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INSTRUCTION MANUAL FOR OBTAINING THE PROTECTION DEGREES - EXTERNAL

This document defines the modifications to the standard version of UniGear needed to obtain higher degree of internal protection – IP3X (excluding the shutters IP2X). The standard version of the UniGear switchboard guarantees the following degrees of protection.

- **IP4X externally**
- **IP2X internally**

The degrees of protection are defined by the IEC 60 529 Standard. (Table gives the main characteristic – Figure 1).
















FIRST CHARACTERISTIC NUMERAL - IP X X		SECOND CHARACTERISTIC NUMERAL - IP X X	
0	NON-PROTECTED	0	NON-PROTECTED
1	 Protected against solid foreign objects of diameter 50 mm and greater.	1	 Protected against vertically falling water drops.
2	 Protected against solid foreign objects of diameter 12,5 mm and greater.	2	 Protected against vertically falling water drops when enclosure tilted up to 15°.
3	 Protected against solid foreign objects of diameter 2,5 mm and greater.	3	 Protected against spraying water at an angle up to 60°.
4	 Protected against solid foreign objects of diameter 1,0 mm and greater.	4	 Protected against splashing water from any direction.
5	 Dust-protected.	5	 Protected against water jets from any direction.
6	 Dust-tight.	6	 Protected against powerful water jets from any direction.
		7	 Protected against the effects of temporary immersion in water.
		8	 Protected against the effects of continuous immersion in water.

Figure 1 Main characteristics for IP coding

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Caution!

We guarantee the proper operation of our equipment only if the installation of the switchgear arrays is performed by certified installation companies with which we have a contract of service representation. The installation employees of these companies are trained regularly in our company and are able to provide perfect installation, adjustment and putting into operation including continuous servicing and/or repairs.

If you decide for another installation company than recommended by the manufacturer, it is necessary to organize the training of the installation employees in our company on contract.

External adaptation to apply increased protection of ABB switchgears

In order to obtain internal IP3X coding below mentioned steps must be performed.

1. Panel sealing

All openings bigger than 2,5mm must be filled by silicone sealant. Be aware that silicone will not effect the movement of the shutters.

For sealing of the openings use the prescribed type of sealant. The sealed surfaces must be cleaned and degreased prior to applying the sealant.

For the degreasing use degreasers based on alcohol.


For the sealing use a sealant based on neutral silicone: LOXEAL 59-20 Oxime grade – no. 1000079734.

More details are defined in the drawing No. 1VL7638245R0101.

1. Openings bigger than 2,5mm between circuit breaker compartment and cable compartment must be filled by silicone.



Figure 2 Openings bigger than 2,5mm between circuit breaker and cable compartment

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2. Openings bigger than 2,5mm between circuit breaker compartment and busbar compartment must be filled in by silicone



Figure 3 Opening between circuit breaker and busbar compartment

2. Panel blinding

During commissioning of the panel, when the lifting hook is dismantled. Mount the screw, which was used for lifting hook, inside the rivet nut from the inside of the panel.

