

INSTALLATION INSTRUCTION

DC switch disconnectors

OTDC315...800F_/OTDC250...600UF_



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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.



Information

Provides important information about the equipment.

Receiving, handling and storage



Warning

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.

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.

Read these safety instructions carefully before using this product!



Danger

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

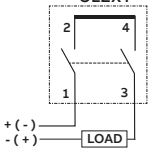
- Apply appropriate personal protective equipment and follow safe electrical work practices.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Before performing visual inspections, tests, or maintenance on the equipment, disconnect all sources of electric power. 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.

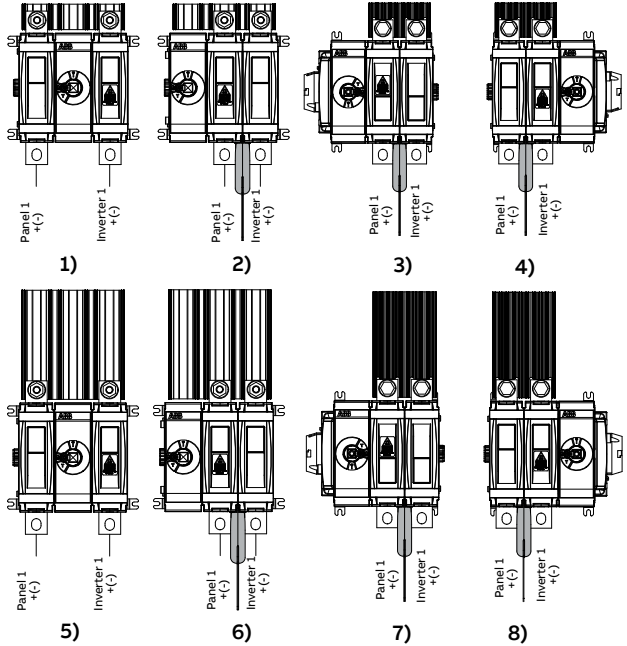
Circuits

Circuit 1a

2-pole, 2-wire, 1-circuit
OEZXY

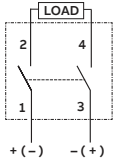


For grounded systems

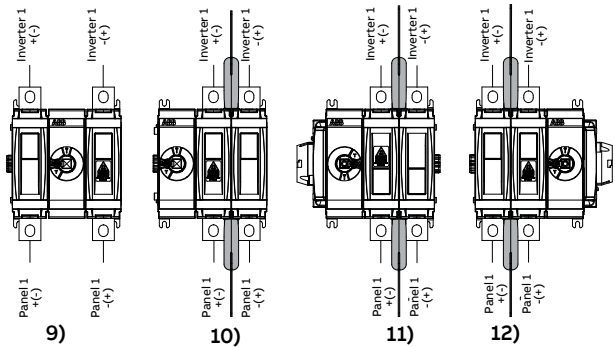
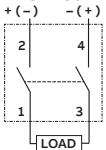


Circuit 2a, 2b

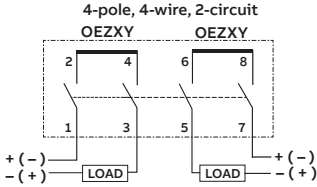
2-pole, 4-wire, 1-circuit



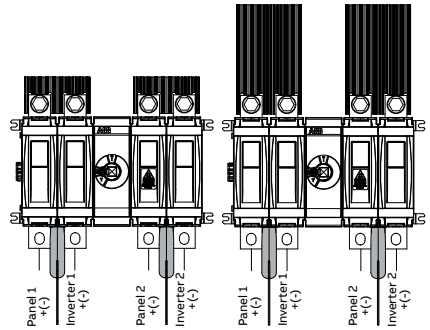
2-pole, 4-wire, 1-circuit
REVERSED SUPPLY



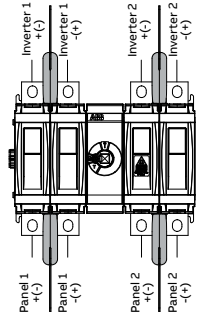
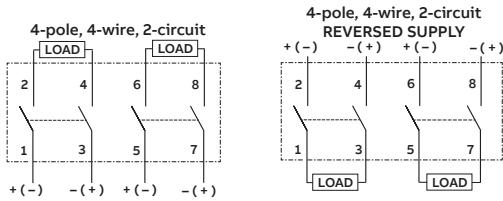
Circuit 3



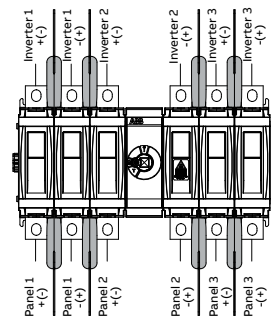
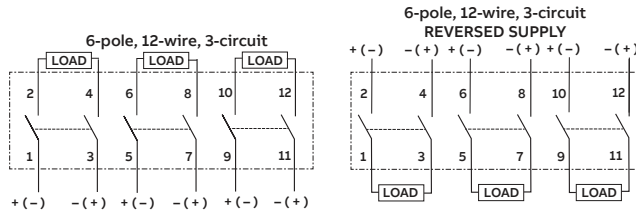
For grounded systems



Circuit 4a, 4c



Circuit 7a, 7c



Types	
1	OTDC250...400UFS11, _UFSV11 OTDC250...400UF11, _UFV11 + OTDCKIT400FS101
2	OTDC250...400UFS02, _UFSV02 OTDC250...400UF02, _UFV02 + OTDCKIT400FS101
3	OTDC250...400UFS02S, _UFSV02S OTDC250...400UF02S, _UFV02S + OTDCKIT400FS11
4	OTDC250...400UFS20S, _UFSV20S OTDC250...400UF20S, _UFV20S + OTDCKIT400FS11
5	OTDC600UFS11, _UFSV11 OTDC600UF11, _UFV11 + OTDCKIT600FS101
6	OTDC600UFS02, _UFSV02 OTDC600UF02, _UFV02 + OTDCKIT600FS101
7	OTDC600UFS02S, _UFSV02S OTDC600UF02S, _UFV02S + OTDCKIT600FS11
8	OTDC600UFS20S, _UFSV20S OTDC600UF20S, _UFV20S + OTDCKIT600FS11
9	OTDC315...800F11, _FV11 OTDC250...600UF11, _UFV11

