INSTALLATION INSTRUCTION

DC switch disconnectors
OTDC315...800F_/OTDC250...600UF_

Exceeds 5 Gauss
Within 15cm / 6 inch
of surface.

CAUTION
Magnetic field
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Use of symbols

🔥 Hazardous voltage
Warns about a situation where a hazardous voltage may cause physical injury to a person or damage to equipment.

⚠️ Caution
Provides important information or warns about a situation that may have a detrimental effect on equipment.

⚠️ General warning
Warns about a situation where something other than electrical equipment may cause physical injury to a person or damage to equipment.

ℹ️ Information
Provides important information about the equipment.
Receiving, handling and storage

**Receiving and handling**
Upon receipt, carefully inspect the switch for damage that may have occurred during transit. If damage is evident, or there is visible indication of rough handling, immediately file a damage claim with the transportation company, and notify your local ABB sales office.

Do not remove the shipping package until ready to install the switch.

**Storage**
If the unit will not be placed into service immediately, store the switch on its original package in a clean, dry location. To prevent condensation, maintain a uniform temperature. Store the unit in a heated building, allowing adequate air circulation and protection from dirt and moisture. Storing the unit outdoors could cause harmful condensation inside the switch enclosure.

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**HAZARD OF EQUIPMENT OVERTURNING**

When moving with a forklift, do not remove the shipping package until the device is in its final location.

Failure to follow this instruction will result in personal injury or equipment damage.
Read these safety instructions carefully before using this product!

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

• Apply appropriate personal protective equipment and follow safe electrical work practices.
• This equipment must only be installed and serviced by qualified electrical personnel.
• Before performing visual inspections, tests, or maintenance on the equipment, disconnect all sources of electric power. Assume that all circuits are live unless they are completely deenergized, tested, grounded, and tagged. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of backfeeding.
• Turn off switch before removing or making load side connections.
• Always use a properly rated voltage sensing device at all line and load to confirm switch is off.
• Turn off power supplying switch before doing any other work on or inside switch.

Failure to follow these instructions could result in death or serious injury.
Circuits

Circuit 1a

2-pole, 2-wire, 1-circuit
For grounded systems

Circuit 2a, 2b

2-pole, 4-wire, 1-circuit
2-pole, 4-wire, 1-circuit REVERSED SUPPLY
Circuit 3

4-pole, 4-wire, 2-circuit

For grounded systems

Circuit 4a, 4c

4-pole, 4-wire, 2-circuit

Circuit 7a, 7c

6-pole, 12-wire, 3-circuit

<table>
<thead>
<tr>
<th>Types</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTDC250...400UFS11, _UFSV11</td>
<td>OTDC250...400UF02, _UFV02</td>
<td>OTDC250...400UF02, _UFV02 + OTDCKIT400FS101</td>
<td>OTDC250...400UFS02, _UFSV02</td>
<td>OTDC250...400UFS02, _UFSV02 + OTDCKIT400FS101</td>
<td>OTDC250...400UFS02S, _UFSV02S</td>
<td>OTDC250...400UFS20S, _UFSV20S</td>
<td>OTD600UFS11, _UFSV11</td>
<td>OTD600UFS22, _UFSV22</td>
<td>OTDC600UFS22, _UFSV22 + 2 x OTDCKIT600FS11</td>
<td>OTDC315...630F02, _FV02</td>
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<td>OTDC315...630F02, _FV02</td>
<td>OTDC315...500F33, _FV33</td>
</tr>
</tbody>
</table>
Enclosure dimensioning
Clearances per UL98 / IEC 60947

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**Warning**
A minimum distance of 25.4 mm (1 in) from current carried parts to any conductive part.

Dimensions apply to all front operated switch types.

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### Minimum clearance to any conductive part

<table>
<thead>
<tr>
<th>From mechanism</th>
<th>From pole</th>
<th>From terminal blade</th>
<th>From mechanism</th>
<th>From shaft</th>
<th>From connection bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>C2</td>
<td>C3</td>
<td>C4</td>
<td>C5</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>35 / 1.38</td>
<td>105 / 4.13</td>
<td>50.8 / 2.00</td>
<td>25.4 / 1.00</td>
<td></td>
</tr>
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</table>

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### Minimum enclosure size or equivalent volume UL98

<table>
<thead>
<tr>
<th>Switch size</th>
<th>No. of poles</th>
<th>H</th>
<th>W</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTDC250F, OTDC320F, OTDC400F</td>
<td>2</td>
<td>500 / 19</td>
<td>500 / 19</td>
<td>200 / 7.9</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>600 / 24</td>
<td>700 / 27</td>
<td>200 / 7.9</td>
</tr>
<tr>
<td>OTDC600F</td>
<td>2</td>
<td>600 / 24</td>
<td>700 / 27</td>
<td>200 / 7.9</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1000 / 39</td>
<td>800 / 32</td>
<td>330 / 13</td>
</tr>
</tbody>
</table>
Enclosure dimensioning
Clearances per UL98 / IEC 60947

Warning
A minimum distance of 25.4 mm (1 in) from current carried parts to any conductive part.

