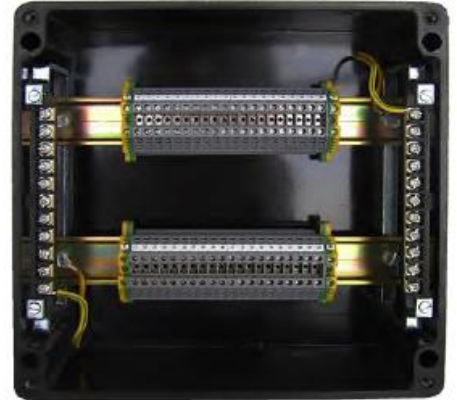


## SKX 12E-15E

Upute za uporabu  
User manual

## UPOZORENJE

Upute za uporabu sadrže osnovne informacije o proizvodu. Montaža, instaliranje, uporaba i održavanje trebaju biti izvedeni prema ovoj Uputi kako bi bio osiguran siguran rad unutar nazivnih karakteristika. Ovu Uputu nadopunjuju nacionalni Pravilnici i norme. Odgovorna osoba korisnika je dužna osigurati njihovo provođenje. Neprovođenje može umanjiti protueksplozijsku zaštitu uređaja i dovesti u opasnost ljude, imovinu i okoliš. Svako neispravno i nedozvoljeno postupanje kao i nepoštivanje odredbi ove Upute isključuje svaku odgovornost proizvođača.

**Prije ugradnje/puštanja u pogon:**

- Pažljivo pročitati cijelu Uputu za uporabu,
- Izvršiti odgovarajuću obuku odgovornog osoblja,
- Provjeriti da je sadržaj ove Upute u potpunosti razumljiv odgovornim osobama,
- Uvjeriti se da su primijenjeni svi zahtjevi nacionalnih Pravilnika i posebne sigurnosne mjere ukoliko postoje.

**U slučaju nejasnoća:**

- Kontaktirati proizvođača.

**Tijekom pogona:**

- Osigurati da ove Upute za uporabu i druge radne upute korisnika budu vidljivo istaknute i dostupne odgovornom osoblju cijelo vrijeme,
- Provjeravati provođenje ove Upute i svih drugih sigurnosnih uputa korisnika.



## 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 complements 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.

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**1. NAMJENA**

Protueksplozijski zaštićena razvodišta, tip SKX 12/E - SKX15/E, namijenjena su za spajanje i razvod vodova i kabela u industrijskim prostorima na mjestima koja su ugrožena potencijalnom eksplozivnom atmosferom plinova, para i prašina u zonama opasnosti 1, 2, 21, 22 sukladno normama EN 60079-10-1 i EN 60079-10-2.

**2. SUKLADNOST PROIZVODA**

Konstrukcija kućišta u skladu je s aparatnim normama EN 60947-1, EN 60947-7-1, EN 60947-7-2 i svim drugim povezanim normama. Proizvod je sukladan Pravilniku o opremi i zaštitnim sustavima namijenjenim za uporabu u potencijalno eksplozivnim atmosferama, NN br. 33/16.

Proizvod je sukladan ATEX Direktivi 2014/34/EU i normama:

- EN IEC 60079-0:2018,
- EN IEC 60079-7:2015/A1:2018,
- EN 60079-11:2012,
- EN 60079-31:2014.

Proizvod je razvijen, proizveden i ispitan prema postojećem stanju tehnike sukladno normama EN ISO 9001, EN ISO/IEC 80079-34 i EN ISO 14001.

Proizvod je sukladan LVD Direktivi 2014/34 EU.

Proizvod je sukladan RoHS Direktivi 2011/65 EU.

Proizvod je sukladan EMC Direktivi 2014/30/EU.

**3. TABLICA IZVEDBI**

Strane A, B, C, D kućišta buše se prema potrebi za montažu pripadajućih uvodnica. Tablica maks.br.uvoda daje maksimalni dozvoljeni broj uvoda/uvodnica po strani kućišta, uz napomenu, da je na definiranom mjestu dozvoljeno bušenje svake manje veličine uvoda i montaža svake manje plastične uvodnice.

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**1. PURPOSE**

Explosion protected terminal boxes, type SKX 12/E - SKX15/E, are used for transfer and distribution of electrical energy in industrial areas with a potentially explosive atmosphere in hazardous areas 1, 2, 20, 21 in accordance with EN 60079-10-1 and EN 60079-10-2.