Types	
10	OTDC315...630F02, _FV02 OTDC250...600UF02, _UFV02
11	OTDC315...630F02S, _FV02S OTDC250...600UF02S, _UFV02S
12	OTDC315...630F20S, _FV20S OTDC250...600UF20S, _UFV20S
13	OTDC250...400UFS22, _UFSV22 OTDC250...400UF22, _UFV22 + 2 x OTDCKIT400FS11
14	OTDC600UFS22, _UFSV22 OTDC600UF22, _UFV22 + 2 x OTDCKIT600FS11
15	OTDC315...630F22, _FV22 OTDC250...600UF22, _UFV22
16	OTDC315...500F33, _FV33

Enclosure dimensioning

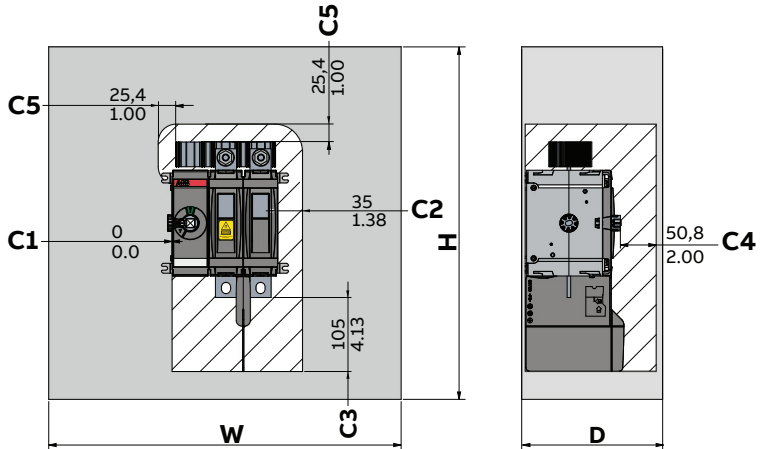
Clearances per UL98 / IEC 60947

mm / in



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.

Minimum clearance to any conductive part

From mechanism	From pole	From terminal blade	From mechanism shaft	From connection bar
C1	C2	C3	C4	C5
0	35 / 1.38	105 / 4.13	50,8 / 2.00	25,4 / 1.00

Minimum enclosure size or equivalent volume UL98

Switch size	No. of poles	H	W	D
OTDC250F, OTDC320F,	2	500 / 19	500 / 19	200 / 7.9
OTDC400F	4	600 / 24	700 / 27	200 / 7.9
OTDC600F	2	600 / 24	700 / 27	200 / 7.9
	4	1000 / 39	800 / 32	330 / 13

Enclosure dimensioning

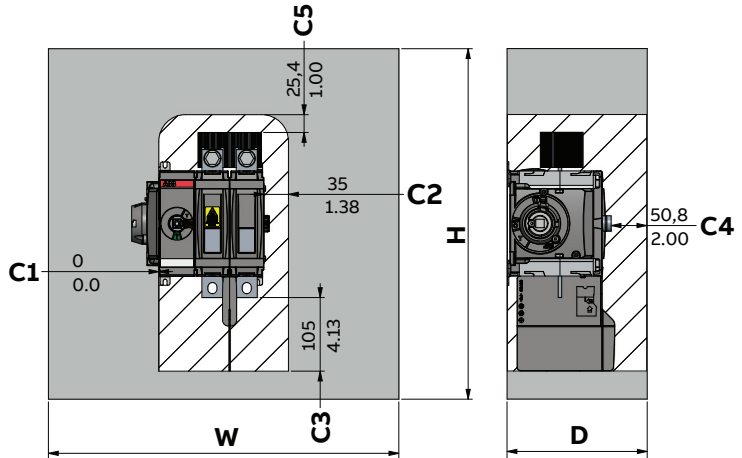
Clearances per UL98 / IEC 60947

mm / in



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.

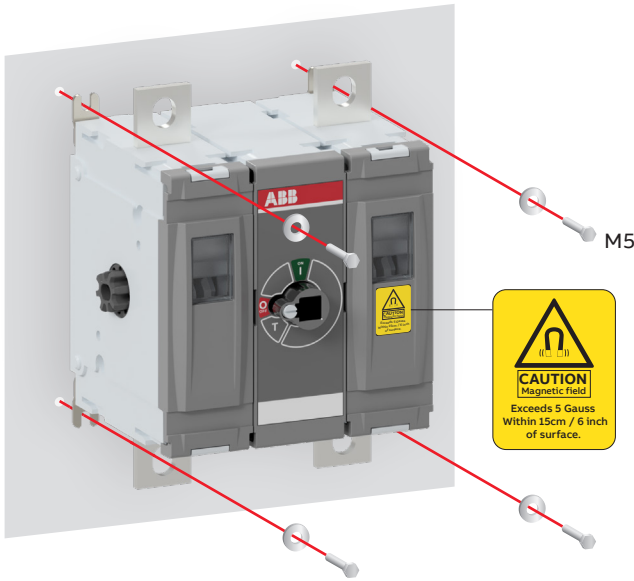
Minimum clearance to any conductive part

From mechanism	From pole	From terminal blade	From mechanism shaft	From connection bar
C1	C2	C3	C4	C5
0	35 / 1.38	105 / 4.13	50,8 / 2.00	25,4 / 1.00

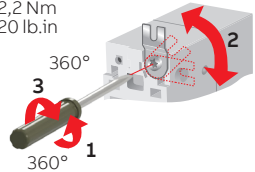
Minimum enclosure size or equivalent volume UL98

Switch size	No. of poles	H	W	D
OTDC250F, OTDC320F, OTDC400F	2	500 / 19	500 / 19	200 / 7.9
OTDC600F	2	600 / 24	700 / 27	200 / 7.9

