Installation and operation instructions

STOTZ Residual Current Operated Circuit Breaker with Overcurrent Release FS 451
RCBO according to DIN VDE 0664 Part 2 and EN 61009

GH F450 7002 P2

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Residual Current Operated Circuit Breaker with Overcurrent Release (RCBO)

type FS 451 "multiSTOTZ"

- for alternating and pulsating d.c. fault currents
- ambient temperatures: T_{max} + 55 °C, T_{min} – 25 °C
- short circuit protection: 6000 A
- let through energy limiting class: 3
- surge current withstand capacity: 250 A (pulse shape 8/20 according to DIN VDE 0432 Part 2)

Technical data

see nameplate

Maximum back-up fuse

Protection provided by maximum back-up fuses is only required in cases where the short-circuit current occurring at the mounting position can be expected to exceed the indicated rated switching capacity.

<table>
<thead>
<tr>
<th>FS 451 max. back-up fuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>rated current</td>
</tr>
<tr>
<td>I_{n} / A</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>10...40</td>
</tr>
</tbody>
</table>

Connection

Incoming supply is connected by means of "Safe Connect" plug-in technology.

In the outgoing circuit ensure that the conductors are properly and firmly connected. Max. tightening torque = 2.5 Nm.

Caution: Installation and removal must be carried out by authorised personnel only.

Connection diagram

Connection diagram showing the connection points and how to connect conductors.

Operation

- operating lever
- position indicator

<table>
<thead>
<tr>
<th>operating lever</th>
<th>position indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>closing operation</td>
<td>opening operation</td>
</tr>
<tr>
<td>black &quot;I - ON&quot;</td>
<td>&quot;0 - OFF&quot;</td>
</tr>
</tbody>
</table>

Operating test

Device must be switched on and system voltage must be applied, press "T" test button briefly; the switch must respond immediately (black operating lever in "0 - OFF" position).

Operating tests should be carried out regularly, approximately once every month.

Operating test diagram

Diagram showing the test button and how to perform an operating test.
Test of effectiveness of protection
Apart from the RCBO operating test, test the effectiveness of the protection of the installation according to the applicable code of practice.

The maximum permissible earth/electrode resistance values for protection against indirect contact are as follows:

<table>
<thead>
<tr>
<th>max. permissible touch voltage $U_t$</th>
<th>max. permissible earth/electrode resistance if rated residual current $I_{L}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mA</td>
<td>833 Ω</td>
</tr>
<tr>
<td>50 V</td>
<td>1666 Ω</td>
</tr>
</tbody>
</table>

Cleaning
Dirty RCBOs may be cleaned with a damp cloth moistened with soapy water if dry cleaning is impossible. Never use caustic detergents or solvents.

Maintenance
Except for the regular operating test, no further maintenance measures need to be observed.

Malfunctioning
Where damage occurs (caused by e.g. transport, storage) repair work is not permissible.

If the device responds immediately after putting the RCBO into operation, check the downstream active circuit and any connected current-consuming apparatus for earth fault current or short circuit. Remove any conductive connections between the neutral conductor and the protective conductor existing in load circuit.

Where none of the above causes apply, and the device is still actuated when switched on, or if the operating test is completed unsuccessfully after pressing the test button, the RCBO must be replaced.

Opening the device will lead to a loss of warranty.