**2. PRODUCT CONFORMITY**

Terminal boxes construction is in compliance with EN 60947-1, EN 60947-7-1, EN 60947-7-2 standards and all other related standards. The product complies with ATEX Directive 2014/34/EU and standards:

- EN IEC 60079-0: 2018,
- EN IEC 60079-7: 2015 / A1: 2018,
- EN 60079-11: 2012,
- 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 / IEC 80079-34 and EN ISO 14001.

The product complies with the LVD Directive 2014/34 EU.

The product complies with RoHS Directive 2011/65 EU.

The product complies with the EMC Directive 2014/30/EU.

**3. TABLE TYPES**

The sides A, B, C, D of the terminal boxes are drilled for mounting the corresponding cable entries. Table of max.numb.of cable entry's gives the maximum number of cable entry's / glands at the terminal box, noting that the specified position allow drilling of each smaller size cable entry and installation of every minor plastic cable glands.

Tablica izvedbi: Table types:

	ISO 16		ISO 20		ISO 25		ISO 32	
	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D
MMK 12	2	2	2	2	1	1		
MMK 13	2	4	2	3	1	2		
MMK 14	2	6	2	4	1	3	1	2
MMK 15	4	6	3	4	2	3	1	2
MMK 15 s N/PE Sabirnicom MMK15 with N/PE Busbar	4	5	3	3	2	3	1	

Za razvodišta SKX 12, SKX 13, SKX 14 maksimalni broj rednih stezaljki s priključnim vodičima nazivnog presjeka i maksimalne trajne struje određen je metodom maksimalnih nazivnih gubitaka (worst case).

For terminal boxes SKX 12, SKX 13, SKX 14 the maximum number of terminals with connecting conductors of the same rated cross-section and the maximum continuous current is determined by the method of maximum rated losses (worst case).

SKX 12/E01			
Nazivni presjek vodiča / stezaljki [mm <sup>2</sup> ] Nominal cross-section conductor/ terminal [mm <sup>2</sup> ]	Najveći broj stezaljki Maximal number of terminals	Temperatura okoline T <sub>a</sub> [°C] Ambient temperature T <sub>a</sub> [°C]	I <sub>max</sub> [A]
4 / 4	5	40	20
4 / 4	5	50	18
4 / 4	5	55	17

SKX 13/E01			
Nazivni presjek vodiča / stezaljki [mm <sup>2</sup> ] Nominal cross-section conductor/ terminal [mm <sup>2</sup> ]	Najveći broj stezaljki Maximal number of terminals	Temperatura okoline T <sub>a</sub> [°C] Ambient temperature T <sub>a</sub> [°C]	I <sub>max</sub> [A]
4 / 4	8	40	19
4 / 4	8	50	17
4 / 4	8	55	16

SKX 13/E02			
Nazivni presjek vodiča / stezaljki [mm <sup>2</sup> ] Nominal cross-section conductor/ terminal [mm <sup>2</sup> ]	Najveći broj stezaljki Maximal number of terminals	Temperatura okoline T <sub>a</sub> [°C] Ambient temperature T <sub>a</sub> [°C]	I <sub>max</sub> [A]
6 / 6	8	40	25
6 / 6	8	50	22
6 / 6	8	55	19

SKX 14/E01			
Nazivni presjek vodiča / stezaljki [mm <sup>2</sup> ] Nominal cross-section conductor/ terminal [mm <sup>2</sup> ]	Najveći broj stezaljki Maximal number of terminals	Temperatura okoline T <sub>a</sub> [°C] Ambient temperature T <sub>a</sub> [°C]	I <sub>max</sub> [A]
4 / 4	16	40	20
4 / 4	16	50	18
4 / 4	16	55	16

SKX 14/E02			
Nazivni presjek vodiča / stezaljki [mm <sup>2</sup> ] Nominal cross-section conductor/ terminal [mm <sup>2</sup> ]	Najveći broj stezaljki Maximal number of terminals	Temperatura okoline T <sub>a</sub> [°C] Ambient temperature T <sub>a</sub> [°C]	I <sub>max</sub> [A]
6 / 6	16	40	25
6 / 6	16	50	22
6 / 6	16	55	19

Na rednu stezaljku je dozvoljen priključak vodiča manjeg presjeka od nazivne veličine redne stezaljke, prema tehničkim podacima, uz obavezno umanjeње maksimalne struje vodiča.