Mounting OTDC_F_

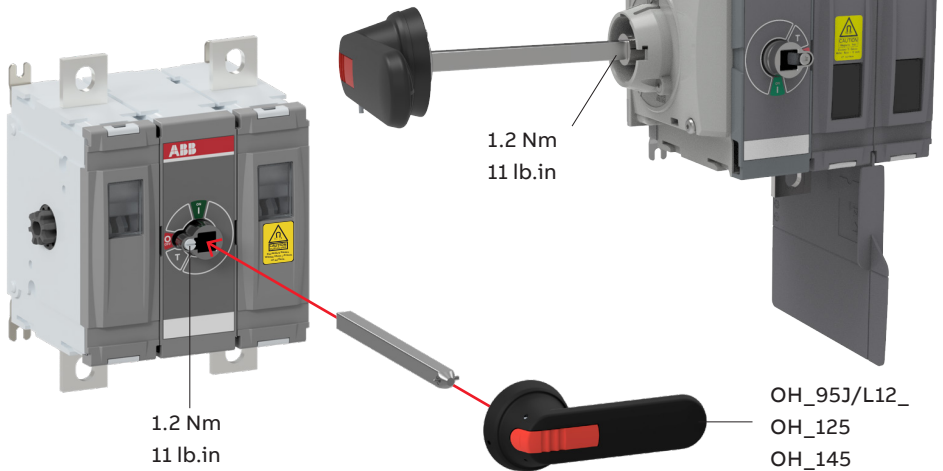


TORX T20
2,2 Nm
20 lb.in



Warning

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

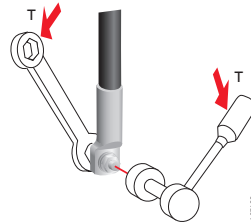
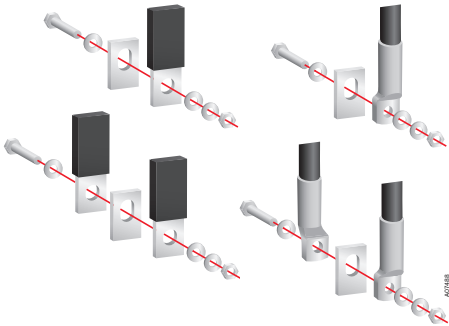


1.2 Nm
11 lb.in

1.2 Nm
11 lb.in

OH_95J/L12_
OH_125
OH_145

Busbars and compression lugs



M10 30...44 Nm
/ 266-390 lb.in
M12 50...75 Nm
/ 443-664 lb.in

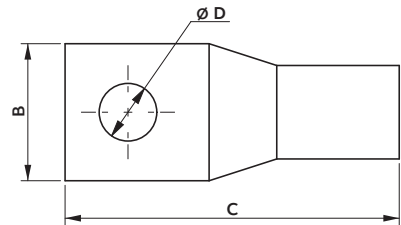
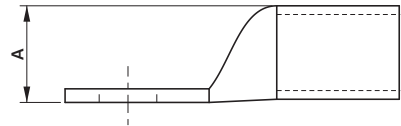


Caution

Always use counter torque when tightening terminals!

Busbar width	[mm / in]
min-max	25-41 / 1-1.6
recommendation	25 / 1

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



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.

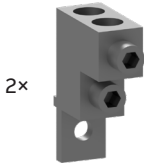


Warning

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

Mechanical lug kit

OZXA402



OZXA402



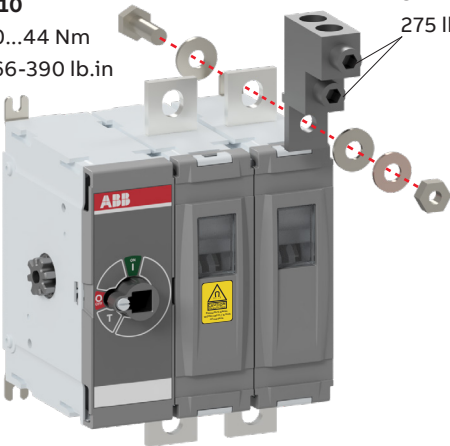
Caution

Always use counter torque when tightening terminals!

M10

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

31 Nm
275 lb.in



Warning

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

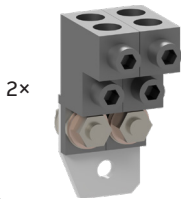


Caution

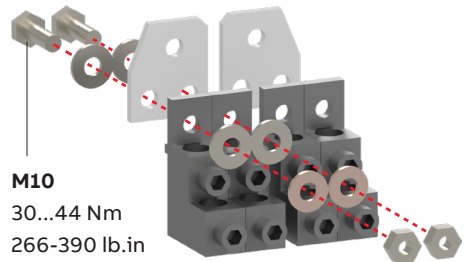
Phase barrier or shroud is mandatory on all switch types, except OTDC_F_11. Type for package of 2 barriers is OTDCB400F/2.

Mechanical lug kit

OZXA604



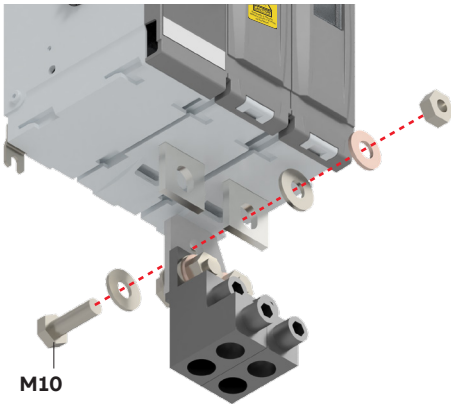
OZXA604



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



Caution
Always use counter torque when tightening terminals!



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



31 Nm
275 lb.in



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



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



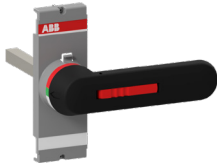
Information
Shroud suitable with mechanical lugs OZXA402, compression lugs and busbars.

