5 B50-1+N	XX 913 088
DLS5 B50-2	XX 913 118
DLS5 B50-3	XX 913 148
DLS5 B50-3+N	XX 913 368
DLS5 B50-4	XX 913 178
63 A	
DLS5 B63-1	XX 913 059
DLS5 B63-1+N	XX 913 089
DLS5 B63-2	XX 913 119
DLS5 B63-3	XX 913 149
DLS5 B63-3+N	XX 913 369
DLS5 B63-4	XX 913 179



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Miniature Circuit-Breaker DLS 5

Tripping Characteristic C



Designation	Article-No.
0,5 A	
DLS5 C0,5-1	XX 913 200
DLS5 C0,5-1+N	XX 913 230
DLS5 C0,5-2	XX 913 260
DLS5 C0,5-3	XX 913 290
DLS5 C0,5-3+N	XX 913 380
DLS5 C0,5-4	XX 913 320
1 A	
DLS5 C01-1	XX 913 202
DLS5 C01-1+N	XX 913 232
DLS5 C01-2	XX 913 262
DLS5 C01-3	XX 913 292
DLS5 C01-3+N	XX 913 382
DLS5 C01-4	XX 913 322
2 A	
DLS5 C02-1	XX 913 204
DLS5 C02-1+N	XX 913 234
DLS5 C02-2	XX 913 264
DLS5 C02-3	XX 913 294
DLS5 C02-3+N	XX 913 384
DLS5 C02-4	XX 913 324
4 A	
DLS5 C04-1	XX 913 207
DLS5 C04-1+N	XX 913 237
DLS5 C04-2	XX 913 267
DLS5 C04-3	XX 913 297
DLS5 C04-3+N	XX 913 387
DLS5 C04-4	XX 913 327
6 A	
DLS5 C06-1	XX 913 209
DLS5 C06-1+N	XX 913 239
DLS5 C06-2	XX 913 269
DLS5 C06-3	XX 913 299
DLS5 C06-3+N	XX 913 389
DLS5 C06-4	XX 913 329
10 A	
DLS5 C10-1	XX 913 211
DLS5 C10-1+N	XX 913 241
DLS5 C10-2	XX 913 271
DLS5 C10-3	XX 913 301
DLS5 C10-3+N	XX 913 391
DLS5 C10-4	XX 913 331

Function:

Miniature circuit-breaker (MCB) for the overload protection of cables and leads as per the requirements of IEC 60364-4-43. Due to its magnetic, non-delayed high-speed tripping with extremely short disconnecting times the DLS 5 ensures minimum loading of the line in the event of a short-circuit. The conducting-state current is well below the figures for the highest current limiting Class 3 as per EN 60898 or IEC 60898. In contrast to standard MCBs the thermal tripping of the DLS 5 is triggered by the lost heat of the magnetic high-speed trip. No additional heat is generated by the thermal trip. During normal operation the current heat loss is therefore minimal.

Features:

- Wide range of types
 - 1 - 4-pole
 - 6 A - 63 A
- Tripping at load currents in excess of 5 - 10 times the rated current
- High short-circuit breaking capacity
- Individual devices are easily removed from cross-wiring with phase bar.
- Double-deck terminals for large wire diameter and busbar at both ends
- Switch position indication
- View panel for labels
- Multi-function switch lever with three positions:
 - On (up position)
 - Off (down position)
 - „Tripped“ indication (central position), i.e. when the DLS 5 is tripped by a fault the lever adopts the central position.

Mounting method:

- Snap-on fastening on DIN-rail to EN 50022 possible in all standard distribution panels.
- Any mounting position possible

Miniature Circuit Breakers (MCB)

Applications:

Power supply of domestic and utility buildings as well as industrial installations.

