INSTALLATION AND OPERATING INSTRUCTION

Motorized change-over and transfer switches

OTM_C
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Operation

**OTM_C**

Switch 0
- Close
- Open

Switch 1
- Close
- Open

**OTM_CL**

Switch 0
- Close
- Open

Switch 1
- Close
- Open

**OTM_CF**

Switch 0
- Close
- Open

Switch 1
- Close
- Open
1. Introduction

This manual describes the installation and the basic operation of the motorized change-over and transfer switches, types OTM_C. The instructive part is followed by a section on available accessories.

1.1 Use of symbols

- **Hazardous voltage**: warns about a situation where a hazardous voltage may cause physical injury to a person or damage to equipment.
- **General warning**: warns about a situation where something other than electrical equipment 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.
- **Information**: provides important information about the equipment.

1.2 Explanations of abbreviations and terms

- **OTM_C**: Motorized change-over switch, the type name
- **OME_**: Motor operator, the type name
- **OT_C**: Change-over switch, the type name
- **OZXB_ and OZXA_**: Terminal clamp sets, the type name, accessories
- **OTZC_**: Bridging bars, the type name, accessories
- **OTS_**: Terminal shrouds, the type name, accessories
- **OA_**: Auxiliary contacts, the type name, accessories
- **ODPS_**: Dual power source, the type name, accessories
2. Product overview

Motorized change-over switches (type OTM_C) are suitable for remote control. You can operate the motorized change-over switches either electrically by using the motor operator or manually by using the handle. The operation, either electrical or manual, can be chosen by the selector switch “Motor/Manual” on the motor operator. Motorized change-over switches consist of the change-over switch and the motor operator.

![Motorized change-over switch (type OTM_C)](image)

1. Change-over switch
2. Motor operator
3. Switch panel, the operating mechanism
4. Handle for manual operation, double grip handle in sizes OTM1000-3200_C
5. Motor/Manual selection
6. Terminals for motor operator voltage supply
7. Terminals for push-buttons
8. Fuse (F1) of motor operator
9. Locking latch for releasing the handle and locking electrical operation
10. Locking clip for locking manual operation
11. Terminals for locking state information
12. Place for auxiliary contacts
3. Quick start

This is a quick guide only meant for those who need a reminder of how to operate the unit. For more detailed instructions, see chapter 6.

3.1 Operating the motorized change-over switch electrically; remote control

To operate the motorized change-over switch electrically:

1. Remove the handle from the switch panel. You can remove the handle in all positions (I, 0, II).
2. Turn the Motor/Manual selector to the Motor (M) position to enable electrical operation.

Figure 3.1 Operating the motorized change-over switch electrically; remote control
3.1.1 Locking electrical operation
To disable electrical operation, lock the locking latch with a padlock. After the locking latch has been locked, the motorized change-over switch cannot be operated electrically. You can lock electrical operation in all positions (I, 0, II).

Figure 3.2  Locking electrical operation

直径5~6 mm

1

2
3.2 Operating the motorized change-over switch manually; local operation

To operate the motorized change-over switch manually:

1. Turn the Motor/Manual selector to the Manual (Man.) position to enable manual operation and to prevent electrical operation.
2. Attach the handle to the switch panel. You can attach the handle in all positions (I, 0, II).

To disable the manual (and at the same time also electrical) operation, lift up the locking clip to position 0 and attach the padlock to the handle.
4. Installation

4.1 Mounting the motorized change-over switch

Use protection against direct contact.

