Instructions for assembly, operation and maintenance of indoor transfer switches

single-pole design
rated voltage 3 kV DC
rated current 630 A
Handling and storage

Carefully unpack the disconnector after delivery. Any damages to the switching device during the transport and identified in the course of unpacking must be immediately reported to the forwarder/supplier.

When lifting up grip the switching device only at the base frame. Avoid lifting the device by gripping at the current-carrying path. During the storage protect the device against mechanical damage, increased humidity level and contamination.

Operating conditions

The switches are intended for operation in normal operating conditions as defined by EN 60721 or EN 50123-1 standards.

They can be operated at altitudes of up to 1 400 m above sea level. For altitudes of above 1 400 m above sea level the rated insulation level has to be moderated accordingly.

According to the above standards the following limits for ambient temperature apply:

- lowest ambient temperature: – 25 °C,
- highest daily average ambient temp.: + 35 °C,
- absolute highest ambient temperature: + 40 °C.

Assembly

The transfer switches can be mounted in any position.

In the case the switching device is equipped with a motor operated drive mechanism the possibility of manual emergency control of the drive is to be considered.

Mounting the transfer switch

In the course of tightening the screws any deformations or mechanical tensions in the base frame have to be avoided (use shim blocks where appropriate).

Connection of busbars or cable heads

Take heed to tensions and stresses which have to be avoided when connecting the busbars or cables to the device. Tighten the connecting screws with the torque of 70 Nm (with a second key in counter position).

Function test prior putting the device into operation

Check of the current-carrying path

Improper handling during transport may cause damage to the switching device. This is why the symmetrical run-in of knife contact into the fixed contact should be checked prior putting the device into operation.

Checking the auxiliary switches

Switching state indication function, if such is installed at the switching device, should be verified in terms of its proper operation prior putting the switch into service.

Operation

No a specific knowledge is required for the operating staff of the switching device. The transfer switches have always a motor drive installed.

In emergency cases the motor drive can be actuated manually using a square block mounted on the motor drive. In case of using the square block the actuation is done using the crank handle.
Maintenance

Under normal operating conditions the maintenance works are carried out every 10 years or following 2000 switching cycles. The maintenance works include:

Cleaning
- of insulators
- of switching knife contacts

Greasing
- specified grease is to be applied on the outer surface of main contacts, but in a very thin layer, only.

<table>
<thead>
<tr>
<th>Place of grease application</th>
<th>Specified brand names</th>
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<tbody>
<tr>
<td>surfaces of the main contacts</td>
<td>Rivolta S.K.D. 4002</td>
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After finishing the maintenance works perform a few test switch-on operations.

ITrp 3-630/20-M

Internal wiring diagram – 230 V AC

M1: motor drive
S1: end position switch – position up
S2: end position switch – position down
S3: emergency manual control switch
X1: terminal block

Specifications are subject to change without notice.