

## Razvodna kutija RK/...

## Junction box RK/...



## 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 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

## SADRŽAJ:

1. Namjena.....	2
2. Stupanj zaštite.....	2
3. Tehnički podaci.....	2
4. Tipna oznaka.....	3
5. Dimenzije.....	3
6. Pregled, održavanje, popravak i obnavljanje.....	4
7. Odgovornosti i ovlaštenja.....	4
8. Skladištenje i transport.....	4
9. Jamstvo proizvođača.....	4
10. Označavanje.....	5

## 1. NAMJENA

Protueksplozijski zaštićena razvodna kutija RK 01/... namijenjena je za prijenos električne energije do nazivnog presjeka  $6 \text{ mm}^2$  u prostorima s potencijalno eksplozivnom atmosferom plinova, para i prašina kao i njihovih kombinacija u zonama opasnosti 1, 2, 21, 22 EN 60079-10:2004 i EN 61241-10:2007.

## 2. STUPANJ ZAŠTITE

Protueksplozijska zaštita je izvedena sukladno „općim zahtjevima“, sukladno normom EN 60079-0:2006, „povećana sigurnost“ sukladno normom EN 60079-7:2007, „samosigurnost“ sukladno normom EN 60079-11:2007 i „zaštita kućištem“ sukladno normama EN 61241-0:2006 i EN 61241-1:2004.

Tipni certifikat: CESI 10 ATEX 040

Oznaka kategorije i protueksplozijske zaštite uređaja:

- II 2G Ex e II T6 Ex ia/ib IIC T6
- II 2D Ex tD A21 IP66 T80°C

Mehanička zaštita: IP 66, kategorija 1, sukladno EN 60529:1991/A1:1998

Otpornost na udar: IK 08, sukladno EN 50102:1995/A1:1998

Klasa zaštite: I (zaštitno uzemljenje), unutarnja PE stezaljka, sukladno EN 61140:2002/A1:2006

## 3. TEHNIČKI PODACI

Nazivni napon:	690V		
Maksimalni napon za Ex i:	60V		
Temperatura okoline:	-20°C ≤ T <sub>a</sub> ≤ +40°C – T6 -20°C ≤ T <sub>a</sub> ≤ +50°C – T6 -20°C ≤ T <sub>a</sub> ≤ +50°C – T6 s odgovarajućim kabelskim uvodnicama -20°C ≤ T <sub>a</sub> ≤ +70°C – T6, za Ex i, s odgovarajućim kabelskim uvodnicama		
Maksimalna struja stezaljke:	25 A	T <sub>a</sub> ≤ 40°C	RK 01/744,
	20 A	T <sub>a</sub> ≤ 50°C	RK 01/544
	32 A	T <sub>a</sub> ≤ 40°C	RK 01/546
	25 A	T <sub>a</sub> ≤ 50°C	
	20 A	T <sub>a</sub> ≤ 40°C	RK 01/514
	16 A	T <sub>a</sub> ≤ 50°C	
Maksimalna struja stezaljke:	25 A	T <sub>a</sub> ≤ 40°C	RK 01/516
	20 A	T <sub>a</sub> ≤ 50°C	
Nazivni presjek stezaljke:	4 mm <sup>2</sup> – RK 01/744, RK 01/544, RK 01/514 6 mm <sup>2</sup> – RK 01/516, RK 01/546		
Uvodi i uvodnice:	Uvodi sukladni sa EN 60423 Uvodnice sukladne sa EN 50262 6xM25 za kabele Ø7-15 (Ø13-19 na zahtjev) 6xM32 za kabele Ø12-21 (Ø17-25 na zahtjev) 4xM25 za kabele Ø7-15 (Ø13-19 na zahtjev)		

## CONTENTS:

1. Purpose.....	2
2. Type of protection.....	2
3. Technical data.....	2
4. Type.....	3
5. Dimensions.....	3
6. Inspection, maintenance, repair and overhaul.....	4
7. Responsibility and authorization.....	4
8. Storage and transport.....	4
9. Manufacturer's warranty.....	4
10. Marking.....	5

## 1. PURPOSE

Explosion protected junction box RK 01/... are used for transfer and distribution of electrical energy up to  $6 \text{ mm}^2$  in areas with a potentially explosive atmosphere of gases, vapors and dust as well as their combinations in hazardous areas 1, 2, 21, 22, in accordance with standards EN 60079-10:2004 and EN 61241-10:2007.

