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1. MANUFACTURER

TEP Ex d.o.o.

Prilaz dr. Franje Tuđmana 6 HR-49210 ZABOK

Telephone: +385 49 222 900

Web address: www.tepex.hr

2. General safety information**WARNING!**

The user manual contains basic information about the product. Mounting, installation, usage and maintenance should be carried out under this user manual to provide and ensure safe operation within the nominal characteristics. This user manual complement national Regulation and Standards. The responsible person shall ensure their implementation. Failure off implement this user manual can reduce explosion protection and endanger people, property and the environment. Any improper and illegal actions as well as non-compliance with the provisions of this user manual excludes all responsibility by manufacturer side.

Before installation/commissioning:

- Carefully read all instructions,
- Execute proper training of responsible personnel,
- Check that the contents of these instructions is fully understandable by the responsible personnel,
- Make sure that all the requirements and national Regulations as well as all special security measures are applied.

In lack of understanding:

- Contact the manufacturer.

During operation:

- Ensure that this user manual and other work instructions are available to the responsible staff at all times,
- Check the implementation of these instructions and all other safety user's instructions.

3. PURPOSE

Explosion protected busbar SKX 604016 -. / ... is intended for connection and distribution of reinforced and non-reinforced cables with cross-sections from 35 mm² to 150 mm² and currents from 80 A to 300 A in industrial premises in places with potentially explosive atmospheres and dust in hazard zones 1, 2, 21, 22, in accordance with EN 60079-10-1 and EN 60079-10-2.

4. PRODUCT COMPLIANCE

The product complies with the ATEX Directive 2014/34/EU and standard:

- EN IEC 60079-0: 2018,
- EN IEC 60079-7: 2015 / A1: 2018,
- EN 60079-31: 2014.

The product is developed, manufactured and tested according to the existing state of the art, in accordance with the standards EN ISO 9001, EN ISO 80079-34 and EN ISO 14001.

- The product complies with the LVD Directive 2014/35 / EU.
- The product complies with RoHS Directive 2011/65 / EU.
- The product complies with the EMC Directive 2014/30 / EU.

5. DEGREE OF PROTECTION AND TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0054
Category and explosion protection:	  II 2G Ex eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db
Ambient temperature:	-20°C do +40°C / +50°C
Mechanical protection:	IP66, category 1
Resistance to shock:	IK 09
Class of protection:	I (PE - protective earthing)
Rated voltage U _n :	630 V AC
Maximum current I _{max} :	According to the table of maximum currents
Withstand short-circuit peak current. I _{pk} :	70 kA
Short-term withstand short-circuit current. I _k :	22 kA/1s
Number of poles:	3L + PE
Connection terminals:	Terminal 185 mm ² for cables 120 mm ² and 150 mm ² , - tightening torque of the terminal bolt 30 Nm Terminal 120 mm ² for cables from 35 mm ² to 95 mm ² , - tightening torque of the terminal bolt 15 Nm Cable: multicore round s (r), multicore sector s (s)
Internal grounding terminal:	Screw terminal M8 for cable lug DIN 46235: - housing earthing 35 mm ² H07V-K - cover earthing 10 mm ² H07V-K
External earthing terminal:	Saddle terminals 16 mm ² Tightening torque of the terminal bolt 3,0 Nm
Insulation stripping:	Terminal 185 mm ² - 34 mm Terminal 120 mm ² - 34 mm
Cover screw:	Combi screw M5x25/10-Z4 A2, tightening torque 3,0 Nm
Dimensions (LxWxH):	600 x 400 x 200 mm (without cable glands)
Housing material:	Stainless steel 1,5mm 1.4404, X2CrNiMo17-12-2, AISI 316L
Mass:	27,0 kg max.

Maximal currents:

Terminal	Cable cross-section	t _{amb} -20°C to +40°C	t _{amb} -20°C to +50°C
185 mm ²	150 mm ²	300 A	250 A
	120 mm ²	250 A	200 A
120 mm ²	95 mm ²	200 A	160 A
	70 mm ²	150 A	125 A
	50 mm ²	125 A	100 A
	35 mm ²	100 A	80 A

6. TYPES

SKX 604016 - . / . . .

