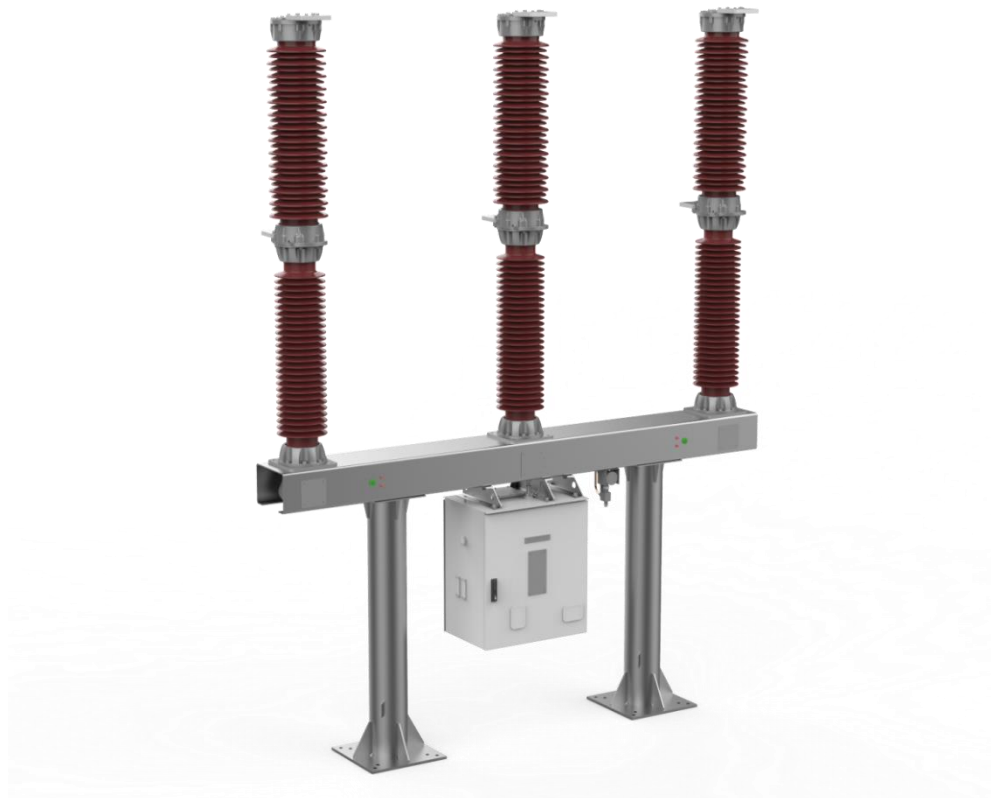


VISOKONAPONSKI SF₆ PREKIDAČI
ZA VANJSKU UGRADNJU
Serija 8E1

HIGH-VOLTAGE OUTDOOR
SF₆ CIRCUIT BREAKERS
Series 8E1



- ◆ Visokonaponski prekidač za vanjsku ugradnju
- ◆ Nazivni napon od 123 kV do 145 kV, nazivna struja do 3150 A, nazivna prekidna moć 40 kA
- ◆ Visoka razina pouzdanosti, čak i pod ekstremnim uvjetima i klimi
- ◆ Potpuno tvornički sastavljeno prije isporuke
- ◆ Jednostavna instalacija i puštanje u rad s dugim intervalima između održavanja
- ◆ Tropolno ili jednopolno upravljanje
- ◆ Live tank circuit breaker for outdoor applications
- ◆ Rated voltages from 123 kV up to 145 kV, 3150 A and 40 kA short circuit rating
- ◆ High level of reliability, even under extreme conditions and climates
- ◆ Completely factory preassembled prior to delivery
- ◆ Easy installation and commissioning with long intervals between maintenance
- ◆ Three-pole or single-pole operated

1. UVOD

Visokonaponski prekidač serije 8E1 karakterizira optimizirana prekidna komora, pouzdan opružni pogonski mehanizam s motornim pogonom i vrlo mala ukupna masa.

Na temelju zahtjeva kupaca, prekidač serije 8E1 može se isporučiti s mogućnošću tropolnog ili jednopolnog upravljanja, tj. s jednim ili tri pogonska mehanizma (po jedan po polu).



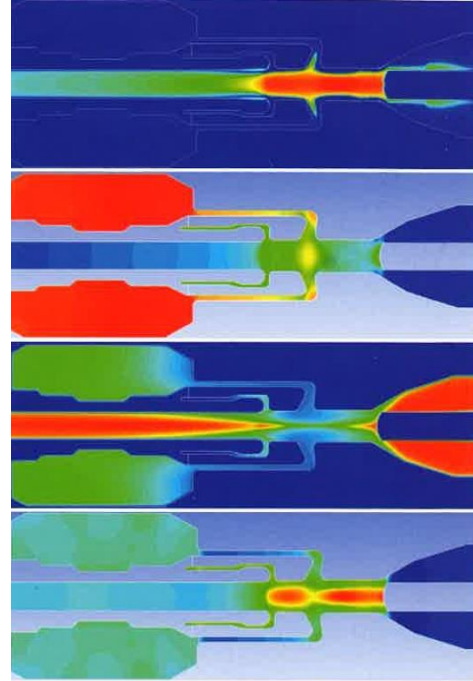
Slika 1.
Prekidač 8E1-III,
nazivni napon 123 kV

Fig. 1
Circuit breaker
8E1-III, 123 kV

1. INTRODUCTION

High voltage circuit breaker series 8E1 is characterized with optimized interrupter unit, reliable motor spring operating mechanism and very low total mass.

