# Doepke

## DATA SHEET
### residual current circuit-breaker
### DFS 2 080-2/0,03-AC
*sensitive to residual currents Type AC*
*Article number 09154602*

### Function
Residual current circuit-breakers (RCCBs) are components for implementing protective measure "Automatic disconnection of the power supply" as per VDE 0100 part 410 or corresponding international installation regulations. Series DFS 2 devices are compact two-pole residual current circuit-breakers for single-phase networks. In the standard design, they only take up two module-width units of space. In spite of the compact dimensions, a number of different tripping currents and characteristics are available at rated currents, depending on the design, up to 125 A. They also have large two-tier terminals for large conductor cross-sections, a practical multi-functional switch toggle and can be provided with labels using free-of-charge software. Switches with residual current characteristic AC only detect AC residual currents. They cannot detect pulsating DC residual currents so are not permitted for use as residual current operated protective devices in Germany. They are therefore only available as export models. Devices in the standard design are intended for monitoring circuits with a rated voltage of 230 V and a rated frequency of 50 Hz.

### Features
tripping not dependent on mains and auxiliary voltage, sensitive to AC residual currents (type AC) , compact design for all rated currents, high short-circuit resistance, double-sided two-tier terminals for large conductor cross-section and busbar, switch position indicator, viewing window for labels, multifunction switch toggle with three positions: "on", "off" and "tripped", Neutral conductor position left or right

### Mounting
quick fastening to mounting rail, any installation position, supply from any direction

### Applications
Power supplies to residential and purpose-built buildings as well as industrial facilities with TN-S, TT and TN-C-S networks. In IT networks, the residual current circuit-breakers of this series can be set to switch off in the event of a second fault, Not permitted for use in TN-C networks; not permitted for protecting systems in which electronic equipment may cause pulsating or smooth DC residual currents or residual currents with frequencies not equal to 50 Hz. Comprehensive protection is not provided with an RCCB type AC. For these applications we recommend our residual current circuit-breaker type A or our AC/DC sensitive residual current circuit-breaker type B/B+.

### Accessories
automatic reclosing devices DFA, terminal caps KA, information stickers HAS, auxiliary switches DHi, restart locks DFS WES, software DBS

### Technical Data

| Technical Data | DFS 2 080-2/0,03-AC |
|---|---|
| Series | DFS 2 AC |
| Number of poles | 2 |
| Residual current type | AC |
| Rated current (AC) | 80 A |
| Rated residual current IΔn | 0.03 A |
| Short-time delayed | false |
| Selective | false |
| min. Operating voltage range of test circuit | 150 V |
| max. Operating voltage range of test circuit | 250 V |

| Technical Data | DFS 2 080-2/0,03-AC |
|---|---|
| Maximum disconnection times | 1 · IΔn: ≤ 300 ms; 5 · IΔn: ≤ 40 ms |
| | **load circuit** |
| Specification | load disconnect contact |
| min. Contact opening | 4 mm |
| Rated voltage (AC) | 230 V |
| Rated current (AC) | 80 A |
| Rated short-circuit current | 10 kA |
| Surge current strength | 0.25 kA |
| max. Total rated switching capacity | 800 A |
| Rated insulation voltage | 400 V |
| Rated impulse withstand voltage | 4 kV |
| Rated frequency | 50 Hz |
| Current heat loss per current path | 4 W |
| Thermal Backup-fuse OCPD | 63 A |
| Short-circuit backup-fuse SCPD | 100 A |
| Back-up fuse type | gG |
| | **screw-type terminal  top and bottom  (load circuit)** |
| Neutral conductor position | left or right |
| Protection against direct contact | DGUV V3, VDE 0660-514, finger and back-of-hand proof |
| Connection C1 Maximum number of conductors per terminal | 2 (conductors of same type and cross-section) |
| Cross section solid | 1-wire: 1.5 mm² ... 50 mm²; 2-wire: 1.5 mm² ... 16 mm² |
| Connecting capacity flexible | 1-wire: 1.5 mm² ... 50 mm²; 2-wire: 1.5 mm² ... 16 mm² |
| Cross section stranded | 1-wire: 1.5 mm² ... 50 mm²; 2-wire: 1.5 mm² ... 16 mm² |
| Cross section AWG, solid | 15 ... 1 |
| Cross section AWG, stranded | 15 ... 1 |
| Cross section AWG, flexible | 15 ... 1 |
| Cross section AWG, flexible with ferrule | 15 ... 1 |
| Tightening torque | 2.5 Nm ... 3 Nm |
| | **General data** |
| Operating position | optional |
| max. Operating altitude above MSL | 2000 m |
| Mechanical endurance | min. 5000 cycles |
| Electrical endurance | min. 2000 cycles |
| Surrounding atmosphere | normal environmental conditions |
| Storage temperature | -35 °C ... 75 °C |
| Ambient temperature | -25 °C ... 40 °C |
| Climate resistance | according to IEC 60068-2-30: humid heat / cyclic (25 °C / 55 °C; 93 % / 97 % RH) |
| Shock resistance | 20 g / 20 ms Duration |
| Fatigue limit | > 5 g (f ≤ 80 Hz, duration > 30 min.) |
| Housing type | distribution board housing |
| Installation type | Mounting rail (35 mm) |
| Housing material | thermoplastic |
| Protection class | IP20 (installed: IP40) |
| sealable | true |
| Width | 36 mm |

Subject to technical changes

| Technical Data | DFS 2 080-2/0,03-AC |
|---|---|
| Height | 85 mm |
| Depth | 75 mm |
| Installation depth | 69 mm |
| Module widths | 2 |
| Weight | 0.253 kg |
| Design requirements/Standards | VDE 0664-10, DIN EN 61008-1 |
| Degree of pollution | 2 |

### Dimensions



*Dimensional drawing Group view*

### Wiring example



*Wiring diagram*