Maksimalna struja vodiča manjeg presjeka od nazivnog (S<sub>2</sub>) dobije se množenjem maksimalne struje vodiča nazivnog presjeka (S<sub>n</sub>) faktorom,

$$\sqrt{\frac{S_2}{S_n}}, \text{ tj. } I_2 = I_n \sqrt{\frac{S_2}{S_n}}$$

SKX 15/ E - prema tablici dozvoljenih kombinacija broja rednih stezaljki, nazivnog presjeka vodiča i maksimalne struje za nazivni presjek vodiča

Tablica dozvoljenih kombinacija broja vodiča na principu nazivnih maksimalnih gubitaka:

On each terminal is allowed to connect smaller cross section conductor than the rated size of the terminal block, according to the technical data, with the obligatory reduction of the maximum current of the conductors. Maximum current of the conductor that are smaller cross section than the rated (S<sub>2</sub>) is obtained by multiplying the maximum current of the conductors with the rated cross-section (S<sub>n</sub>) factor,

$$\sqrt{\frac{S_2}{S_n}}, \text{ i.e. } I_2 = I_n \sqrt{\frac{S_2}{S_n}}$$

SKX 15/ E - according to the table of the permitted number of the combination of the terminals, rated cross sections and maximum current for rated cross sections

Table of permitted combinations of conductors on the principle of maximum rated losses:

SKX 15/E			
Nazivni presjek vodiča / stezaljki [mm <sup>2</sup> ] Nominal cross-section conductor/ terminal [mm <sup>2</sup> ]	Najveći broj stezaljki <sup>1)</sup> Maximal number of terminals	Temperatura okoline T <sub>a</sub> [°C] Ambient temperature T <sub>a</sub> [°C]	I <sub>max</sub> [A]
2,5 / 2,5	2	40	18
2,5 / 2,5	4		16
2,5 / 2,5	24		13
2,5 / 2,5	28		12
2,5 / 2,5	2	50	16
2,5 / 2,5	4		14
2,5 / 2,5	24		11
2,5 / 2,5	28		10
2,5 / 2,5	2	55	15
2,5 / 2,5	4		13
2,5 / 2,5	24		10
2,5 / 2,5	28		9
4 / 4	4	40	21
4 / 4	8		18
4 / 4	24		16
4 / 4	4	50	18
4 / 4	8		16
4 / 4	24		14
4 / 4	4	55	17
4 / 4	8		15
4 / 4	24		12

6 / 6	2	40	36
6 / 6	4		32
6 / 6	8		22
6 / 6	16		20
6 / 6	2	50	30
6 / 6	4		26
6 / 6	8		19
6 / 6	16		17
6 / 6	2	55	26
6 / 6	4		23
6 / 6	8		16
6 / 6	16		14
10 / 10	2	40	50
10 / 10	4		45
10 / 10	8		37
10 / 10	12		33
10 / 10	2	50	42
10 / 10	4		37
10 / 10	8		30
10 / 10	12		26
10 / 10	2	55	38
10 / 10	4		34
10 / 10	8		27
10 / 10	12		23
16 / 16	2	40	66
16 / 16	4		58
16 / 16	8		55
16 / 16	12		50
16 / 16	2	50	58
16 / 16	4		50
16 / 16	8		45
16 / 16	12		40
16 / 16	2	55	52
16 / 16	4		45
16 / 16	8		40
16 / 16	12		35
25 / 25	2	40	80
25 / 25	4		70
25 / 25	8		60
25 / 25	2	50	70
25 / 25	4		60
25 / 25	8		50
25 / 25	2	55	60
25 / 25	4		50
25 / 25	8		40
35 / 35	2	40	109
35 / 35	4		80
35 / 35	2	50	95
35 / 35	4		70
35 / 35	2	55	85
35 / 35	4		60