Direct handle kit

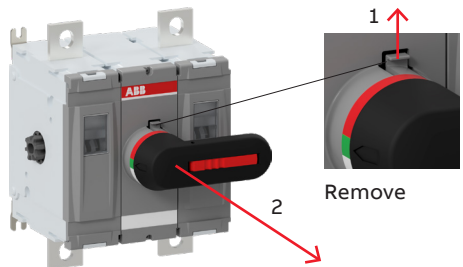
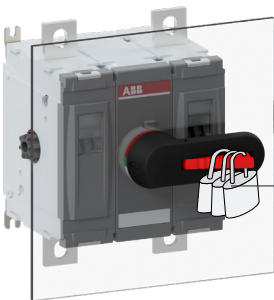
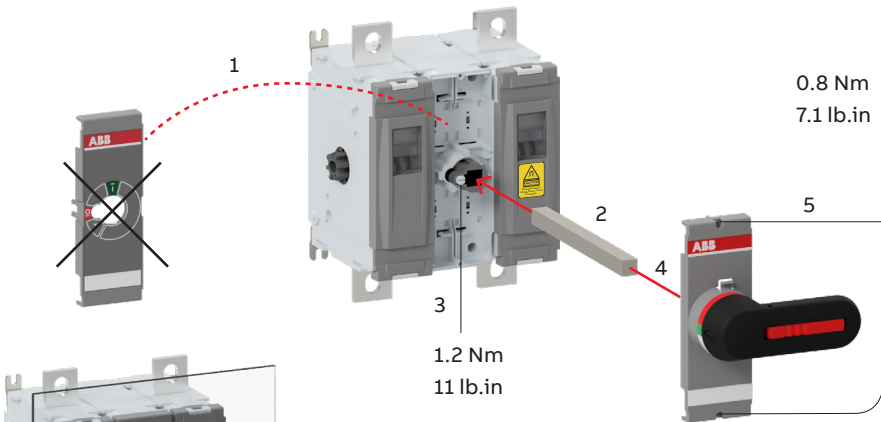
OTDV400FK_



OTDV400FK1



OTDV400FK2



Information

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



Warning

Direct handle kits are not suitable for side operated variants.

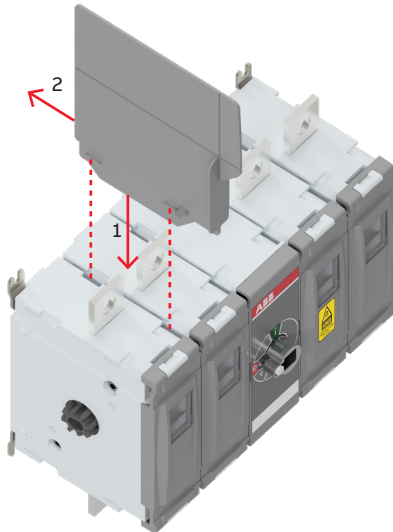
Phase Barrier kit

OTDCB400F/2

2x



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.

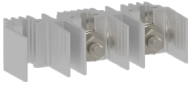
**Caution**

Installation only as shown in drawings.

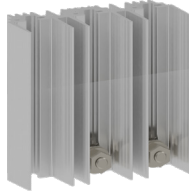
Connection bar kit

OTDCKIT400/600FS101

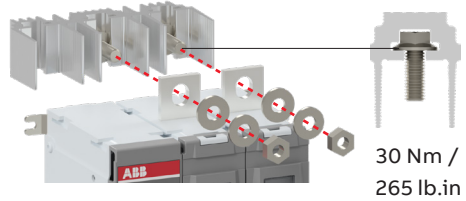
Connection bar kit can be used with IEC and UL types.



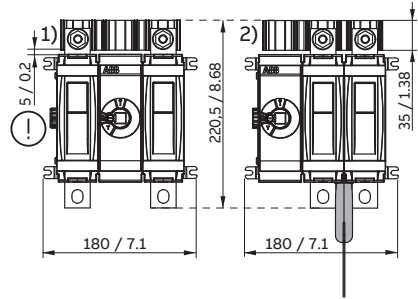
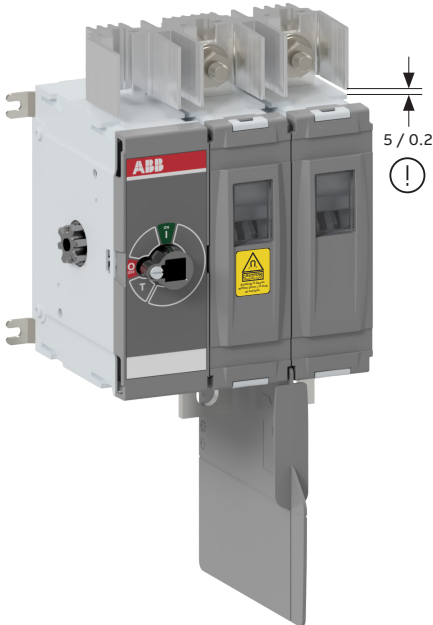
OTDCKIT400FS101



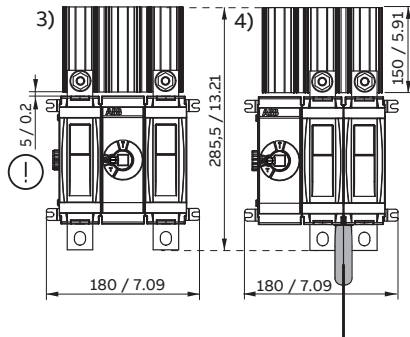
OTDCKIT600FS101



mm / in



1. OTDC250...400UFS11, _UFSV11
OTDC250...400UF11, _UFV11 + OTDCKIT400FS101
2. OTDC250...400UFS02, _UFSV02
OTDC250...400UF02, _UFV02 + OTDCKIT400FS101



3. OTDC600UFS11, _UFSV11
OTDC600UF11, _UFV11 + OTDCKIT600FS101
4. OTDC600UFS02, _UFSV02
OTDC600UF02, _UFV02 + OTDCKIT600FS101



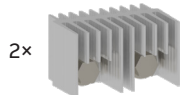
Caution

Installation only as shown in drawings.