Figure 4.1 An example of using protection against direct contact
Figure 4.2 Motorized change-over switches, drilling hole distances / screw-mounting, [mm/in]

<table>
<thead>
<tr>
<th>Model</th>
<th>Hole Distance</th>
<th>Screw-Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTM160-250_C_M</td>
<td>116</td>
<td>E3 E4 U3 U4</td>
</tr>
<tr>
<td>OTM160-250_WC_M</td>
<td>258</td>
<td>293 282 325</td>
</tr>
<tr>
<td>OTM315-400_C_M</td>
<td>142</td>
<td>142/5.59</td>
</tr>
<tr>
<td>OTM400_C_M</td>
<td>305</td>
<td>335/13.19</td>
</tr>
<tr>
<td>OTM630-800_C_M</td>
<td>180</td>
<td>180/7.09</td>
</tr>
<tr>
<td>OTM600_C_M</td>
<td>390</td>
<td>390/15.35</td>
</tr>
<tr>
<td>OTM1000-1250_C_M</td>
<td>230</td>
<td>230/9.06</td>
</tr>
<tr>
<td>OTM1200_C_M</td>
<td>476.5</td>
<td>476.5/18.77</td>
</tr>
<tr>
<td>OTM2000-2500_C_M</td>
<td>614.5</td>
<td>614.5</td>
</tr>
<tr>
<td>OTM3200-4000_C_M</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

3.5...4 Nm 31...35.4 lb.in
5. Dimension drawings

OTM160-250E_C_M, OTM160-250E_WC_M

Figure 5.1 OTM160-250E_C_M

Figure 5.2 OTM160-250E_WC_M
Dimension drawings

OTM200U_C_M, OTM315-400E_C_M

Figure 5.3  OTM200U_C_M

Figure 5.4  OTM315-400E_C_M
Dimension drawings
OTM315-400E_WC_M, OTM400U_C_M

Figure 5.5  OTM315-400E_WC_M

Figure 5.6  OTM400U_C_M
Dimension drawings
OTM630-800E_C_M, OTM600U_C_M

Figure 5.7 OTM630-800E_C_M

Figure 5.8 OTM600U_C_M
Dimension drawings
OTM1000-1200E_C_M, OTM1600E_C_M

Figure 5.9 OTM1000-1200E_C_M

Figure 5.10 OTM1600E_C_M
Dimension drawings

OTM800-1200U_C_M

Figure 5.11  OTM800-1200U_C_M
**Dimension drawings**

**OTM2000-2500E_C_M, OTM3200_C_M**

---

**Figure 5.12 OTM2000-2500E_C_M**

**Figure 5.13 OTM3200_C_M**
6. Connections

Figure 6.1 Mounting the connections to the motorized change-over switches OTM3200_C_M
6.1 Mounting positions

The recommended mounting positions for motorized change-over switches are horizontal, wall mounted or table mounted.

Do not install the motorized change-over switches in any other position than those described above.

6.2 Labelling
7. Connecting

⚠️ Warning

Only an authorised electrician may perform the electrical installation and maintenance of motorized change-over switches. Do not attempt any installation or maintenance actions when a motorized change-over switch is connected to the electrical mains. Before starting work, make sure that the change-over switch is de-energised.

7.1 Control circuit

Do not connect to any power supply

Figure 7.1 Motorized change-over switch terminals

1. Terminal for motor operator voltage supply
2. Control terminal for push buttons or selector switch
3. Terminal for state information of locking

⚠️ Information

Do not couple power for the control terminal. See the correct terminal for the power supply in Figure 7.1

⚠️ Hazardous voltage

The control voltage (output C = 24Vdc) on the control terminal is non-isolated, see box 2 in Figure 7.1

⚠️ Warning

When relay outputs are used with inductive loads (such as relays, contactors and motors), they must be protected from voltage spikes using varistors, RC-protectors (AC current) or DC current diodes (DC current).
8. Operating

Never open any covers on the product. There may be dangerous external control voltages inside the motorized change-over switch even if the voltage is turned off.

Never handle control cables when the voltage of the motorized change-over switch or external control circuits are connected.

Exercise sufficient caution when handling the unit.

8.1 Electrical operation

The motorized change-over switches are available for remote control.

To operate the motorized change-over switch electrically:

1. Release the handle from the switch panel by pressing down the locking latch under the switch panel and pulling the handle off, see Figure 8.1.