		Nazivni presjek vodiča – nazivni presjek redne stezaljke (mm <sup>2</sup> ) Nominal cross-section conductor – Nominal cross-section of terminal [mm <sup>2</sup> ]						
		2,5	4	6	10	16	25	35
Maksimalni mogući broj rednih stezaljki The maximum number of terminals	28 + sabirnica 22PE 28 + busbar 22PE		24	16	14	12	8	4
Širina redne stezaljke [mm] Width of terminal [mm]		5	6	7	10	12	12	15
Dozvoljeni priključak vodiča na rednu stezaljku Allowed number of conductors per terminal		1x2,5-1,5 mm <sup>2</sup>	1x4-1,5 mm <sup>2</sup>	1x6-1,5 mm <sup>2</sup>	1x10-2.5 mm <sup>2</sup>	1x16-2.5 mm <sup>2</sup>	1x25-6 mm <sup>2</sup>	1x35-6 mm <sup>2</sup>
Širina PE stezaljke [mm] Width of PE terminal [mm]		6	6	8	10	12	16	16
Širina završne stezaljke [mm] Width of final terminal [mm]		9						
Prostor stezaljke na DIN nosaču bez završnih stezaljki Space for a terminal on DIN rail without end terminals		max. 140 mm						

Na jednu rednu stezaljku priključena su dva vodiča PE vodiči i kratkospojnici se ne uzimaju u proračun

Two conductors are connected on one terminal PE conductors and jumpers are not taken in the calculation

Na rednu stezaljku je moguć priključak vodiča manjeg nazivnog presjeka s time da se poštuje maksimalni broj vodiča i maksimalna trajna struja za taj nazivni presjek vodiča prema Tablici dozvoljenih kombinacija.

Dozvoljena je kombinacija više različitih nazivnih presjeka rednih stezaljki i vodiča u jednom kućištu. Moguća kombinacija se izračunava na osnovu Tablice dozvoljenih kombinacija na način da se provjeravaju ukupni maksimalni gubici i fizička mogućnost ugradnje, kako je dano u primjeru:

It is possible to connect on one terminal smaller nominal cross-section conductors, but the maximum number of conductors and maximum current for the nominal wire size must be respected according to „Table of permitted combinations“. Combination of nominal cross-section terminals and conductors in one terminal box is allowed. Possible combinations are calculated on the basis of the „Table of permitted combinations “so that the total maximum losses and the possibility of a physical installation is possible.

Primjer: SKX 15/E -20°C ≤ T <sub>amb</sub> ≤ +40° Example: SKX 15/E -20°C ≤ T <sub>amb</sub> ≤ +40°				
Presjek vodiča i stezaljke [mm <sup>2</sup> ] Cross-section of conductor and terminal [mm <sup>2</sup> ]	Struja [A], max. Current [A], max.	Broj stezaljki Number of terminals	Od max. gubitaka Max. dissipation	Ugradbena mjera stezaljki Terminal mounting distance
2,5	12	8 (max. 28)	28,6 %	8x5=40
4	21	1 (max. 4)	25,0 %	1x6=6
6	22	1 (max. 8)	12,5 %	1x7=7
10	33	4 (max. 12)	33,3 %	4x10=40
Ukupno / Total = 99,4% < 100%				93mm<140mm

#### 4. TEHNIČKI PODACI

Nazivni napon:	do 630 V
Nazivni presjek redne stezaljke:	do 35 mm <sup>2</sup>
Maksimalni broj vodiča/rednih stezaljki za nazivni presjek vodiča/redne stezaljke i maksimalne struje:	prema podacima iz Tablice izvedbi
Duljina skidanja izolacije na vodiču:	2,5 mm <sup>2</sup> - 10 mm 4 mm <sup>2</sup> - 10 mm 6 mm <sup>2</sup> - 12 mm 10 mm <sup>2</sup> - 12 mm 16 mm <sup>2</sup> - 14 mm 25 mm <sup>2</sup> - 14 mm 35 mm <sup>2</sup> - 18 mm
Izlazni sigurnosni napon U <sub>0</sub> za samosigurne krugove:	max. 60 V
Izlazna samosigurnosna struja I <sub>0</sub> za samosigurne krugove:	max. 1A
PE stezaljke unutar kućišta:	max. 2 x 4 mm <sup>2</sup> + 2 x 2,5 mm <sup>2</sup> , 3 x 4 mm <sup>2</sup> , 2 x 6 mm <sup>2</sup> - jednožični, višezžični, fleksibilni (s(r), s(s), f)
N/PE sabirnica (SKX 15/E):	2 x (11 x max. 2 x 2,5 mm <sup>2</sup> ), jednožični, višezžični, fleksibilni (s(r), s(s), f)
Završna stopica:	vodiči sa završnom stopicom sukladno DIN 46228 T1
Moment pritezanja vijaka redne stezaljke:	CTS2.5UN – 0,4 Nm CTS4UN – 0,5 Nm CTS6U – 0,8 Nm CTS10U – 1,2 Nm CTS16U – 2,0 Nm CTS25U – 2,0 Nm CTS35UN – 2,5 Nm
Uvodi:	ISO 16 – ISO 32 sukladno EN 62444, prema podacima iz Tablice izvedbi
Vijak poklopca:	vijak kombi M5x20 (Z4), A2, moment pritezanja vijka 1,5 Nm
Površinski otpor:	< 10 <sup>9</sup> Ω
Energija udara:	7 J
Boja:	Crna, RAL 9005
Osnovne mjere (DxŠxV)	SKX 12: 100 x 100 x 80 mm SKX 13: 150 x 100 x 80 mm SKX 14: 200 x 100 x 80 mm SKX 15: 200 x 150 x 80 mm
Montaža na podlogu:	Vijčanim priborom kroz otvore ø6x8 mm na kućištu u vrhovima pravokutnika: SKX 12: 75 x 50 mm SKX 13: 75 x 100 mm SKX 14: 75 x 150 mm SKX 15: 125 x 150 mm
Masa:	SKX 12: cca. 0,5 kg SKX 13: cca. 0,7 kg SKX 14: cca. 1,0 kg SKX 15: cca. 1,0 - 1,5 kg