Connection bar kit

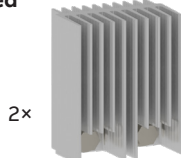
OTDCKIT400/600FS11

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



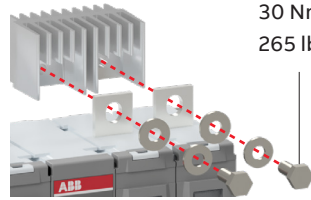
2x

OTDCKIT400FS11

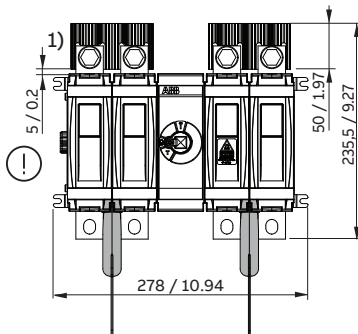


2x

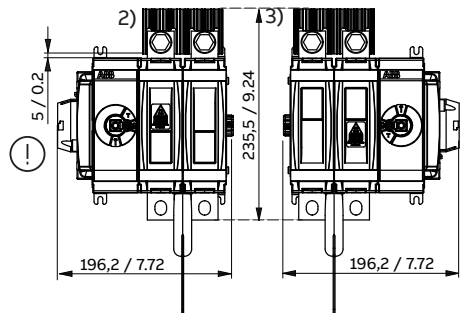
OTDCKIT600FS11



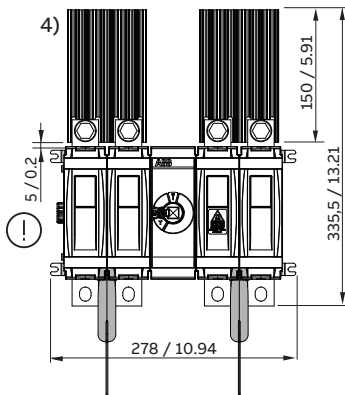
30 Nm
265 lb.in



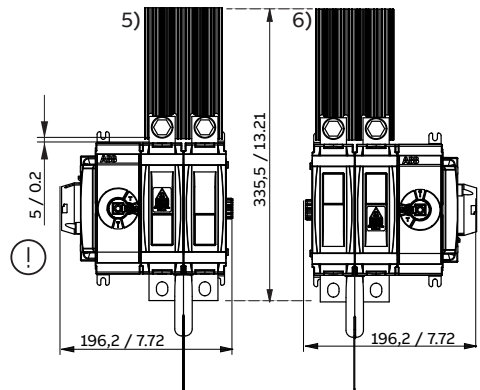
1. OTDC250...400UFS22, _UFSV22
OTDC250...400UF22, _UFV22 + OTDCKIT400FS11



2. OTDC250...400UFS02S, _UFSV02S
OTDC250...400UF02S, _UFV02S + OTDCKIT400FS11
3. OTDC250...400UFS20S, _UFSV20S
OTDC250...400UF20S, _UFV20S + OTDCKIT400FS11



4. OTDC600UFS22, _UFSV22
OTDC600UF22, _UFV22 + OTDCKIT600FS11



5. OTDC600UFS02S, _UFSV02S
OTDC600UF02S, _UFV02S + OTDCKIT600FS11
6. OTDC600UFS20S, _UFSV20S
OTDC600UF20S, _UFV20S + OTDCKIT600FS11



Caution

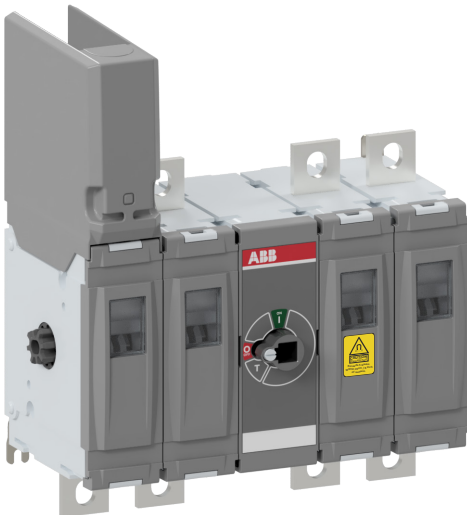
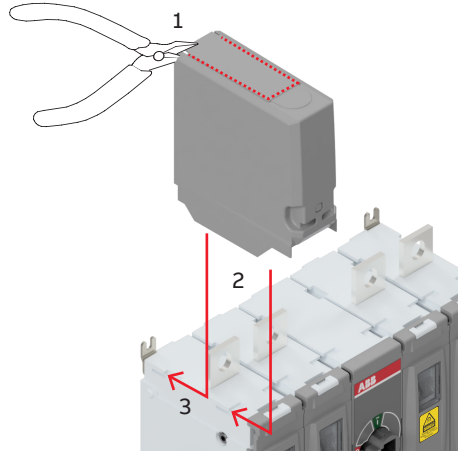
Installation only as shown in drawings.