BASIC TYPE

NUMBER AND TYPE OF ENTRIES:

- 2 -2 entries for cable gland ISO 32 up to ISO 75
- 3 -3 entries for cable gland 1 x ISO 32 up to 75, 2 x ISO 32 up to ISO 50

NUMBER AND SIZE OF terminals:

a) 2 entries (SKX 604016 - 2 / ...):

- 2 x 185** - 2 terminals for cables 120 mm² and 150 mm²
- 1 x 185 + 1 x 120** - 1 terminals for cables 120 mm² and 150 mm²,
1 terminals for cables 35 mm² up to 95 mm²
- 2 x 120** - 2 terminals for cables 35 mm² up to 95 mm²

b) 3 entries (SKX 604016 - 3 / ...):

- 2 x 185 + 1 x 120** - 2 terminals for cables 120 mm² and 150 mm²,
1 terminals for cables 35 mm² up to 95 mm²
- 1 x 185 + 2 x 120** - 1 terminals for cables 120 mm² and 150 mm²,
2 terminals for cables 35 mm² up to 95 mm²
- 3 x 120** - 3 terminals for cables 35 mm² up to 95 mm²

7. MOUNTING

The assembly of the busbar is performed by fixing it on a flat surface or wall over four suspension bracket with M6 screw accessories in the range 422 mm x 550 mm.

8. INSTALIRANJE I PUŠTANJE U RAD

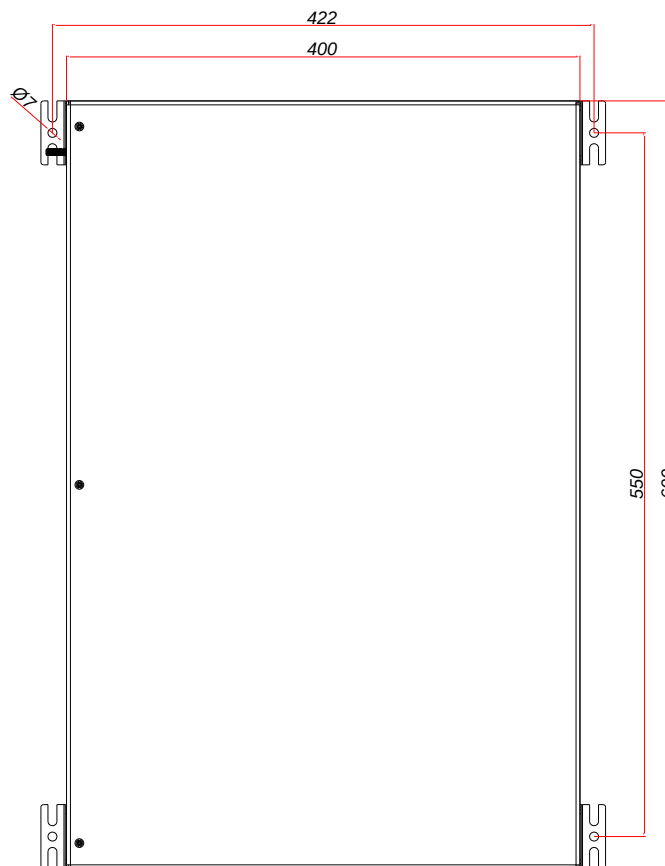
The cable should be unravelled to connect the conductor to the busbar and be prepared for inserting in to the cable gland according to the instructions of the cable gland manufacturer. The insulation of the conductor should be removed in length according to the technical data. The cables should be inserted into the housing, unloaded with clamps and the wires connected to the appropriate terminals on the busbars. Tighten the clamp bolts to the torque according to the technical data. Tighten the nuts to the torque according to the manufacturer's specifications.

Close the housing with a cover. Tighten the cover bolts to the torque according to the technical data.

Connect a protective IP conductor to the external earthing terminal min. 6 mm² Cu.

If short-term withstand short-circuit current I_{hp} (r.s.m.) > 15 kA is expected, with regard to the switch-off time of the protective device, it must be checked in accordance with IEC 60364-5-54 whether the cross-section of the protective earth conductor is sufficiently dimensioned.

The busbar enclosure was factory tested individually for a dielectric strength of (2U_n + 1000 V) r.m.s., 1 min. Relevant national regulations and standards for electrical installations in potentially explosive atmospheres must be observed during commissioning.

9. DIMENSIONS**10. INSPECTION, MAINTENANCE, REPAIR AND OVERHAUL****WARNING!**

Before each opening of the housing, the warning must be observed:

DO NOT OPEN WHEN ENERGIZED

Inspections are carried out in accordance with IEC 60079-17:2007 general and special conditions of manufacturer and users Regulations and includes inspection of parts on which the explosion protection depends, especially:

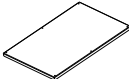
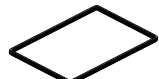
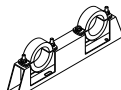
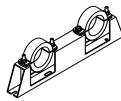
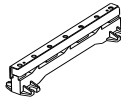
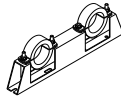
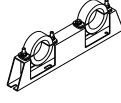
- that the housing, all housing parts, cover and cover seal are complete without cracking and damage and the cover screws are tightened to the rated torque,
- that the bolts and cable release clamp bolts are tightened to rated torques,
- that the cable glands and plugs are installed according to the manufacturer's instructions and that the cable gland seals are undamaged and the nuts are tightened to the rated torque.