#### 4. TECHNICAL DATA

Nominal voltage:	up to 630 V
Nominal cross-section of terminal:	up to 35 mm <sup>2</sup>
Maximal number of conductors/terminals for nominal cross-section conductor/terminal and max. current:	according to table types
Striping length of conductors:	2,5 mm <sup>2</sup> - 10 mm 4 mm <sup>2</sup> - 10 mm 6 mm <sup>2</sup> - 12 mm 10 mm <sup>2</sup> - 12 mm 16 mm <sup>2</sup> - 14 mm 25 mm <sup>2</sup> - 14 mm 35 mm <sup>2</sup> - 18 mm
Maximum safe voltage U <sub>0</sub> for intrinsically safe circuits:	max. 60 V
Maximum safe voltage I <sub>0</sub> for intrinsically safe circuits:	max. 1A
PE terminal inside terminal box:	max. 2 x 4 mm <sup>2</sup> + 2 x 2,5 mm <sup>2</sup> , 3 x 4 mm <sup>2</sup> , 2 x 6 mm <sup>2</sup> – single-core, multi-core, flexible (s(r), s(s), f)
N/PE busbar (SKX 15/E):	2 x (11 x max. 2 x 2,5 mm <sup>2</sup> ), single-core, multi-core, flexible (s(r), s(s), f)
Final lugs:	Conductor with final lugs according DIN 46228 T1
Screw tightening torque of each cross-section terminal:	CTS2.5UN – 0,4 Nm CTS4UN – 0,5 Nm CTS6U – 0,8 Nm CTS10U – 1,2 Nm CTS16U – 2,0 Nm CTS25U – 2,0 Nm CTS35UN – 2,5 Nm
Cable entry's:	ISO 16 – ISO 32 according to EN 62444, according to table types
Cover screw's:	Combo screw M5x20 (Z4), A2, tightening torque 1,5 Nm
Surface Resistivity:	< 10 <sup>9</sup> Ω
Impact energy:	7 J
Color:	Black, RAL 9005
Dimensions (LxWxH)	SKX 12: 100 x 100 x 80 mm SKX 13: 150 x 100 x 80 mm SKX 14: 200 x 100 x 80 mm SKX 15: 200 x 150 x 80 mm
Mounting on the surface:	Screw accessories through a hole ø6x8 mm on the housing at the vertices of the rectangle: SKX 12: 75 x 50 mm SKX 13: 75 x 100 mm SKX 14: 75 x 150 mm SKX 15: 125 x 150 mm
Weight:	SKX 12: ca. 0,5 kg SKX 13: ca. 0,7 kg SKX 14: ca. 1,0 kg SKX 15: ca. 1,0 - 1,5 kg

## 5. PREGLED, ODRŽAVANJE, POPRAVAK I OBNAVLJANJE

Potrebno je obavljati preglede i održavati sve dijelove uređaja o kojima ovisi protueksplozijska zaštita sukladno normi EN 60079-17, općim i posebnim uputama proizvođača i Pravilnicima korisnika, a naročito:

- da su kućišta i svi dijelovi kućišta bez puknuća i oštećenja
- da su brtve poklopca neoštećene, a vijci na poklopcu pritegnuti nazivnim momentom,
- da su redne stezaljke neoštećene i učvršćene za DIN nosač
- da su vijci priključnih stezaljki pritegnuti nazivnim momentom,
- da su uvodnice i čepovi montirani prema uputama proizvođača i pritegnuti nazivnim momentom, a brtve neoštećene.