![Figure 8.1 Releasing the handle](image)

Electrical operation is disabled if the handle is attached to the switch panel.
2. Turn the Motor/Manual selection switch to the Motor (M) position, see Figure 8.2.

![Figure 8.2  Motor/Manual selection switch in the Motor (M) position](image)

3. Operate the motorized change-over switch with the push-buttons or selector switch via impulse control or continuous control.

The motor operator is protected from overloading by a fuse (F1) under the motor operator. Only use the same type of fuse that is described on the label close to the fuse.
8.1.1 Impulse control

When using impulse control, the change-over switch is operated by electric impulses. When you press the control button, the change-over switch is driven to the corresponding position (I, 0, II). The control impulse must last more than 100ms to take effect. A new command cannot be given until the change-over switch has reached the position of the previous command. Figure 8.3 shows the operation of the change-over switch with impulse control.

! Information

If a new command is given before the switch has reached the position of the previous command, the fuse (F1) may operate.

Figure 8.3 Impulse control

3. Operate the motorized change-over switch with the push-buttons or selector switch via impulse control or continuous control.
8.1.2 Continuous control

When using continuous control, the control command is supplied to the switch continuously. When you press the control button, the change-over switch is driven to the corresponding position (I, 0, II). Operation of position 0 will over-run control of the other positions; that is, if you simultaneously give the 0 command with another command, the change-over switch is driven to position 0. Figure 8.4 shows the operation of the change-over switch with continuous control.

The continuous control command can be given with push buttons, cam switches or with relays incorporated in PLC equipment or with other suitable contacts.
8.2 Manual operation by using the handle

You can operate the motorized change-over switch manually by using the handle that is included in the delivery. To operate the motorized change-over switch manually:

1. Turn the Motor/Manual selector to the Manual (Man.) position, see Figure 8.5. The motor operator is switched off and electrical operation is prevented.

2. Attach the handle by pressing it to the switch panel until it clicks into place. You can attach the handle in all positions (I, 0, II), see Figure 8.6.

3. Operate the motorized change-over switch by turning the handle to the required position (I, 0, II).

Information

Electrical operation is prevented when the handle is attached to the switch panel.
8.3 Locking

You can lock the motorized change-over switch to a specific position.

8.3.1 Locking the electrical operation

To disable electrical operation, lock the locking latch with a padlock. After the locking latch has been locked, the change-over switch cannot be operated electrically. You can lock the electrical operation in all positions (I, 0, II).

To lock electrical operation:
1. Pull up the locking latch under the change-over switch panel.
2. Place the padlock under the latch, see Figure 8.7.

![Figure 8.7 Locking the electrical operation](image)

The handle cannot be attached when electrical operation is locked.

8.3.2 Locking the manual operation

By default, manual operation can only be locked to position 0. Locking to position I and II is optional and possible only with modifications to the switch panel.

To lock manual operation:
1. Turn the handle to the required position.
2. Pull out the clip from the handle and place the padlock on the handle; see Figure 8.8.
The handle cannot be removed when padlocked to position 0.

Information

The following figure shows the locking state information (the voltage on motor operator supply needed).
9. Technical data