Dimensions apply to all side operated switch types.

<table>
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<th>From mechanism</th>
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<td>200 / 7.9</td>
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<tr>
<td>OTDC600F</td>
<td>2</td>
<td>600 / 24</td>
<td>700 / 27</td>
<td>200 / 7.9</td>
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</tbody>
</table>
Mounting
OTDC_F_

Warning
Magnetic field exceeds 5 Gauss within 15 cm / 6 in of surface. Can erase credit cards. Avoid medical Implant Device proximity.

1.2 Nm
11 lb.in

1.2 Nm
11 lb.in

OH_95J/L12_
OH_125
OH_145
Busbars and compression lugs

**Caution**
Always use counter torque when tightening terminals!

**Caution**
Ensure cable suitability for compression lugs and application requirements. Use max. 2 pcs of compression lugs per switch terminal.

**Caution**
Phase barrier or shroud is mandatory on all switch types, except OTDC_F_11. Type for package of 2 barriers is OTDCB400F/2.

**Warning**
A minimum distance of 25.4 mm (1 in) from current carried parts to any conductive part.

### Compression Lug dimensions [mm]

- **A**: Maximum height 34
- **B**: Recommended maximum width 36
- **C**: Maximum length 105
- **D**: Recommended bolt slot 10,5...14,3

### Busbar width [mm / in]

- **min-max**: 25-41 / 1-1.6
- **recommendation**: 25 / 1
**Mechanical lug kit**

OZXA402

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**Caution**

Always use counter torque when tightening terminals!

**M10**

30...44 Nm
266-390 lb.in

31 Nm
275 lb.in

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**Warning**

A minimum distance of 25.4 mm (1 in) from current carried parts to any conductive part.

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**Caution**

Phase barrier or shroud is mandatory on all switch types, except OTDC_F_11. Type for package of 2 barriers is OTDCB400F/2.
**Mechanical lug kit**

**OZXA604**

**Caution**
Always use counter torque when tightening terminals!

**M10**
- 30...44 Nm
- 266-390 lb.in

**Warning**
A minimum distance of 25,4 mm (1 in) from current carried parts to any conductive part.

**Information**
Shroud suitable with mechanical lugs OZXA402, compression lugs and busbars.

**Caution**
Phase barrier or shroud is mandatory on all switch types, except OTDC_F_11. Type for package of 2 barriers is OTDCB400F/2.
**Direct handle kit**

**OTDV400FK**

- **OTDV400FK1**
- **OTDV400FK2**

**Information**

Use protection against direct contact. For example, see picture above.

**Warning**

Direct handle kits are not suitable for side operated variants.

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- **ø 5-6 mm**
  - 0.20-0.24 in

- **1.2 Nm**
  - 11 lb.in

- **0.8 Nm**
  - 7.1 lb.in

- **Exceeds 5 Gauss**
  - Within 15cm / 6 inch of surface.

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**CAUTION**

Magnetic field exceeds 5 Gauss within 15cm / 6 inch of surface.
Phase Barrier kit
OTDCB400F/2

Caution
Phase barrier or shroud is mandatory on all switch types, except OTDC_F_11. Type for package of 2 barriers is OTDCB400F/2.

Caution
Installation only as shown in drawings.
Connection bar kit
OTDCKIT400/600FS101

Connection bar kit can be used with IEC and UL types.

OTDCKIT400FS101
OTDCKIT600FS101

Connection bar kit can be used with IEC and UL types.

Caution
Installation only as shown in drawings.

30 Nm / 265 lb.in

1. OTDC250...400UF11, _UFV11
   OTDC250...400UF11, _UFV11 + OTDCKIT400FS101
2. OTDC250...400UF02, _UFV02
   OTDC250...400UF02, _UFV02 + OTDCKIT400FS101
3. OTDC600UF11, _UFV11
   OTDC600UF11, _UFV11 + OTDCKIT600FS101
4. OTDC600UF02, _UFV02
   OTDC600UF02, _UFV02 + OTDCKIT600FS101
Connection bar kit
OTDCKIT400/600FS11

Connection bar kit can be used with IEC and UL types.