Popravak, obnavljanje ili pregradnju kućišta obavlja proizvođač ili od proizvođača ovlaštena pravna osoba, originalnim dijelovima prema proizvodnoj dokumentaciji, a sve sukladno normi EN 60079-19.

Ukoliko popravak i/ili obnavljanje i/ili pregradnju vrši treća osoba, prestaje svaka odgovornost proizvođača za proizvod, a izjava sukladnosti proizvođača postaje nevažeća.

## 6. REZERVNI DJELOVI

- Brtva poklopca kućišta MMK12, MMK13, MMK 14, MMK 15
- Ex eb uvodnica ISO16, ISO20, ISO25, ISO32, komplet
- Ex eb čep ISO16, ISO20, ISO25, M32, komplet
- Ex eb redna stezaljka - tip: CTS4UN ( 0,5-4 mm<sup>2</sup>), CTS6U ( 1,5-6 mm<sup>2</sup>), CTS16U ( 2,5-16 mm<sup>2</sup>), CTS25U ( 6-25 mm<sup>2</sup>), CTS35U ( 6-35 mm<sup>2</sup>) s krajnjim pločicama proizvođač: Connectwell Industries
- Vijak poklopca – vijak kombi M5x2 (Z4), A2

## 7. SKLADIŠTENJE I TRANSPORT

Transport i skladištenje razvodništa dozvoljeno je samo u originalnoj ambalaži, na način istaknut na kartonskoj kutiji.

## 8. ODGOVORNOST I OVLAŠTENJA

Ova Uputa predstavlja najvažniju informaciju o proizvodu. Nadopunjuju je odgovarajući nacionalni zakoni i propisi. Proizvodnja, uporaba, certifikacija i nadzor određene su na nacionalnoj razini:

- a) Pravilnikom o opremi i zaštitnim sustavima namijenjenim za uporabu u prostorima ugroženim eksplozivnom atmosferom (NN br. 33/16, odnosno EU Direktiva ATEX 2014/34/EU) i
- b) Pravilnikom o najmanjim zahtjevima sigurnosti i zaštite zdravlja radnika te tehničkom nadgledanju postrojenja, opreme, instalacija i uređaja u prostorima ugroženim eksplozivnom atmosferom (NN br. 39/06, 106/07.), odnosno EU Direktivi 1999/92/EC (ATEX 137).

Odgovorna osoba dužna je osigurati njihovo provođenje u pogonu.

## 9. JAMSTVO PROIZVOĐAČA

Proizvođač daje jamstvo na proizvod u trajanju od godine dana prema odredbama Zakona o obveznim odnosima. Ova izjava ima snagu Jamstvenog lista.

## 5. INSPECTION, MAINTENANCE, REPAIR AND OVERHAUL

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

- that the housing, cover and gasket of cover are without rupture and damage,
- that the screw of cover, cable glands, plugs and terminal are fastened with nominal torque
- that the terminals are undamaged and properly attached to a DIN rail
- the screws of the connecting terminals are tightened with nominal torque,
- that the cable glands and plugs are installed in accordance with manufacturer's instructions and fasten with the nominal torque and the gaskets are undamaged.

All the repairs are performed by the manufacturer or the manufacturer's authorized personal and the original parts must be provided according to the product documentation, all in accordance with EN 60079-19.

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

## 5. SPARE PARTS

- Cover gasket of the housing MMK12, MMK13, MMK 14, MMK 15
- Ex eb cable gland ISO16, ISO20, ISO25, ISO32, set
- Ex eb plug ISO16, ISO20, ISO25, ISO32, set
- Ex eb terminal - tip: CTS4UN ( 0,5-4 mm<sup>2</sup>), CTS6U ( 1,5-6 mm<sup>2</sup>), CTS16U ( 2,5-16 mm<sup>2</sup>), CTS25U ( 6-25 mm<sup>2</sup>), CTS35U ( 6-35 mm<sup>2</sup>) with end plates
- Screw of the cover – Combo screw M5x2 (Z4), A2

## 7. TYPES

Transportation and warehousing are only allowed in the original packaging, as outlined in a cardboard box.