<table>
<thead>
<tr>
<th>Motor operator, control circuit</th>
<th>Value</th>
<th>Cabling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated operational voltage U [V]</td>
<td>220-240 Vac 50-60 Hz</td>
<td>110-125 Vac/dc 50-60 Hz</td>
</tr>
<tr>
<td>Operating voltage range</td>
<td>0.85... 1.1 x U</td>
<td></td>
</tr>
<tr>
<td>Operating angle</td>
<td>90° I-0, I-0, 0-II, II-0; 180° I-0-II</td>
<td></td>
</tr>
<tr>
<td>Operating time</td>
<td>See the Table 7.2</td>
<td></td>
</tr>
<tr>
<td>Protection degree</td>
<td>IP 20, front panel</td>
<td></td>
</tr>
<tr>
<td>Rated impulse withstand voltage $U_{imp}$</td>
<td>4 kV</td>
<td></td>
</tr>
<tr>
<td>Voltage supply</td>
<td>PE N L</td>
<td>1.5 -2.5 mm²</td>
</tr>
<tr>
<td>F2</td>
<td>Max. MCB 16 A</td>
<td></td>
</tr>
<tr>
<td>Cable of the push-buttons (no SELV)</td>
<td>C II I 0</td>
<td>1.5 -2.5 mm²</td>
</tr>
<tr>
<td>Maximum cable length</td>
<td>100 m</td>
<td></td>
</tr>
<tr>
<td>State information of locking (no SELV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handle attached or motor operator locked</td>
<td>11-12-14 (C/O)</td>
<td>1.5 -2.5 mm²</td>
</tr>
<tr>
<td>Locking motor operator</td>
<td>23-24 (NO)</td>
<td>1.5 -2.5 mm²</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25... +55 °C</td>
<td></td>
</tr>
<tr>
<td>Transportation and storage temperature</td>
<td>-40... +70 °C</td>
<td></td>
</tr>
<tr>
<td>Altitude</td>
<td>Max. 2000 m</td>
<td></td>
</tr>
</tbody>
</table>