Shroud kit

OTDCS400FG1, _T1



OTDCS400FG1 / OTDCS400FT1



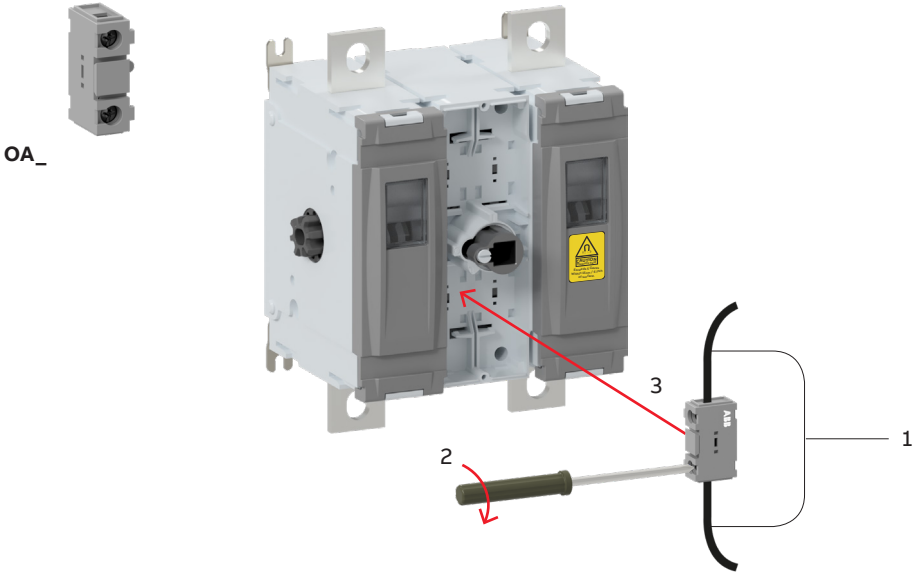
Information

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

Accessory	Description
Grey shroud kit	OTDCS400FG1
Transparent shroud kit	OTDCS400FT1

Auxiliary contacts

OA_



Remove

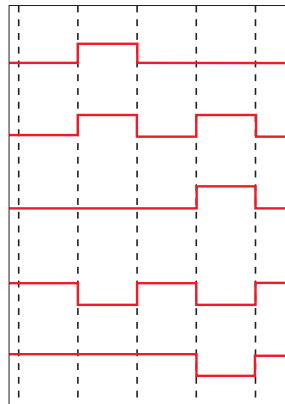
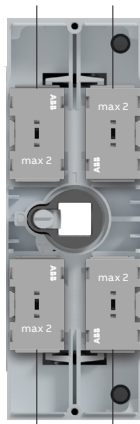
Test contact max. 4 pcs

0 1 0 Test 0



~10°

NO: OA1G10
NC: OA3G01



Main contact

Test contact (NO)

Test indication contact (NO)

Test contact (NC)

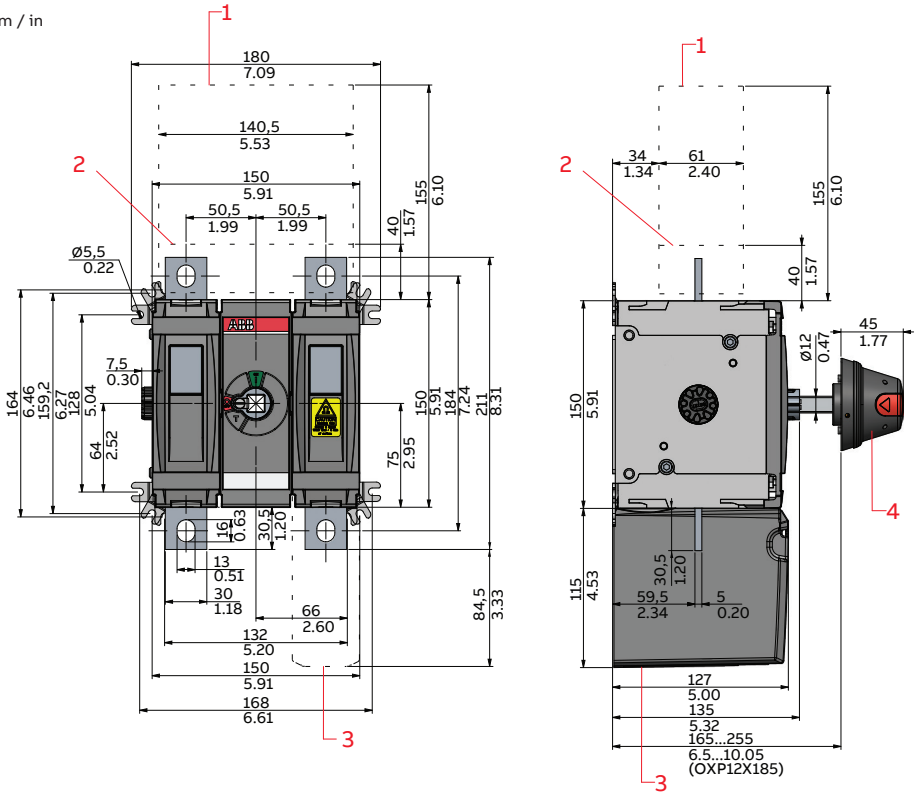
Test indication contact (NC)

Test indication contact
max. 4 pcs

Dimension drawings

OTDC315...800F_11, OTDC250...600UF_11

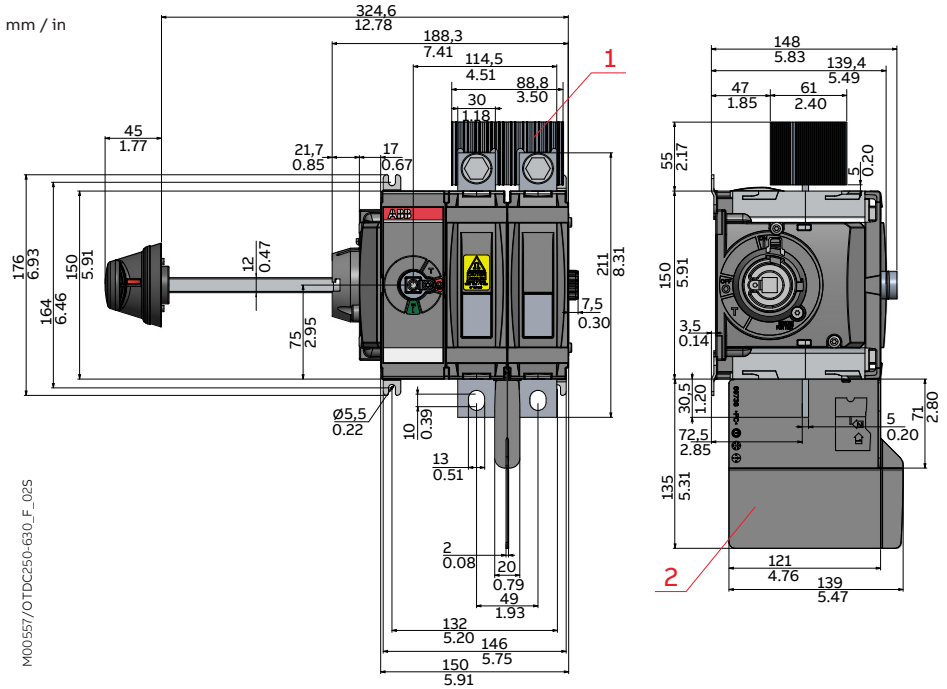
mm / in



Pos.	Accessory	Description
1	Connection bar	OTDCKIT600FS101, OTDC600UF_11 only
2	Connection bar	OTDCKIT400FS101, OTDC250...400UF_11 only
3	Terminal shroud	OTDCS400FG1, OTDCS400FT1
4	Handle	In OTDC315...630F_P and OTDC250...600UF_P types

Dimension drawings

OTDC250...400UFS_02S

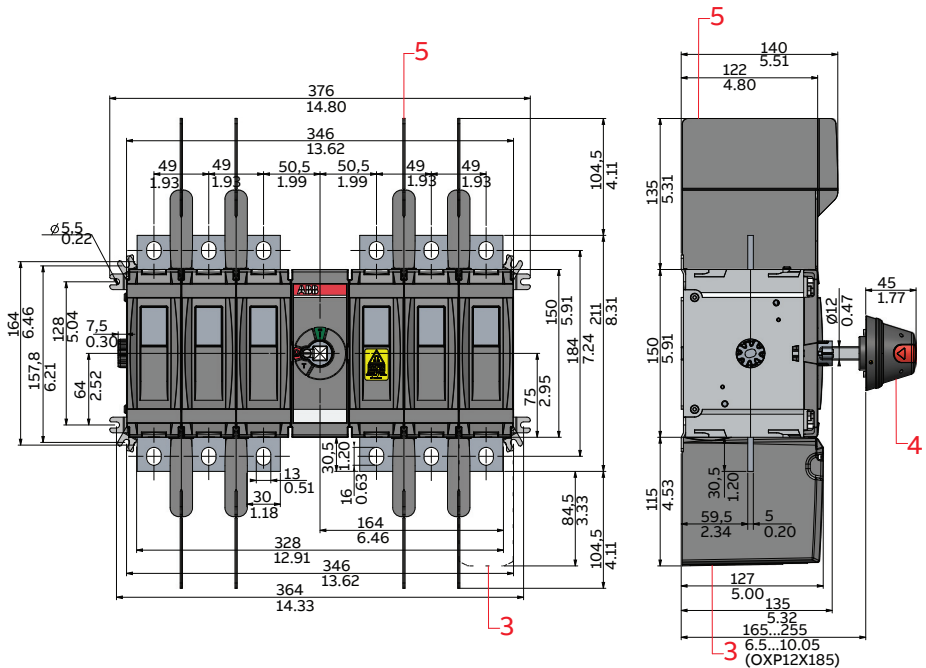


Pos.	Accessory	Description
1	Connection bar	OTDCKIT400FS11
2	Phase barrier	OTDCB400F/2

Dimension drawings

OTDC315...630F_33

mm / in

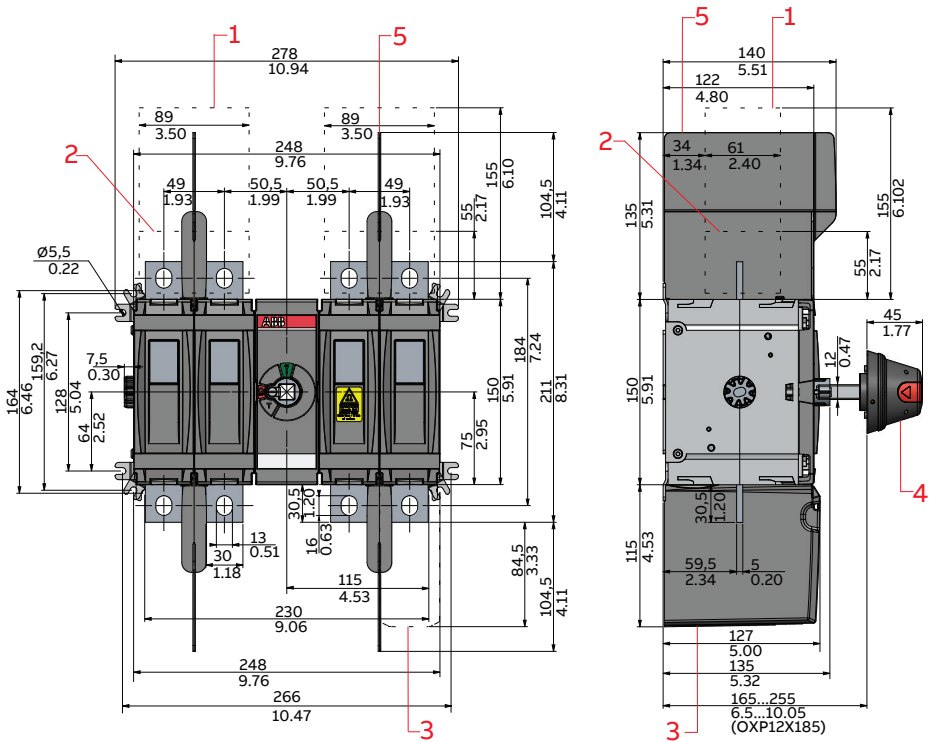


Pos.	Accessory	Description
3	Terminal shroud	OTDCS400FG1, OTDCS400FT1
4	Handle	In OTDC315...630F_P and OTDC250...600UF_P types
5	Phase barrier	OTDCB400F/2

