



DATA SHEET

residual current circuit-breaker

DFS 4 040-4/0,03-AC V110/190

sensitive to residual currents Type AC, Rated voltage 110 V, 190 V

Article number 09134926



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 4 devices are compact two or four-pole residual current circuit-breakers. In the standard design, they only take up four module width units of space. Although DFS 4 devices for AC and pulsating DC residual currents are actually designed for three-phase networks, they can also be used in single-phase networks. However, in addition to these, special variants are also available for single or three-phase operation in the form of the AC/DC sensitive designs (type B, type B+). 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 design V are made for special voltages.

Mounting

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

Notes

Other special voltages available upon request

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 4 040-4/0,03-AC V110/190 |
|--|---|
| Series | DFS 4 AC V |
| Number of poles | 4 |
| Residual current type | AC |
| Rated current (AC) | 40 A |
| Rated residual current $I_{\Delta n}$ | 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 |
| Maximum disconnection times | $1 \cdot I_{\Delta n}: \leq 300 \text{ ms}; 5 \cdot I_{\Delta n}: \leq 40 \text{ ms}$ |
| | load circuit |
| Specification | load disconnect contact |
| min. Contact opening | 4 mm |
| Rated voltage (AC) | 110 V, 190 V |
| Rated current (AC) | 40 A |

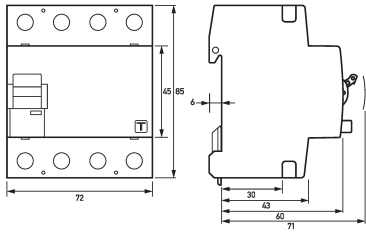
Subject to technical changes

| Technical Data | | DFS 4 040-4/0,03-AC V110/190 |
|---|--|---|
| Rated short-circuit current | | 10 kA |
| Surge current strength | | 0.25 kA |
| max. Total rated switching capacity | | 500 A |
| Rated insulation voltage | | 400 V |
| Rated impulse withstand voltage | | 4 kV |
| Rated frequency | | 50 Hz |
| Current heat loss per current path | | 1.3 W |
| Thermal Backup-fuse OCPD | | 40 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 |
| 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 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ² |
| Connecting capacity flexible | | 1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ² |
| Cross section stranded | | 1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ² |
| 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 | | 72 mm |
| Height | | 85 mm |
| Depth | | 75 mm |
| Installation depth | | 69 mm |
| Module widths | | 4 |
| Weight | | 0.44 kg |
| Design requirements/Standards | | VDE 0664-10, DIN EN 61008-1 |

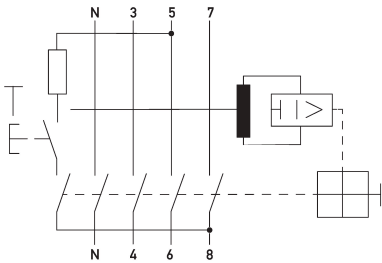
Subject to technical changes

| | |
|---------------------|------------------------------|
| Technical Data | DFS 4 040-4/0,03-AC V110/190 |
| Degree of pollution | 2 |

Dimensions



Wiring example



Dimensional drawing Group view

Wiring diagram