Table 9.1 General technical data of motor operators
<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage</th>
<th>Nominal current (I_n)</th>
<th>Current Inrush (I_{\text{in}})</th>
<th>Operating time (I_{0}, 0-1, 0-II, II-0)</th>
<th>Operating transfer time (I_{1-II} \text{ or } II-I)</th>
<th>Contact transfer time (I_{1-II} \text{ or } II-I)</th>
<th>Fuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTM160...250_C</td>
<td>220-240 Vac</td>
<td>0.2</td>
<td>1.3</td>
<td>0.4 - 1.0</td>
<td>1.0 - 2.0</td>
<td>0.4 - 1.0</td>
<td>T 315 mAH</td>
</tr>
<tr>
<td>OTM160...250_C</td>
<td>110-125 Vac/dc</td>
<td>0.45</td>
<td>2.1</td>
<td>0.5 - 1.2</td>
<td>1.1 - 2.5</td>
<td>0.5 - 1.1</td>
<td>T 1,25 mAH</td>
</tr>
<tr>
<td>OTM160...250_C</td>
<td>48 Vdc</td>
<td>1.1</td>
<td>4.4</td>
<td>0.5 - 1.2</td>
<td>1.1 - 2.5</td>
<td>0.5 - 1.1</td>
<td>T 1,25 mAH</td>
</tr>
<tr>
<td>OTM160...250_C</td>
<td>24 Vdc</td>
<td>3.3</td>
<td>16.8</td>
<td>0.5 - 1.0</td>
<td>1.0 - 2.0</td>
<td>0.4 - 1.0</td>
<td>T 4 AH</td>
</tr>
<tr>
<td>OTM315...400_C</td>
<td>220-240 Vac</td>
<td>0.5</td>
<td>2.1</td>
<td>0.4 - 1.0</td>
<td>0.9 - 2.0</td>
<td>0.4 - 1.0</td>
<td>T 500 mAH</td>
</tr>
<tr>
<td>OTM315...400_C</td>
<td>110-125 Vac/dc</td>
<td>0.6</td>
<td>2.5</td>
<td>0.5 - 1.5</td>
<td>1.2 - 2.6</td>
<td>0.5 - 1.5</td>
<td>T 630 mAH</td>
</tr>
<tr>
<td>OTM315...400_C</td>
<td>48 Vdc</td>
<td>2.1</td>
<td>8.3</td>
<td>0.4 - 1.0</td>
<td>1.0 - 2.0</td>
<td>0.4 - 1.0</td>
<td>T 2,5 AH</td>
</tr>
<tr>
<td>OTM315...400_C</td>
<td>24 Vdc</td>
<td>4.2</td>
<td>17.5</td>
<td>0.4 - 1.0</td>
<td>1.0 - 2.0</td>
<td>0.4 - 1.0</td>
<td>T 4 AH</td>
</tr>
<tr>
<td>OTM600...800_C</td>
<td>220-240 Vac</td>
<td>0.7</td>
<td>2.8</td>
<td>0.4 - 1.0</td>
<td>0.9 - 2.0</td>
<td>0.4 - 1.0</td>
<td>T 1 AH</td>
</tr>
<tr>
<td>OTM600...800_C</td>
<td>110-125 Vac/dc</td>
<td>0.8</td>
<td>4.6</td>
<td>0.6 - 1.5</td>
<td>1.2 - 3.0</td>
<td>0.6 - 1.5</td>
<td>T 1 AH</td>
</tr>
<tr>
<td>OTM600...800_C</td>
<td>48 Vdc</td>
<td>2.6</td>
<td>8.4</td>
<td>0.6 - 1.6</td>
<td>1.2 - 3.0</td>
<td>0.6 - 1.6</td>
<td>T 2,5 AH</td>
</tr>
<tr>
<td>OTM600...800_C</td>
<td>24 Vdc</td>
<td>4.0</td>
<td>22.4</td>
<td>0.5 - 1.5</td>
<td>1.1 - 2.5</td>
<td>0.5 - 1.5</td>
<td>T 5 AH</td>
</tr>
<tr>
<td>OTM1000...1600_C</td>
<td>220-240 Vac</td>
<td>1.8</td>
<td>7.7</td>
<td>0.5 - 1.5</td>
<td>1.5 - 3.0</td>
<td>0.5 - 1.5</td>
<td>T 2 AH</td>
</tr>
<tr>
<td>OTM1000...1600_C</td>
<td>110-125 Vac/dc</td>
<td>3.0</td>
<td>13.3</td>
<td>0.5 - 1.5</td>
<td>1.5 - 3.0</td>
<td>0.5 - 1.5</td>
<td>T 4 AH</td>
</tr>
<tr>
<td>OTM1000...1600_C</td>
<td>48 Vdc</td>
<td>5.3</td>
<td>22.4</td>
<td>0.5 - 1.5</td>
<td>1.5 - 3.0</td>
<td>0.5 - 1.5</td>
<td>T 5 AH</td>
</tr>
<tr>
<td>OTM1000...1600_C</td>
<td>24 Vdc</td>
<td>8.0</td>
<td>26.6</td>
<td>1.0 - 2.0</td>
<td>2.0 - 3.5</td>
<td>0.8 - 1.7</td>
<td>T 10 AH</td>
</tr>
<tr>
<td>OTM2000...2500_C</td>
<td>220-240 Vac</td>
<td>1.8</td>
<td>7.7</td>
<td>0.5 - 2.0</td>
<td>1.5 - 3.5</td>
<td>0.5 - 1.5</td>
<td>T 2 AH</td>
</tr>
<tr>
<td>OTM2000...2500_C</td>
<td>110-125 Vac/dc</td>
<td>3.0</td>
<td>13.3</td>
<td>0.5 - 2.0</td>
<td>1.5 - 3.5</td>
<td>0.5 - 1.5</td>
<td>T 4 AH</td>
</tr>
<tr>
<td>OTM2000...2500_C</td>
<td>48 Vdc</td>
<td>5.3</td>
<td>22.4</td>
<td>0.5 - 2.0</td>
<td>1.5 - 3.5</td>
<td>0.5 - 1.5</td>
<td>T 5 AH</td>
</tr>
<tr>
<td>OTM2000...2500_C</td>
<td>24 Vdc</td>
<td>8.0</td>
<td>26.6</td>
<td>1.0 - 2.0</td>
<td>2.0 - 3.5</td>
<td>0.8 - 1.7</td>
<td>T 10 AH</td>
</tr>
<tr>
<td>OTM3200_C</td>
<td>220-240 Vac</td>
<td>1.8</td>
<td>7.7</td>
<td>0.5 - 2.0</td>
<td>1.5 - 3.5</td>
<td>0.5 - 1.5</td>
<td>T 2 AH</td>
</tr>
<tr>
<td>OTM3200_C</td>
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<td>3.0</td>
<td>13.3</td>
<td>0.5 - 2.0</td>
<td>1.5 - 3.5</td>
<td>0.5 - 1.5</td>
<td>T 4 AH</td>
</tr>
<tr>
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<td>5.3</td>
<td>22.4</td>
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<td>1.5 - 3.5</td>
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<td>T 5 AH</td>
</tr>
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<td>24 Vdc</td>
<td>8.0</td>
<td>26.6</td>
<td>1.0 - 2.0</td>
<td>2.0 - 3.5</td>
<td>0.8 - 1.7</td>
<td>T 10 AH</td>
</tr>
</tbody>
</table>