Based on customer demands, the circuit breaker series 8E1 can be delivered with possibility of three-pole or single-pole operation, i.e. with one or three operating mechanisms (one per pole).

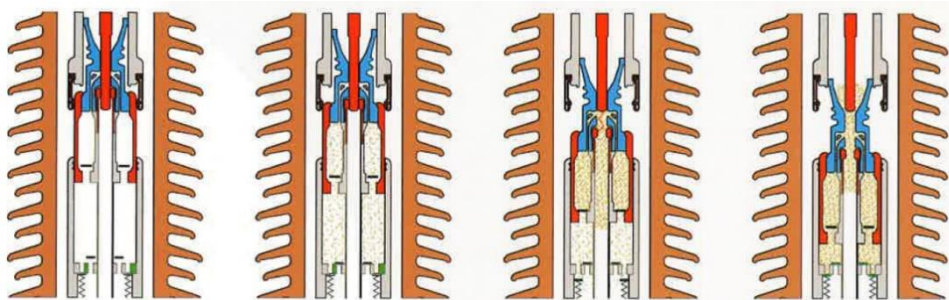


Slika 2.
Proces gašenja električnog
luka – matematički model

Fig. 2
Electrical arc quenching
process – mathematical
model

2. POL PREKIDAČA

Pol prekidača se sastoji od komore prekidača, potpornog izolatora i prijenosnog polužja. Montaža, podešavanje i ispitivanje prekidača izvodi se u tvornici. Prekidači se isporučuju kao zasebne transportne jedinice pretpunjene plinom SF₆, što smanjuje vrijeme montaže na mjestu. Princip rada lučne komore prikazan je na Slici 3.



Slika 3. Gašenje električnog luka – princip samoekspanzije

2. POLE COLUMN

Pole column consists of interrupter unit, post insulator and crank case assembly. Their assembling, adjusting and testing on a circuit breaker base is made in the factory and they are delivered as an individual transport units with SF₆ gas pre-filling, which reduces mounting time at site. The basic principle of electric arc quenching is shown in Figure 3.

Fig. 3 Arc-quenching principle with self-blast technology

3. POGONSKI MEHANIZAM

Pogonski mehanizam smješten je u kućište otporno na koroziju.

Pogonski mehanizam karakterizira njegova pouzdanost, brza i jednostavna montaža na mjestu i respektabilno vrijeme zatvaranja/otvaranja kontakata. Masa prekidača je minimizirana.

Osim standardne električne pomoćne opreme, koja se može prilagoditi prema zahtjevima kupca, prekidač je opremljen ispitnim konektorom za pomoćne krugove, koji se može koristiti za nadzor ili dijagnostiku tijekom vremena korištenja. Informacije o dodatnoj opciji nadzora dostupne su na zahtjev.

3. OPERATING MECHANISM

Motor-spring operating mechanism is placed in a corrosion-resistant housing.

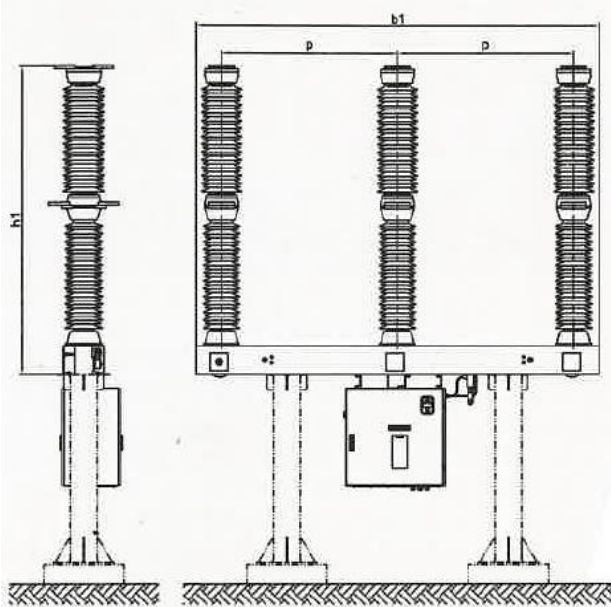
The operating mechanism is characterized by its reliability, fast and simple site mounting and respectable contact closing/opening time. The mass of the circuit breaker has been minimized.

Besides standard electrical auxiliary equipment, that can be adapted in accordance with customer's demands, the circuit breaker is equipped with a test connector for auxiliary circuits, which can be used for monitoring or diagnostic purposes during the usage time. Information regarding the additional monitoring option is available on request.