Dimension drawings

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

mm / in

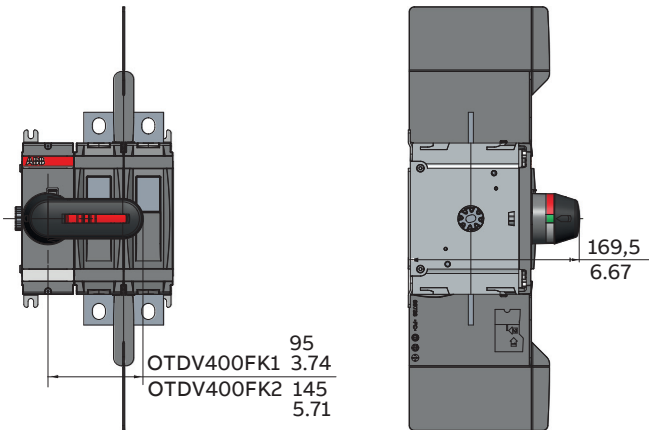


Pos.	Accessory	Description
1	Connection bar	OTDCKIT600FS11, OTDC600UF_22 only
2	Connection bar	OTDCKIT400FS11, OTDC250...400UF_22 only
3	Terminal shroud	OTDCS400FG1, OTDCS400FT1
4	Handle	In OTDC315...630F_P and OTDC250...600UF_P types
5	Phase barrier	OTDCB400F/2

Dimension drawings

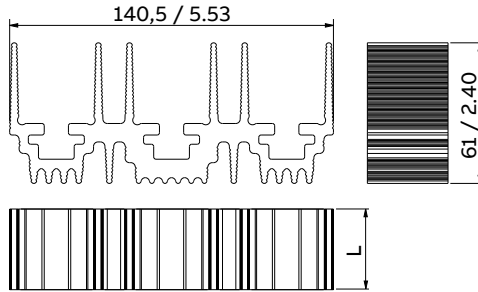
OTDC315...630F_K, OTDC250...600UF_K

mm / in



Dimension drawings

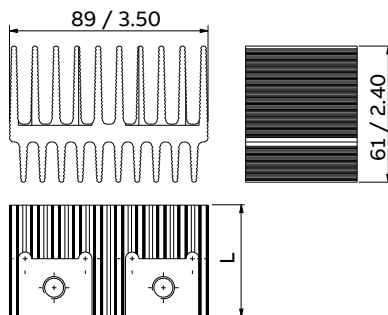
OTDCKIT400/600FS101



Type	Part number	L measure
OTDCKIT400FS101	OEZXY132-35	35 mm / 1.38 in
OTDCKIT600FS101	OEZXY132-100	100 mm / 5.91 in

Connection bar kit

OTDCKIT400/600FS11



Type	Part number	L measure
OTDCKIT400FS11	OEZXY133-50	50 mm / 1.97 in
OTDCKIT600FS11	OEZXY133-150	150 mm / 5.91 in



BG	Внимание! Опасно напряжение! Да се монтира само от лице с електротехническа квалификация.
CN	警告！电压危险！只能由专业电工进行安装。
CZ	Varování! Nebezpečné napětí! Montáž smí provádět výhradně elektrotechnik!
DA	Advarsel! Farlig elektrisk spænding! Installation må kun foretages af personer med elektroteknisk ekspertise.
DE	Warnung! Gefährliche Spannung! Installation nur durch elektrotechnische Fachkraft.
EL	Προειδοποίηση! Υψηλή τάση! Η εγκατάσταση πρέπει να γίνεται μόνο από εξειδικευμένους ηλεκτροτεχνικούς.
EN	Warning! Hazardous voltage! Installation by person with electrotechnical expertise only.
ES	¡Advertencia! ¡Tensión peligrosa! La instalación deberá ser realizada únicamente por electricistas especializados.
ET	Hoiatus! Ohtlik pinge. Paigaldada võib ainult elektrotehnika-alane ekspert.
FI	Varoitusta! Vaarallinen jännite! Asennuksen voi tehdä vain sähköalan ammattihenkilö.
FR	Avertissement! Tension électrique dangereuse! Installation uniquement par des personnes qualifiées en électrotechnique.
HR	Upozorenje! Opasan napon! Postavljati smije samo elektrotehnički stručnjak.
HU	Figyelmeztetés! Veszélyes feszültség! Csak elektrotechnikai tapasztalattal rendelkező szakember helyezheti üzembe.
IE	Rabhadh! Voltas guaiseach! Ba chóir do dhuine ag a bhfuil saineolas leictreicniúil, agus an té sin agháin, é seo a shuiteáil.
IT	Avvertenza! Tensione pericolosa! Fare installare solo da un elettricista qualificato.
LT	Dėmesio! Pavojinga įtampa! Dirbti leidžiama tik elektrotechniko patirties turintiems asmenims.
LV	Uzmanību! Bīstami - elektrība! Montāžas darbus drīkst veikt tikai personas, kurām ir atbilstošas elektrotehniskās zināšanas.
MT	Twissija! Vultaġġ perikoluż! Għandu jiġi installat biss minn persuna b'kompetenza elettroteknika.
NL	Waarschuwing! Gevaarlijke spanning! Mag alleen geïnstalleerd worden door een deskundige elektrotechnicus.
NO	Advarsel! Farlig spenning! Montering skal kun utføres av kvalifiserte personer med elektrokompetanse.
PL	Ostrzeżenie! Niebezpieczne napięcie! Instalacji może dokonać wyłącznie osoba z fachową wiedzą w dziedzinie elektrotechniki.
PT	Aviso! Tensão perigosa! A instalação só deve ser realizada por um electricista especializado.
RO	Avertizare! Tensiune periculoasă! Instalarea trebuie efectuată numai de către o persoană cu experiență în electrotehnică.
RU	Осторожно! Опасное напряжение! Монтаж должен выполняться только специалистом-электриком.
SE	Varning! Farlig spänning! Installation får endast utföras av en elektriker.
SK	Varovanie! Nebezpečné napätie! Montáž môže vykonávať iba skúsený elektrotechnik.
SL	Opozorilo! Nevarna napetost! Vgradnjo lahko opravi le oseba z elektrotehničnim strokovnim znanjem.



Contact us

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