\(a)\) Under nominal conditions

Table 9.2 Specified technical data of motor operators

Table 9.3 State information
### 10. Accessories

#### 10.1 Terminal clamp sets OZXA_, OZXB_

| OTM2000-2500E_C_ | OZXB3 |
| OTM3200E_C_     | OZXB4 |
| OZXB5           | OZXB6 |
| OZXB7L          |       |
| OTM1000-1600E_C_| OZXB3 |
| OZXB4           | OZXB5 |
| OZXB6*          | OZXB7L|
| OTM630-OTM800E_C_| OZXB3 |
| OZXB4           | OZXB5 |
| OZXB6*          | OZXB7L|
| OTM315-OTM400E_C_| OZXB2L|
| OZXB3           | OZXB7 |
| OZXB7L          | OZXB7L|
| OZXB8           | OZXB9 |
| OTM160-OTM250E_C_| OZXB1L|
| OZXB2           | OZXB2L|
| OZXB8           | OZXB9 |

| OTM800-1200U_C_ | OZXA-1200_ |
| OTM600U_C_      | OZXA-800_  |
| * max. 1 pcs/side | OZXA-806_ |
| OTM400U_C_      | OZXA-400_  |
|                  | OZXA-406_  |

**Figure 10.1** Mounting of the terminal clamp sets, types OZXB_ and OZXA_
10.2 Bridging bars OTZC\_, OTZR\_

OTZC13, OTZC14
OTM160-250\_C\_

OTZC23, OTZC24
OTM315-400\_C\_

OTZC33, OTZC34
OTM600-800\_C\_

630 A

800 A

Figure 10.2 Mounting of the bridging bars (type OTZC\_) to the motorized change-over switches OTM160-800E\_C\_
Figure 10.3 Mounting of the bridging bars (type OTZC_) to the motorized change-over switches OTM1000-1600E_C_ and OTM800-1200U_C_.
Figure 10.4 Mounting of the bridging bars (type OTZC_) to the motorized change-over switches OTM2000-2500E_C_
Figure 10.5  Mounting of the bridging bars (type OTZC) to the motorized change-over switches OTM3200E_C
10.3 Voltage sensing connectors OMZB_

Figure 10.6 Mounting of the voltage sensing connectors, type OMZB_
10.4 Terminal shrouds OTS_