In to the parts for maintenance and repair belongs all the parts provided by the manufacturer and indicated in the list of spare parts. All other procedures have the character of repair. All the repairs are performed by the manufacturer or the manufacturer's authorized personal and the original parts have to be provided according to the product documentation, all in accordance with EN 60079-19:2011.

Overhaul and modifications are not allowed.

If repair or any other procedure are performed on the product by unauthorized person, all producer responsibility for the product and the warranty and the manufacturer's declaration of conformity becomes invalid.

11. SPARE PARTS AND ACCESSORIES

PART	DESCRIPTION	CODE	PART	DESCRIPTION	CODE
	Poklopac kućišta Housing cover	SKX 604016/ 10-100		Stezaljka 35 mm² Terminal 35 mm²	SKX 604016/ 10-170
	Brtva poklopca Cover gasket	SKX 604016/ 10-110		Stezaljka 120 mm² Terminal 120 mm²	SKX 604016/ 10-180
	Vijak poklopca M6x30 Cover screw M6x30	SKX 604016/ 10-120		Stezaljka 185 mm² Terminal 185 mm²	SKX 604016/ 10-190
	Nosač za ovjes Mounting bracket	SKX 604016/ 10-130		Sklop rasterećenja kabela 3/4" Cable relief assembly 3/4 "	SKX 604016/ 10-200
	Nosač sabirnice PE PE busbar holder	SKX 604016/ 10-140		Sklop rasterećenja kabela 1" Cable relief assembly 1"	SKX 604016/ 10-210
	Nosač sabirnice Busbar holder	SKX 604016/ 10-150		Sklop rasterećenja kabela 5/4" Cable relief assembly 5/4"	SKX 604016/ 10-220
	Sabirnica ECu 30x10 Busbar ECu 30x10	SKX 604016/ 10-160		Sklop rasterećenja kabela 6/4" Cable relief assembly 6/4"	SKX 604016/ 10-230

12. RESPONSIBILITY AND AUTHORIZATION

This instruction is the basic information about the product. It is complementing with the corresponding national laws and regulations.

Production, use, certification and supervision are determined at the national level:

- Regulations concerning equipment and protective systems intended for use in potentially explosive atmospheres EU directive 94/9 EC (ATEX 94)
- Regulations on minimum requirements for safety and health protection of workers and technical inspection of facilities, equipment, installations and equipment in hazardous areas EU directive 1999/92/EC (ATEX 137).

The responsible person shall ensure their implementation at the working facility.

13. STORAGE AND TRANSPORT

Transportation and storage of the light fitting is only allowed in the original cardboard box.

14. MANUFACTURER'S WARRANTY

The manufacturer provides a Warranty on the product for a period of one year under the provisions of this User manual and the Law. This statement has the force of Warranty sheet.

15. MARKING

Explosion protected busbar SKX 604016 -. / ... is marked:

- marking plate with technical data on the housing cover



- marking label with technical inside housing

TEPEX Croatia, Zagreb, Medarska 69 Made in Croatia				
SKX 604016 - 2 / ... 630V AC IP 66				
$-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C} / +50^{\circ}\text{C}$				
Current max.				
Terminal	Cross section	$T_{\text{amb}} \leq +40^{\circ}\text{C}$	$T_{\text{amb}} \leq +50^{\circ}\text{C}$	
185mm ²	150mm ²	300A	250A	
	120mm ²	250A	200A	
	95mm ²	200A	160A	
120mm ²	70mm ²	150A	125A	
	50mm ²	125A	100A	
	35mm ²	100A	80A	
CE 0722 Ex II 2G Ex eb IIC T6 Gb				
Ex II 2D Ex tb IIIC T80°C Db				
FIDI 19 ATEX 0054 MR... DATUM... KK..				

TEPEX Croatia, Zagreb, Medarska 69 Made in Croatia				
SKX 604016 - 3 / ... 630V AC IP 66				
$-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C} / +50^{\circ}\text{C}$				
Current max.				
Terminal	Cross section	$T_{\text{amb}} \leq +40^{\circ}\text{C}$	$T_{\text{amb}} \leq +50^{\circ}\text{C}$	
185mm ²	150mm ²	300A	250A	
	120mm ²	250A	200A	
	95mm ²	200A	160A	
120mm ²	70mm ²	150A	125A	
	50mm ²	125A	100A	
	35mm ²	100A	80A	
CE 0722 Ex II 2G Ex eb IIC T6 Gb				
Ex II 2D Ex tb IIIC T80°C Db				
FIDI 19 ATEX 0054 MR... DATUM... KK..				