30 Nm
265 lb.in

Installation only as shown in drawings.
**Shroud kit**

OTDCS400FG1, _T1

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**Information**
Shroud suitable with mechanical lugs OZX402, compression lugs and busbars.

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey shroud kit</td>
<td>OTDCS400FG1</td>
</tr>
<tr>
<td>Transparent shroud kit</td>
<td>OTDCS400FT1</td>
</tr>
</tbody>
</table>
Auxiliary contacts

OA_

Remove

Test contact max. 4 pcs

NO: OA1G10
NC: OA3G01

Test indication contact max. 4 pcs

~10°

Exceeds 5 Gauss
Within 15cm / 6 inch
of surface.

CAUTION
Magnetic field

Main contact
Test contact (NO)
Test indication contact (NO)
Test contact (NC)
Test indication contact (NC)
Dimension drawings
OTDC315...800F_11, OTDC250...600UF_11

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connection bar</td>
<td>OTDCKIT600FS101, OTDC600UF_11 only</td>
</tr>
<tr>
<td>2</td>
<td>Connection bar</td>
<td>OTDCKIT400FS101, OTDC250...400UF_11 only</td>
</tr>
<tr>
<td>3</td>
<td>Terminal shroud</td>
<td>OTDCS400FG1, OTDCS400FT1</td>
</tr>
<tr>
<td>4</td>
<td>Handle</td>
<td>In OTDC315...630F_P and OTDC250...600UF_P types</td>
</tr>
</tbody>
</table>
**Dimension drawings**

**OTDC250...400UFS_02S**

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connection bar</td>
<td>OTDCKIT400FS11</td>
</tr>
<tr>
<td>2</td>
<td>Phase barrier</td>
<td>OTDCB400F/2</td>
</tr>
</tbody>
</table>
Dimension drawings
OTDC315...630F_02, OTDC250...600UF_02

Information
Shroud suitable with mechanical lugs OZXA402, compression lugs and busbars.

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connection bar</td>
<td>OTDCKIT600FS101, OTDC600UF_02 only</td>
</tr>
<tr>
<td>2</td>
<td>Connection bar</td>
<td>OTDCKIT400FS101, OTDC250...400UF_02 only</td>
</tr>
<tr>
<td>3</td>
<td>Terminal shroud</td>
<td>OTDCS400FG1, OTDCS400FT1</td>
</tr>
<tr>
<td>4</td>
<td>Handle</td>
<td>In OTDC315...630F_P and OTDC250...600UF_P types</td>
</tr>
<tr>
<td>5</td>
<td>Phase barrier</td>
<td>OTDCB400F/2</td>
</tr>
</tbody>
</table>
Dimension drawings

OTDC315...630F_33

mm / in

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Terminal shroud</td>
<td>OTDCS400FG1, OTDCS400FT1</td>
</tr>
<tr>
<td>4</td>
<td>Handle</td>
<td>In OTDC315...630F_P and OTDC250...600UF_P types</td>
</tr>
<tr>
<td>5</td>
<td>Phase barrier</td>
<td>OTDCB400F/2</td>
</tr>
</tbody>
</table>
**Dimension drawings**

OTDC315...630F_22, OTDC250...600UF_22

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connection bar</td>
<td>OTDCKIT600FS11, OTDC600UF_22 only</td>
</tr>
<tr>
<td>2</td>
<td>Connection bar</td>
<td>OTDCKIT400FS11, OTDC250...400UF_22 only</td>
</tr>
<tr>
<td>3</td>
<td>Terminal shroud</td>
<td>OTDCS400FG1, OTDCS400FT1</td>
</tr>
<tr>
<td>4</td>
<td>Handle</td>
<td>In OTDC315...630F_P and OTDC250...600UF_P types</td>
</tr>
<tr>
<td>5</td>
<td>Phase barrier</td>
<td>OTDCB400F/2</td>
</tr>
</tbody>
</table>
Dimension drawings
OTDC315...630F_K, OTDC250...600UF_K

mm / in
Dimension drawings
OTDCKIT400/600FS101

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>L measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTDCKIT400FS101</td>
<td>OEZXY132-35</td>
<td>35 mm / 1.38 in</td>
</tr>
<tr>
<td>OTDCKIT600FS101</td>
<td>OEZXY132-100</td>
<td>100 mm / 5.91 in</td>
</tr>
</tbody>
</table>
Connection bar kit

**OTDCKIT400/600FS11**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>L measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTDCKIT400FS11</td>
<td>OEZXY133-50</td>
<td>50 mm / 1.97 in</td>
</tr>
<tr>
<td>OTDCKIT600FS11</td>
<td>OEZXY133-150</td>
<td>150 mm / 5.91 in</td>
</tr>
</tbody>
</table>