<table>
<thead>
<tr>
<th>OTS250G₃S</th>
<th>OTS250G₃L</th>
<th>OTS400G₃S</th>
<th>OTS400G₃L</th>
<th>OTS800G₃S</th>
<th>OTS800G₃L</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTM160-250_C_</td>
<td>OTM250_C_</td>
<td>OTM315-400_C_</td>
<td>OTM300_C_</td>
<td>OTM600-800_C_</td>
<td>OTM800_C_</td>
</tr>
<tr>
<td>OTS250G₃S</td>
<td>OTS250G₃L</td>
<td>OTS400G₃S</td>
<td>OTS400G₃L</td>
<td>OTS800G₃S</td>
<td>OTS800G₃L</td>
</tr>
<tr>
<td>M8</td>
<td>M10</td>
<td>M8</td>
<td>M12</td>
<td>M8</td>
<td>M12</td>
</tr>
<tr>
<td>15...22 Nm</td>
<td>30...44 Nm</td>
<td>50...75 Nm</td>
<td>30...44 Nm</td>
<td>50...75 Nm</td>
<td>50...75 Nm</td>
</tr>
<tr>
<td>5/6 DIA in</td>
<td>266-390 lb.in</td>
<td>433-664 lb.in</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 10.7 Mounting of the terminal shrouds (type OTS_ ) to the motorized change-over switches OTM160-800E_C_
Figure 10.8 Mounting of the terminal shrouds (type OTS_ ) to the motorized change-over switches OTM1000-1600E_C_ and OTM800-1200U_C_
10.5 Reversing bars OTZR

OTZR1  OT100-250_C
OTZR2  OT315-400_C
OTZR3  OT600-800_C
10.6 Voltage sensing connectors OMZB_

OMZB1_ OT160-250_C_
OMZB2_ OT315-400_C_

OMZB3_ OT630-800E_C_
OMZB4_ OT1000-2500E_C_

OMZB2_ OT800U_C_
OMZB3_ OT600U_C_

OMZB4_ OT3200E_C_
Figure 10.9  Mounting of the terminal shrouds (type OTS_) to the motorized change-over switches OTM2000-2500_C_, OTM3200_C_
10.7 Auxiliary contacts OA_

Figure 10.10 Mounting of the auxiliary contacts, type OA_
10.8 Dual power source ODPS_

![Figure 10.11](image1.png) The dual power source, type ODPS230. Connection diagram ODPS230.

![Figure 10.12](image2.png) The dual power source, type ODPSE230C. Connection diagram ODPSE230C.
10.9 Handle and spare fuse storage OTVS_

**OTVS1**
OTM160-250_C

**OTVS2**
OTM315-3200_C

---

**OTVS0**
OTM160-250_C

Figure 10.13 Handle and spare fuses can be stored on the motorized change-over switch by mounting the accessory OTVS_
11. Clearances per UL 1008

<table>
<thead>
<tr>
<th>Size (Current)</th>
<th>A</th>
<th>B</th>
<th>D</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT_100-1200U_C</td>
<td>0</td>
<td>0.5 in/13 mm</td>
<td>0.5 in/13 mm</td>
<td>According to the UL1008 standard</td>
</tr>
</tbody>
</table>

Minimum enclosure size or equivalent volume

<table>
<thead>
<tr>
<th>Size (current)</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTMDC100_C</td>
<td>6.3 in/190 mm</td>
<td>19 in/490 mm</td>
<td>12 in/315 mm</td>
</tr>
<tr>
<td>OTM200U_C</td>
<td>16 in/406 mm</td>
<td>12 in/305 mm</td>
<td>8 in/203 mm</td>
</tr>
<tr>
<td>OTM400U_C</td>
<td>24 in/610 mm</td>
<td>14 in/356 mm</td>
<td>10 in/254 mm</td>
</tr>
<tr>
<td>OTM600U_C</td>
<td>24 in/610 mm</td>
<td>28 in/700 mm</td>
<td>16 in/400 mm</td>
</tr>
<tr>
<td>OTM800-1200U_C</td>
<td>48 in/1220 mm</td>
<td>24 in/610 mm</td>
<td>16 in/400 mm</td>
</tr>
</tbody>
</table>

Figure 11.1  Clearances per UL 1008, minimum enclosure size or equivalent volume
11.1 Phase barriers OTB_
Phase barriers or shrouds (see section 8.3) must be used to maintain a clearance of 1 inch on the motorized change-over switch types: OTM600U_C, if the conductors are wider than 39 mm /1.54 in (phase barrier 68838) on OTM800-1200U_C, if the lugs are wider than 54 mm /2.13 in (phase barrier 68912).