Accessories:

- DHi 1 auxiliary switch
- DFA remote actuator for 1 - 3-pole DLS 5 (for remote tripping, enabling and disabling)
- Contact-protection cover for system construction
- WES (restart locking facility)

Designation	Article-No.
13 A	
DLS5 C13-1	XX 913 212
DLS5 C13-1+N	XX 913 242
DLS5 C13-2	XX 913 272
DLS5 C13-3	XX 913 302
DLS5 C13-3+N	XX 913 392
DLS5 C13-4	XX 913 332
15 A	
DLS5 C15-1+N	XX 913 250
DLS5 C15-2	XX 913 280
DLS5 C15-3	XX 913 310
DLS5 C15-3+N	XX 913 400
DLS5 C15-4	XX 913 340
16 A	
DLS5 C16-1	XX 913 213
DLS5 C16-1+N	XX 913 243
DLS5 C16-2	XX 913 273
DLS5 C16-3	XX 913 303
DLS5 C16-3+N	XX 913 393
DLS5 C16-4	XX 913 333
20 A	
DLS5 C20-1	XX 913 214
DLS5 C20-1+N	XX 913 244
DLS5 C20-2	XX 913 274
DLS5 C20-3	XX 913 304
DLS5 C20-3+N	XX 913 394
DLS5 C20-4	XX 913 334
25 A	
DLS5 C25-1	XX 913 215
DLS5 C25-1+N	XX 913 245
DLS5 C25-2	XX 913 275
DLS5 C25-3	XX 913 305
DLS5 C25-3+N	XX 913 395
DLS5 C25-4	XX 913 335
32 A	
DLS5 C32-1	XX 913 216
DLS5 C32-1+N	XX 913 246
DLS5 C32-2	XX 913 276
DLS5 C32-3	XX 913 306
DLS5 C32-3+N	XX 913 396
DLS5 C32-4	XX 913 336
40 A	
DLS5 C40-1	XX 913 217
DLS5 C40-1+N	XX 913 247
DLS5 C40-2	XX 913 277
DLS5 C40-3	XX 913 307
DLS5 C40-3+N	XX 913 397
DLS5 C40-4	XX 913 337
50 A	
DLS5 C50-1	XX 913 218
DLS5 C50-1+N	XX 913 248
DLS5 C50-2	XX 913 278
DLS5 C50-3	XX 913 308
DLS5 C50-3+N	XX 913 398
DLS5 C50-4	XX 913 338
63 A	
DLS5 C63-1	XX 913 219
DLS5 C63-1+N	XX 913 249
DLS5 C63-2	XX 913 279
DLS5 C63-3	XX 913 309
DLS5 C63-3+N	XX 913 399
DLS5 C63-4	XX 913 339



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Miniature Circuit-Breaker MCB

Tripping Characteristic D



10000   EN 61008

Designation	Article-No.
1 A	
MCB D1-1	XX 915 412
2 A	
MCB D2-1	XX 915 414
4 A	
MCB D4-1	XX 915 417
6 A	
MCB D6-1	XX 915 419
MCB D6-2	XX 915 479
MCB D6-3	XX 915 519
10 A	
MCB D10-1	XX 915 421
MCB D10-1+N	XX 915 451
MCB D10-2	XX 915 481
MCB D10-3	XX 915 521
MCB D10-3+N	XX 915 551
MCB D10-4	XX 915 581
13 A	
MCB D13-1	XX 915 422
MCB D13-1+N	XX 915 452
MCB D13-2	XX 915 482
MCB D13-3	XX 915 522
MCB D13-3+N	XX 915 552
MCB D13-4	XX 915 582
16 A	
MCB D16-1	XX 915 423
MCB D16-1+N	XX 915 453
MCB D16-2	XX 915 483
MCB D16-3	XX 915 523
MCB D16-3+N	XX 915 553
MCB D16-4	XX 915 583

Function:

Miniature circuit-breaker (MCB) for the overload protection of cables and leads.

Due to its magnetic, non-delayed high-speed tripping with extremely short disconnecting times the MCB ensures minimum loading of the line in the event of a short-circuit.

The conducting-state current is well below the figures for the highest current limiting class 3 as per EN 60898 or IEC 60898.

Features:

- Wide range of types
 - 1 - 4-pole
 - 6 A - 63 A
- Tripping at load currents in excess of 10 - 20 times the rated current
- High short-circuit breaking capacity
- Double-deck terminal for large wire diameter and busbar at bottom