4. UKUPNE DIMENZIJE

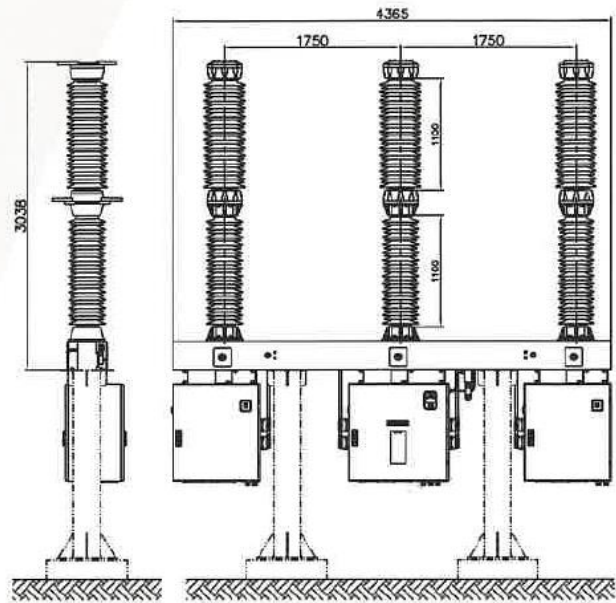
4. OVERALL DIMENSIONS

Nazivni napon	Rated voltage	kV	72,5	123	145
Razmak polova p	Pole distance p	mm	1100	1750	1750
Visina h1	Height h1	mm	2638	3038	3288
Širina b1	Width b1	mm	2700	4000	4000



Slika 5.
Tropolno upravljani SF6
prekidač tipa 8E1-III, za
nazivni napon 72,5 – 145 kV

Fig. 5
Three-pole operated SF6
circuit breaker 8E1-III
for 72,5 – 145 kV



Slika 6.
Jednopolno upravljani SF6
prekidač tipa 8E1-I, za nazivni
napon 123 kV

Fig. 6
Single-pole operated SF6
circuit breaker 8E1-I
for 123 kV

5. OSNOVNI TEHNIČKI PODACI

5. BASIC TECHNICAL DATA

Nazivni napon	Rated voltage	kV	123	145
Nazivni podnosivi atmosferski udarni napon 1,2/50 μ s	Rated lightning impulse voltage 1,2/50 μ s	kV	550	650
Nazivni podnosivi napon industrijske frekvencije 50 Hz/1 min.	Rated power frequency withstand voltage (1 min.)	kV	230	275
Nazivna frekvencija	Rated frequency	Hz	50	
Nazivna struja	Rated normal current	A	...3150	
Nazivna prekidna struja (prekidna moć)	Rated breaking current	kA	... 40	
Nazivna podnosiva struja kratkog spoja (1 s ili 3 s)	Rated short-time withstand current (1s or 3 s)	kA	... 40	
Nazivna podnosiva udarna struja	Rated peak withstand current	kA	... 100	
Standardni sklopni ciklus	Standard duty cycle		0-0,3s-C0-3min-C0	
Vrijeme otvaranja	Opening time	ms	≤ 30	
Vrijeme zatvaranja	Closing time	ms	≤ 70	
Klasa električne i mehaničke trajnosti	Electrical and mechanical endurance class		E2, M2	
Napon upravljanja	Control voltage	V=	110 / 125 / 220	
Napon motora	Motor voltage	V=	110 / 125 / 220	
Temperatura okoline	Ambient temperature range	°C	- 30 ... + 40	
Primijenjene norme	Applied standards		IEC 62271-1, IEC 62271-100	

Napomena:

Tehničke karakteristike, podaci o dimenzijama i drugi relevantni podaci podložni su promjenama. Obvezujući podaci – mjerne skice, sheme unutarnjeg ožičenja, referentne liste i drugo dostupni su na zahtjev, kao i informacije o svim ostalim značajkama koje odstupaju od podataka navedenih u ovom letku.

Notice:

Technical characteristics, dimensional drawings and other relevant data are subject to change. Obligatory data – dimensional drawings, internal wiring diagrams, reference lists etc. are available on request by agreement with the client, as well as information on all other features that deviate from the data listed in this leaflet.



Izjava proizvođača:

Tehničke karakteristike, podaci o dimenzijama i drugi relevantni podaci podložni su promjenama. Mjerne skice su ilustrativne i nisu prikazane u mjerilu.

Molimo da kontaktirate proizvođača za tehnička rješenja i detalje koji nisu navedeni u ovom promotivnom materijalu. Obvezujuće podatke - mjerne skice, sheme unutarnjeg ožičenja, referentne liste itd. dajemo na zahtjev.

Manufacturer's Statement:

Technical characteristics, dimensional drawings and other relevant data are subject to change. Dimensional drawings are not shown in the scale. Please contact the manufacturer for technical solutions and details not provided in this promotional material/leaflet.

Obligatory data – dimensional drawings, wiring diagrams etc. are available on request.

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