## 2. TYPE OF PROTECTION

The explosion protection ensure utilizing types of protection: „General requirements“ in accordance with EN 60079-0:2006, „Increased safety“ EN 60079-7:2007, „Intrinsic safety“ EN 60079-11:2007. The product is in accordance with standard EN 61241-0:2006, EN 61241-1:2004 – „Protection by enclosure tD“

EC-Type Examination Certificate: CESI 10 ATEX 040

Apparatus category and marking of explosion-protection:

- II 2G Ex e II T6 Ex ia/ib IIC T6
- II 2D Ex tD A21 IP66 T80°C

Degree of protection: IP66, category 1 in accordance with EN 60529+A1

Resistance to shock: IK 08 in accordance with EN 50102+A1

Insulation class: I (protective earthing) in accordance with EN 61140+A1

## 3. TECHNICAL DATA

Rated voltage:	690V		
Maximum voltage for Ex i:	60V		
Environment temperature	-20°C ≤ T <sub>a</sub> ≤ +40°C – T6 -20°C ≤ T <sub>a</sub> ≤ +50°C – T6 -20°C ≤ T <sub>a</sub> ≤ +50°C – T6 with specially designed cable glands -20°C ≤ T <sub>a</sub> ≤ +70°C – T6, for Ex i, with specially designed cable glands		
Maximum current of terminals:	25 A	T <sub>a</sub> ≤ 40°C	RK 01/744,
	20 A	T <sub>a</sub> ≤ 50°C	RK 01/544
	32 A	T <sub>a</sub> ≤ 40°C	RK 01/546
	25 A	T <sub>a</sub> ≤ 50°C	
	20 A	T <sub>a</sub> ≤ 40°C	RK 01/514
	16 A	T <sub>a</sub> ≤ 50°C	
Maximum current of terminals:	25 A	T <sub>a</sub> ≤ 40°C	RK 01/516
	20 A	T <sub>a</sub> ≤ 50°C	
Rated cross-section:	4 mm <sup>2</sup> – RK 01/744, RK 01/544, RK 01/514 6 mm <sup>2</sup> – RK 01/516, RK 01/546		
Cable entries and cable glands:	Cable entries in accordance with EN 60423 Cable glands in accordance with EN 50262 6xM25 for cable Ø7-15 (Ø13-19 on request) 6xM32 for cable Ø12-21 (Ø17-25 on request) 4xM25 for cable Ø7-15 (Ø13-19 on request)		

	4xM32 za kabele Ø12-21 (Ø17-25 na zahtjev)
Momenti pritezanja:	0,6 Nm – redna stezaljka 4mm <sup>2</sup> 1,2 Nm – redna stezaljka 6mm <sup>2</sup>
Masa:	0,55 kg

	4xM32 for cable Ø12-21 (Ø17-25 on request)
Tightening torque:	0,6 Nm – terminal block 4mm <sup>2</sup> 1,2 Nm – terminal block 6mm <sup>2</sup>
Weight:	0,55 kg

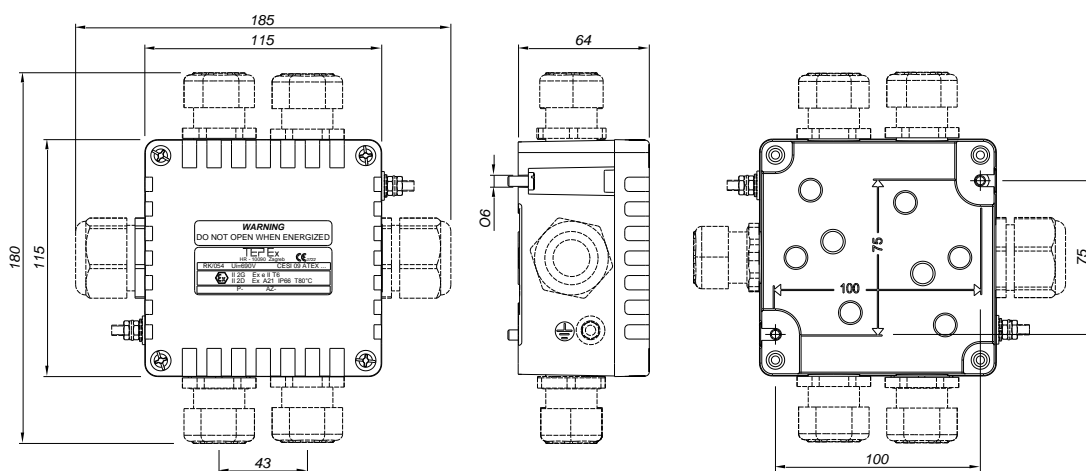
#### 4. TIPNA OZNAKA

#### 4. TYPE

TIP/ TYPE	IZVEDBA/ VERSION	KABELSKE UVODNICE I ČEPOVI/ CABLE GLANDS AND PLUGS / CABLE ENTRIES	BROJ STEZALJKE I NAZIVNI PRESJEK STEZALJKE/ NUMBER OF TERMINALS AND TERMINAL CROSS SECTION	MAX. MOGUĆI PRIKLJUČAK PO STEZALJCI puni, višezični, fleksibilni MAX. POSSIBLE CONNECTION BY TERMINAL solid, stranded, flexible
RK 01/514-C RK 01/514-M		4 x M25 uvodnica za kabele Ø <sub>v</sub> 7-15 mm 2 x M25 čepa / 4 x M25 cable glands for cables Ø <sub>v</sub> 7-15 mm 2 x M25 plug	5 - 1 x 4mm <sup>2</sup>	1x0,5...4mm <sup>2</sup> 2x0,5...2,5mm <sup>2</sup>
RK 01/514 Ex i				
RK 01/516-C RK 01/516-M			5 - 1 x 6mm <sup>2</sup>	1x1,5...6mm <sup>2</sup> 2x1,5...4mm <sup>2</sup>
RK 01/544		6 x M25 uvodnica za kabele Ø <sub>v</sub> 7-15mm / 6 x M25 cable glands for cables Ø <sub>v</sub> 7-15mm	5 - 4 x 4mm <sup>2</sup>	4x4mm <sup>2</sup> 6x2,5mm <sup>2</sup> 1x4mm <sup>2</sup> + 2x2,5mm <sup>2</sup> + +3x1,5mm <sup>2</sup>
RK 01/744			7 - 4 x 4mm <sup>2</sup>	1x4mm <sup>2</sup> + 5x1,5mm <sup>2</sup> 2x4mm <sup>2</sup> + 3x2,5mm <sup>2</sup>
RK 01/544-E		2 x Ø32,5mm 4 x Ø25,5mm	5 - 4 x 4mm <sup>2</sup>	4x4mm <sup>2</sup> 6x2,5mm <sup>2</sup> 1x4mm <sup>2</sup> + 2x2,5mm <sup>2</sup> + +3x1,5mm <sup>2</sup>
RK 01/744-E			7 - 4 x 4mm <sup>2</sup>	1x4mm <sup>2</sup> + 5x1,5mm <sup>2</sup> 2x4mm <sup>2</sup> + 3x2,5mm <sup>2</sup>

#### 5. DIMENZIJE

#### 5. DIMENSIONS



## 6. PREGLED, ODRŽAVANJE, POPRAVAK, OBNAVLJANJE

Potrebno je obavljati preglede i održavati sve dijelove uređaja o kojima ovisi protueksplozijska zaštita sukladno EN 60079-17:2007, općim i posebnim uputama proizvođača i Pravilnicima korisnika, a naročito:

- da su kućište, poklopac i brtva poklopca bez puknuća i oštećenja,
- da su vijci poklopca, uvodnice, čepovi i priključne stezaljke montirani i pritegnuti s nazivnim momentom.

Popravak, obnavljanje ili pregradnju kućišta obavlja proizvođač ili od proizvođača ovlaštena pravna osoba, originalnim dijelovima prema proizvodnoj dokumentaciji, a sve sukladno normi EN 60079-19:2007.

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

## 7. ODGOVORNOSTI I OVLAŠTENJA

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

- Pravilnikom o opremi i zaštitnim sustavima namijenjenim za uporabu u prostorima ugroženim eksplozivnom atmosferom (NN br. 34/10.) i EU direktivi 94/9 EC (ATEX 95)
- 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.

## 8. SKLADIŠTENJE I TRANSPORT

Transport i skladištenje treba vršiti samo u originalnoj ambalaži, na način istaknut na kartonskoj kutiji.

## 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.

## 10. OZNAČAVANJE

Protueksplozijski zaštićena razvodna kutija, tip RK 01/... označena je:

- oznakom (tampon tisak)

## 6. INSPECTION, MAINTENANCE, REPAIR AND OVERHAUL

Inspections are carried out in accordance with EN 60079-17:2007, 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.

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 60079-19:2007.

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.

## 7. RESPONSIBILITY AND AUTHORIZATION

This instruction is the basic information about the product. It is complemented by 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 95)
- 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.

## 8. STORAGE AND TRANSPORT

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

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

## 10. MARKING

Explosion protected junction box, type RK 01/... are labeled with:

- marking (tampon printing)

**TEP Ex** Medarska 69, Zagreb, Croatia  
Made in Croatia  
RK 01/544 630V 22A/18A 5x4mm<sup>2</sup>  
Ex II 2G Ex e II T6 CESI 10 ATEX 040  
Ex II 2D Ex tD A21 IP66 T80°C   
-20°C < T<sub>a</sub> < +40°C / +50°C  
**WARNING**  
**DO NOT OPEN WHEN ENERGIZED**