Phase barriers 68912 must be used on motorized change-over switches types OTM1000-2500_C if the voltage is > 415 V Phase barriers CXBY69470 must be used on OTM3200E_C.

The types for the package of 6 barriers are:
68838 = OTB800/6C
68912 = OTB1600/6C
CXBY69470= OTB4000/6C.

Figure 11.1 OTM600U_C, OTM800-1200U_C, OTM1000-2500E_C and OTM3200E_C mounting of phase barriers
Figure 11.2  Mounting and dimensional drawings the phase barriers

Phase barrier type 68838 on:
OTM600U_C

Phase barrier type 68912 on:
OTM800U_C_
OTM1000-1600E_C_
OTM2000-2500E_C_

Phase barrier type CXBY69470 on:
OTM3200E_C_
MOTORIZED CHANGE-OVER AND TRANSFER SWITCHES, OTM_C

Внимание! Опасно напряжение! Да се монтира само от лице с електротехническа квалификация.

警告！电压危险！只能由专业电工进行安装。

Varování! Nebezpečné napětí! Montáž smí provádět výhradně elektrotechnik!

Advarsel! Farlig elektrisk spænding! Installation må kun foretages af personer med elektroteknisk ekspertise.

Warnung! Gefährliche Spannung! Installation nur durch elektrotechnische Fachkraft.

Προειδοποίηση! Υψηλή τάση! Η εγκατάσταση πρέπει να γίνεται μόνο από εξειδικευμένους ηλεκτροτεχνικούς.

Warning! Hazardous voltage! Installation by person with electrotechnical expertise only.

Avertencia! ¡Tensión peligrosa! La instalación deberá ser realizada únicamente por electricistas especializados.

Hoiatus! Ohtlik pinge. Paigaldada võib ainult elektrotehnika-alane ekspert.

Varoitus! Vaarallinen jännite! Asennuksen voi tehdä vain sähköalan ammatillinen.

Avertissement! Tension électrique dangereuse! Installation uniquement par des personnes qualifiées en électricité.

Upozorenje! Opasan napon! Postavljanje smije samo elektrotehnički stručnjak.

Figyelmeztetés! Veszélyes feszültség! Csak elektrotechnikai tapasztalattal rendelkező szakember helyezheti üzembe.

Ráhadr! Voltas guaseach! Ba chóir do dhún é a bhfuil saineolas leictirteicniúil, agus an té sin amháin, é seo a shulteáil.

Avvertenza! Tensione pericolosa! Fare installare solo da un elettricista qualificato.

Demesio! Pavoja! Dirbtis leidžiama tik elektrotechniko patirties turintiems asmenims.

Uzmanību! Bīstami - elektrība! Montāžas darbus drikst veikt tikai personas, kurām ir atbilstošas elektrotehnikas zināšanas.

Twissij! Valtagī perikolus! Ghandu jīgi installat biss minn persuna b’kompetenza elettroteknika.

Waarschuwing! Gevaarlijke spanning! Mag alleen geïnstalleerd worden door een deskundige elektrotechnicus.

Advarsel! Farlig spenning! Montering skal kun utføres av kvalifiserte personer med elektrokompetanse.

Ostrezenie! Niebezpieczne napięcie! Instalacja może dokonać wyłącznie osoba z fachową wiedzą w dziedzinie elektrotechniki.

Aviso! Tensão perigosa! A instalação só deve ser realizada por um eletricista especializado.

Avertizare! Tensiunea periculoasă! Instalaţia trebuie efectuată numai de către o persoană cu experienţă în electrotehnică.

Ostroorno! Опасное напряжение! Монтаж должен выполняться только специалистом-электриком.

Warning! Farlig spänning! Installation får endast utföras av en elektriker.
Contact us

ABB Oy
P.O. Box 622
FI-65101 Vaasa
Finland

abb.com/lowvoltage