## 8. 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:

- a) Regulations concerning equipment and protective systems intended for use in potentially explosive atmospheres EU Directive ATEX 2014/34/EU and
- b) 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.

## 9. MANUFACTURER 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 on obligations. This statement has the force of Warranty sheet.

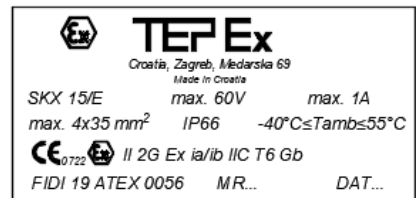
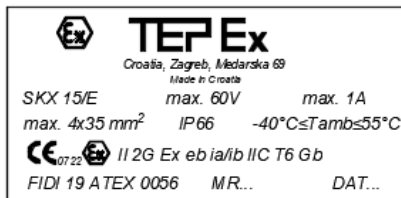
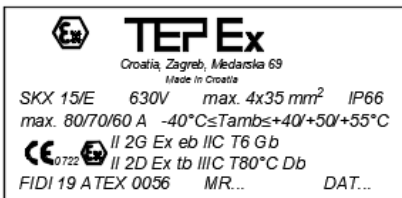
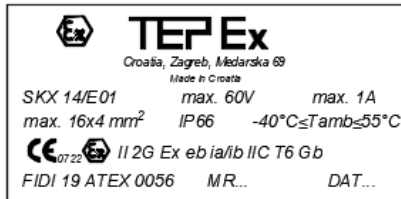


## 10. OZNAČAVANJE

## 10. MARKING

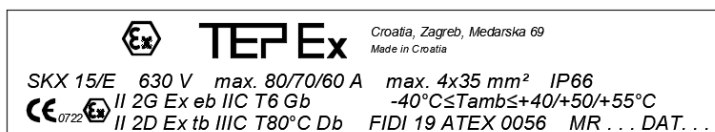
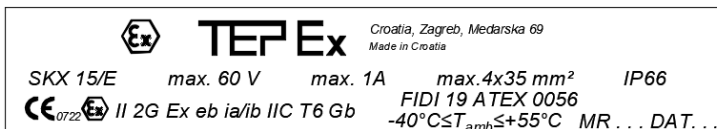
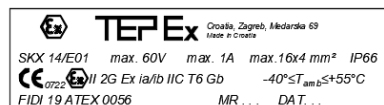
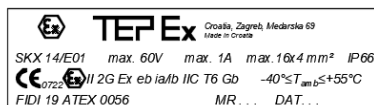
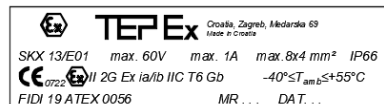
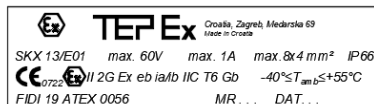
Protueksplozijski zaštićeno razvodnište SKX 12/E - SKX 15/E označeno je:  
- natpisnom naljepnicom u kućištu:

Explosion protected terminal box SKX 12/E - SKX 15/E is marked:  
- inner label with technical data inside housing:



- natpisom pločicom s tehničkim podacima na poklopcu kućišta

- marking plate with technical data on housing cover:



- natpisnom pločicom upozorenja na poklopcu:

- warning label on housing cover:

**WARNING  
DO NOT OPEN WHEN ENERGIZED**

- natpisnom pločicom upozorenja za samosigurne strujne krugove:

- warning labels for intrinsically safe circuits:

<b>WARNING</b>
<b>DO NOT OPEN WHEN ENERGIZED</b>
<b>ONLY FOR Ex i</b>

- razvodište SKX 15/E označeno je naljepnicom upozorenja na unutarnjoj strani poklopca:

- Terminal box SKX 15 / E are marked with a warning label on the inner side of the cover:

<b><i>WARNING!</i></b>
<i>ENSURE TO COMPLY WITH THE TABLE OF PERMITTED INSTALLATION ACCORDING TO THE TABLE PROVIDED IN USER MANUAL</i>