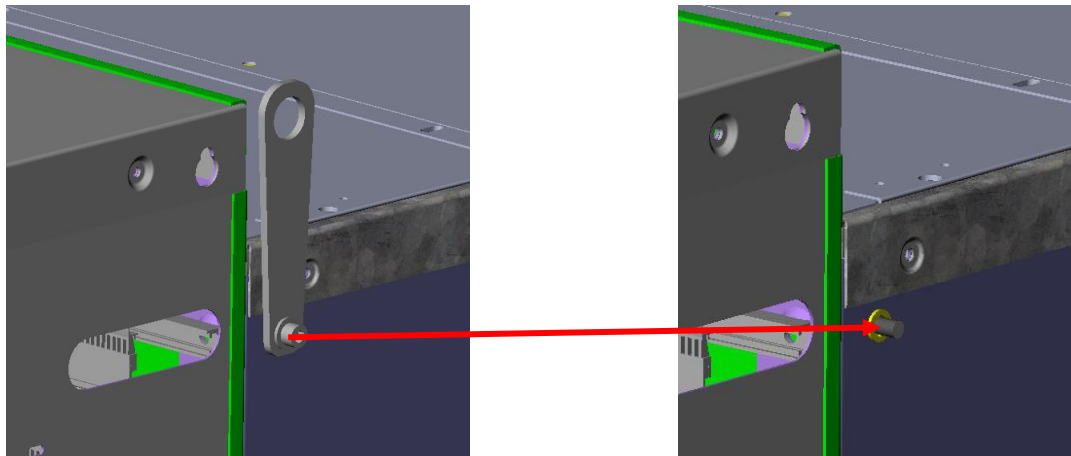
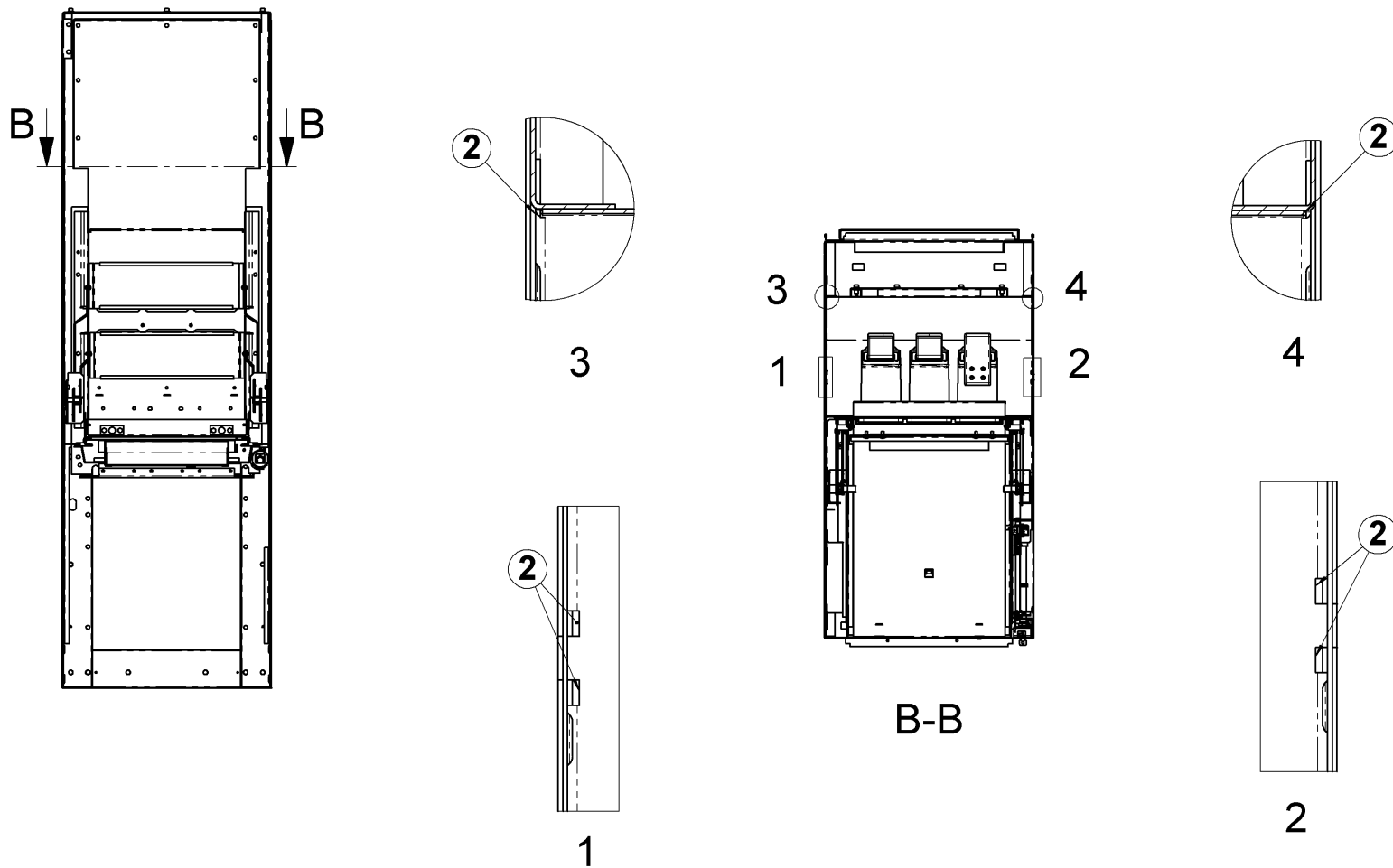


Figure 4 Panel blinding after dismantling the lifting hook

Follow document 1VLG100622 - Instruction for obtaining internal IP3X (exluding the shutters) - internal
 Postupujte podle dokumentu 1VLG100622 - Pokyny pro získání interního IP3X (s výjimkou clon) - interní



All openings bigger than 2,5mm must be filled with silicone sealant
Be aware that silicone will not effect the movement of the shutters

Note

1, 2, 3, 4 - Fill the chinks between partition plate and side wall with silicone sealant

Všechny otvory větší než 2,5 mm musí být vyplněny silikonovým tmelem.
Dát pozor, aby silikon neovlivnil pohyb clon.

Poznámka

1, 2, 3, 4 - Vyplňte mezery mezi oddělovacím krytem a bočnicí silikonovým tmelem

R0102

Verz.: Verzi: Rev.: Změna:		Finishing/Coating: Povrchová úprava:		Note/Poznámka:	
00 Z7472		22.8.2017 BAJÁNEK		Type: Typ:	Scale: Měřítko: 1:10
Material: Materiál:		Dimension: Rozměr:		Title: Název: SEALING OF PANEL IP3X INTERNAL TĚSNĚNÍ SKŘÍŇE IP3X INTERNÍ	
Prepared by: Vypracoval: BAJÁNEK 22.8.2017		Based on: Podobnost:		Lang.: Jazyk: EN-CS	
Checked by: Přezkoušel: BAJÁNEK 22.8.2017		Approved by: Schválil: BERNARD 22.8.2017		Format: Formát: A3	
ABB		ABB Switzerland Ltd Group Technology Management		Drawing No.: Č. výkresu: 1VL7638245	
				Sheet/No. of sh.: List/Číslo: 1/1	

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 Všechna práva vyhrazena.

Surface roughness: ISO 1302
 Symboly drsnosti podle ČSN
 EN ISO 1302

Shape and position: "K"
 General toler. for welded constructions:
 EN ISO 13020: linear-A, angular-C
 Tvar a poloha: "K"
 Všeob. tolerance svar. dílců: EN ISO 13020: úhly-A, úhly-C

Banded construction dimensions:
 Rozměry vztahující se k ohybu:
 Angles of bending:
 Úhly ohybu.

General tolerances for machining and forming:
 ISO 2768-1: tolerance podle ISO 2768-1.2
 Linear and angular dimensions
 (in plane) and fillets
 Délky, úhly v rovině, zaoblení: