

TEEx/MCB .. 1P

Upute za uporabu
User manual

UPOZORENJE

Upute za uporabu sadrže osnovne informacije o proizvodu. Montaža, instaliranje, uporaba i održavanje trebaju biti izvedeni prema ovim Uputama kako bi bio osiguran siguran rad unutar nazivnih karakteristika. Ove Upute 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 ovih Uputa isključuje svaku odgovornost proizvođača.

Prije ugradnje/puštanja u pogon:

- Pažljivo pročitati cijele Upute za uporabu,
- Izvršiti odgovarajuću obuku odgovornog osoblja,
- Provjeriti da je sadržaj ovih Uputa 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 ovih Uputa 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 to 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 this user manual,
- Execute proper training of responsible personnel,
- Check that the contents of this user manual 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 all the time,
- Check the implementation of this user manual and all other safety user's instructions.

SADRŽAJ:

1. Namjena.....	2
2. Sukladnost proizvoda.....	2
3. Tehnički podaci.....	2
4. Tipna oznaka.....	3
5. Montaža.....	4
6. Dimenzije.....	4
7. Pregled, održavanje, popravak, obnavljanje.....	4
8. Odgovornost i ovlaštenja.....	5
9. Skladištenje i transport.....	5
10. Jamstvo proizvođača.....	5
11. Označavanje.....	5

CONTENTS:

1. Purpose.....	2
2. Product conformity.....	2
3. Technical data.....	2
4. Types	3
5. Mounting.....	4
6. Dimensions.....	4
7. Inspection, maintenance, repair and overhaul.....	4
8. Responsibility and authorization.....	5
9. Storage and transport.....	5
10. Manufacturer's warranty.....	5
11. Marking.....	5

1. NAMJENA

Protueksplozijski zaštićeni automatski instalacijski prekidač tip TEx/MCB .. 1P namijenjen je za ugradnju u kućišta izvedena u vrsti zaštite „povećana sigurnost“ koja su namijenjena za ugradnju u industrijskim prostorima, na mjestima s potencijalno eksplozivnom atmosferom plinova i para u zonama opasnosti 1 i 2 sukladno normi EN IEC 60079-10-1:2021.

2. SUKLADNOST PROIZVODA

Konstrukcija automatskog prekidača sukladna je s normom EN 60898-1:2019 i svim povezanim normama.

Proizvod je sukladan Pravilniku o opremi i zaštitnim sustavima namijenjenim za uporabu u potencijalno eksplozivnim atmosferama, NN br. 34/16.

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

- EN IEC 60079-0:2018,
- EN 60079-1:2014,
- EN IEC 60079-7:2015+A1:2018.

Proizvod je sukladan normama prema LVD Direktivi 2014/35/EU.

Proizvod je sukladan RoHS Direktivi 2011/65/EU.

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

3. TEHNIČKI PODACI

Certifikat	FIDI 23 ATEX 0075U
Oznaka kategorije i protueksplozijske zaštite uređaja:	 II 2G Ex db eb IIC Gb
Radna temperatura:	$-20\text{ °C} \leq T_{\text{service}} \leq +75\text{ °C}$
Temperatura okoline:	$-20\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$
Nazivni napon U_n :	230/400 V AC
Nazivna frekvencija f :	50/60 Hz
Nazivna struja I_n :	1, 2, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63 A
Karakteristike okidanja:	B, C, D, K, Z
Nazivna kratkotrajna isklopna moć:	10 kA (230/400 V AC)
Gubici, max.:	3,0 - 13,0 W
Radni napon:	max. 253 V AC min. 12 V AC

1. PURPOSE

Explosion protected miniature circuit breaker type TEx/MCB .. 1P is intended for installation in enclosures made in the protection type „increased safety“ which are intended for installation in industrial premises, in places with a potentially explosive atmosphere of gases and vapors in danger zones 1 and 2 in accordance with EN IEC 60079-10-1:2021.

2. PRODUCT CONFORMITY

The construction of the circuit breaker complies with EN 60898-1:2019 and all related standards.

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

- EN IEC 60079-0:2018,
- EN 60079-1:2014,
- EN IEC 60079-7:2015+A1:2018.

The product is in compliance with standards from the LVD Directive 2014/35 EU.

The product is in compliance with the RoHS Directive 2011/65 EU.

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

3. TECHNICAL DATA

Certificate:	FIDI 23 ATEX 0075U
Category and explosion protection:	 II 2G Ex db eb IIC Gb
Service temperature:	$-20\text{ °C} \leq T_{\text{service}} \leq +75\text{ °C}$
Ambient temperature:	$-20\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$
Rated voltage U_n :	230/400 V AC
Rated frequency f :	50/60 Hz
Rated current I_n :	1, 2, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63 A
Tripping characteristics:	B, C, D, K, Z
Rated short-circuit capacity:	10 kA (230/400 V AC)
Power loss:	3,0 - 13,0 W
Operational voltage:	max. 253 V AC min. 12 V AC

	max. 72 V DC min. 12 V DC
Dielektična čvrstoća:	2 kV min.
Nazivni podnosivi impulsni napon U_{imp} :	4 kV, 8/20 μ s
Klasa ograničenja energije:	3
Mehanička zaštita:	IP 20, EN 60529 + A1/A2
Mehanička životna dob:	20 000 ciklusa
Električna životna dob:	10 000 ciklusa
Oznaka pozicije kontakata:	I – uključeno, II – isključeno
Moment pritezanja vijaka stezaljki:	Vijci M8x16, 8.8, DIN 913 / ISO 4026, galSn6 - 4 Nm
Moment pritezanja pričvrstnih vijaka:	Vijci M5x16, 8.8, DIN 912 / ISO 4762, galZn6 – 2,5 Nm
Priključak na stezaljku prekidača:	- Jednožični (puni) bez završnog tuljka, fleksibilni i višezični s završnim tuljkom: od 1x1,5 mm ² do 1x25 mm ² ili od 2x1,5 mm ² do 2x6 mm ² - Fleksibilni i višezični s igličastim završnim tuljkom: od 2x1,5 mm ² do 2x16 mm ²
Masa:	≈ 800 g

Prema aparatnoj normi IEC EN 60898-1 automatski instalacijski prekidač funkcionalan je unutar danih tehničkih podataka pri temperaturi okoline:

- $T_{amb\ max.} = +40\ ^\circ C$
- Maksimalna prosječna temperatura okoline unutar 24 sata do $+35\ ^\circ C$
- Minimalna temperatura okoline $-5\ ^\circ C$

Za radnu temperaturu izvan danih granica treba uvažiti korektivne faktore koje daje proizvođač ABB Ltd. za automatski prekidač (S201M serija prekidača).

Temperaturni razred automatskog instalacijskog prekidača se ne određuje s obzirom da je automatski prekidač ugradbena komponenta namijenjena za ugradnju u kućišta u vrsti zaštite „povećana sigurnost“, prema tome korisnik je dužan odrediti temperaturni razred uređaja u koji se ugrađuje ova komponenta.

Cilindrični raspori (prema EN 60079-1:2014, članak 5.2):

- za $\Phi 6,2$, L=14 mm, Gap $i_{max} = 0,145$ mm ($f < 0,5$ mm), (osovina $\Phi 6,15_{-0,08}^{+0}$, provrt $\Phi 6,2H7$),
- za $\Phi 15,2$, L=14 mm, Gap $i_{max} = 0,148$ mm ($f < 0,5$ mm), (svornjak $\Phi 15,15_{-0,08}^{+0}$, provrt $\Phi 15,2H7$)

Vijčani raspor (prema EN 60079-1:2014, članak 5.3):

- M5x0,8 – 6g/6H, srednja tolerancija prema ISO 965-1, navoj ISO 965-3, 12 punih navoja.

4. TIPNA OZNAKA

TE_x/MCB .. 1P

- osnovna tipna oznaka
- slovo – karakteristika okidanja (B, C, D, K, Z)
- broj – nazivna struja (1, ..., 63)

	max. 72 V DC min. 12 V DC
Dielectric test voltage:	2 kV min.
Rated impulse withstand voltage U_{imp} :	4 kV, 8/20 μ s
Energy limiting class:	3
Mechanical protection:	IP 20, EN 60529 + A1/A2
Mechanical endurance:	20 000 cycles
Electrical endurance:	10 000 cycles
Contact position indication:	I – on, II – off
Tightening torque value for clamp screws:	Clamp screws M8x16, 8.8, DIN 913 / ISO 4026, galSn6 - 4 Nm
Tightening torque value for mounting screws:	Screws M5x16, 8.8, DIN 912 / ISO 4762, galZn6 – 2,5 Nm
Terminal connection:	- Solid cable without cord end, flexible and multi-wire with cord end: from 1x1,5 mm ² to 1x25 mm ² - Flexible and multi-wire cable with pin cable lug: from 2x1,5 mm ² to 2x16 mm ²
Weight:	≈ 800 g

According to the IEC EN 60898-1 apparatus standard, the miniature circuit breaker is functional within the given technical data at ambient temperature:

- $T_{amb\ max.} = +40\ ^\circ C$
- Maximum average ambient temperature within 24 hours up to $+35\ ^\circ C$
- Minimum ambient temperature $-5\ ^\circ C$

For the service temperature above the given limits, the correction factors given by the manufacturer ABB Ltd. should be taken into account for miniature circuit breaker (S201M circuit breaker series).

The temperature class of the miniature circuit breaker is not determined, considering that the circuit breaker is the built-in component intended for installation in enclosures made in the protection type „increased safety“, therefore the user is obliged to determine the temperature class of the device in which this component is installed.

Cylindrical joints (According to EN 60079-1:2014, clause 5.2):

- for $\Phi 6,2$, L=14 mm, Gap $i_{max} = 0,145$ mm ($f < 0,5$ mm), (axle $\Phi 6,15_{-0,08}^{+0}$, bore $\Phi 6,2H7$),
- for $\Phi 15,2$, L=14 mm, Gap $i_{max} = 0,148$ mm ($f < 0,5$ mm), (bolt $\Phi 15,15_{-0,08}^{+0}$, bore $\Phi 15,2H7$)

Threaded joints (According to EN 60079-1:2014, clause 5.3):

- M5x0,8 – 6g/6H, medium tolerance according to ISO 965-1/98, thread ISO 965-3, 12 full threads.

4. TYPES

TE_x/MCB .. 1P

- basic type designation
- letter – tripping characteristic (B, C, D, K, Z)
- number – rated current (1, ..., 63)

8. ODGOVORNOSTI I OVLAŠTENJA

Ove "Upute za uporabu" predstavljaju najvažnije informacije 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. 33/16, odnosno EU Direktiva ATEX 2014/34/EU) i
- 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. RESPONSIBILITY AND AUTHORIZATION

This user manual represent the basic information about the product. It is completed 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 2014/34/EU and
- 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. SKLADIŠTENJE I TRANSPORT

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

9. STORAGE AND TRANSPORT

Transportation and storage of the miniature circuit breaker is only allowed in the original packaging, as indicated on a cardboard box.

10. JAMSTVO PROIZVOĐAČA

Proizvođač izdaje jamstvo na proizvod u trajanju od 3 godina prema odredbama Zakona o obveznim odnosima. Ova izjava ima snagu Jamstvenog lista, a jamstvo vrijedi samo ukoliko se korisnik pridržava Uputa za upotrebu.

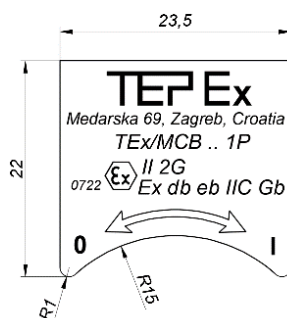
10. MANUFACTURER'S WARRANTY

The manufacturer provides a warranty on the product for a period of three years under the provisions of this user manual and the law on obligations. This statement has the force of Warranty sheet and the warranty is valid only if the user follows the instructions for use (User manual).

11. OZNAČAVANJE

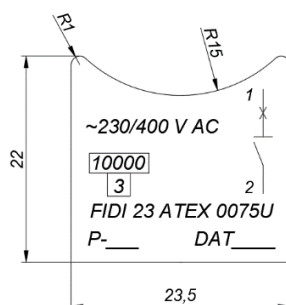
Protueksplozijski zaštićen automatski instalacijski prekidač TEx/MCB .. 1P označen je s dvije vanjske natpisne pločice:

Natpisna pločica 1 :



External label with nominal data 1:

Natpisna pločica 2 :



External label with nominal data 2: