



ENERGOINVEST
Rasklopna Oprema a.d.

PREKIDACI VISOKOG NAPONA U SF6 TEHNICI
ZA VANJSKU MONTAŽU 72,5kV-420kV TIP-SFE

HIGH VOLTAGE CIRCUIT BREAKERS IN SF6 TECHNIQUE
FOR OUTDOOR INSTALLATION 72,5kV-420kV TYPE-SFE



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Prekidači visokog napona, sa gasom SF6 tipa SFE su autonomni trolpolni aparati predviđeni za vanjsku montažu sa jednim prekidnim elementom po polu, odnosno dva prekidna elementa po polu za naponski nivo 420 kV. Ovi aparati po principu rada pripadaju potisnim ("puffer") prekidačima kod kojih se gasna struja za gašenje luka postiže sabijanjem i potiskivanjem gasa SF6 prilikom operacije otvaranja.

Prekidači ovog tipa su konstruisani na modularnom principu sa ciljem da se postigne maksimalno mogući stepen unifikacije sastavnih dijelova i sklopova, jednostavnost konstrukcionih rješenja i što veća pouzdanost u radu. Pol prekidača se sastoji od jednog ili dva prekidna elementa, potpornog izolacionog stuba i kućišta mehanizma postavljenih na noseću konstrukciju. Pogonski mehanizam je smješten u kolonu ispod pola zajedno sa razervoarom za zrak. Kod prekidača sa dva prekidna elementa po polu, paralelno prekidnim elementima postavljeni su kondenzatori za kontrolu raspodjele napona.

Svaki izolacioni stub sa pripadajućim kućištem mehanizma i prekidnim elementom, odnosno spojnim "Y" elementom sa dva prekidna elementa predstavlja jedinstvenu gasnu zonu.

Prekidni element se sastoji od sklopa nepokretnih kontakata, sklopa pokretnih kontakata sa klipom i cilindrom za potiskivanje gasa i porcelanskog kućišta. Veza između pogonskog mehanizma i prekidnog elementa ostvarena je preko izolacione poluge koja je smještena u potporni izolacioni stub i kućište mehanizma.

Za otvaranje prekidača ovog tipa i zatezanje opruge za zatvaranje koristi se elektropneumatski pogonski mehanizam. Napajanje pogona zrakom vrši se motor-kompresorskom jedinicom koja je smještena u komandnom ormaru prekidača. U komandnom ormaru pored toga smještena je i oprema za upravljanje prekidačem.

Sklopna ispitivanja prekidača obavljena su u skladu sa IEC preporukama u ispitnoj laboratoriji KEMA, Holandija. Ostala ispitivanja su obavljena u vlastitim laboratorijama.

- Nazivni napon napajanja komandnih kola 110 ili 220 V dc
- Nazivni napon napajanja motor-kompresorske jedinice 380/220 V, 50/60 Hz
- Nazivni napon napajanja grijača 220 V, 50/60 Hz
- Nazivni pritisak zraka pogonskog mehanizma 1,8 MPa
- Nazivni pritisak gasa u SF6 prekidaču 0,5 MPa.

Napomena: Za druge vrijednosti napona napajanja pomoćnih strujnih krugova i motor-kompresorske jedinice obratite se proizvođaču.

High voltage circuit breaker with SF6 gas, type SFE are autonomous three pole apparatus intended for outdoor installation with one interrupter per pole, i.e. two interrupters for voltage level of 420 kV. By operation principle they belong to "puffer" type of SF6 circuit breaker where gas stream for arc extinction is realized by compression and puffing of SF6 gas during opening operation.

The circuit breakers of this type are designed on modular principle in order to achieve maximum possible unification degree of the composing parts and assemblies, simple designs and higher service reliability. The circuit breaker pole is composed of one or two interrupters, insulator column and mechanism housing placed on the supporting structure. Operating mechanism with air receiver is accommodated below circuit breaker pole. At circuit breakers with two interrupters per pole, capacitors for voltage distribution control are placed in parallel with interrupters.

Each insulator column with its mechanism housing and interrupter i.e. coupling "Y" element with two interrupters makes unique gas zone.

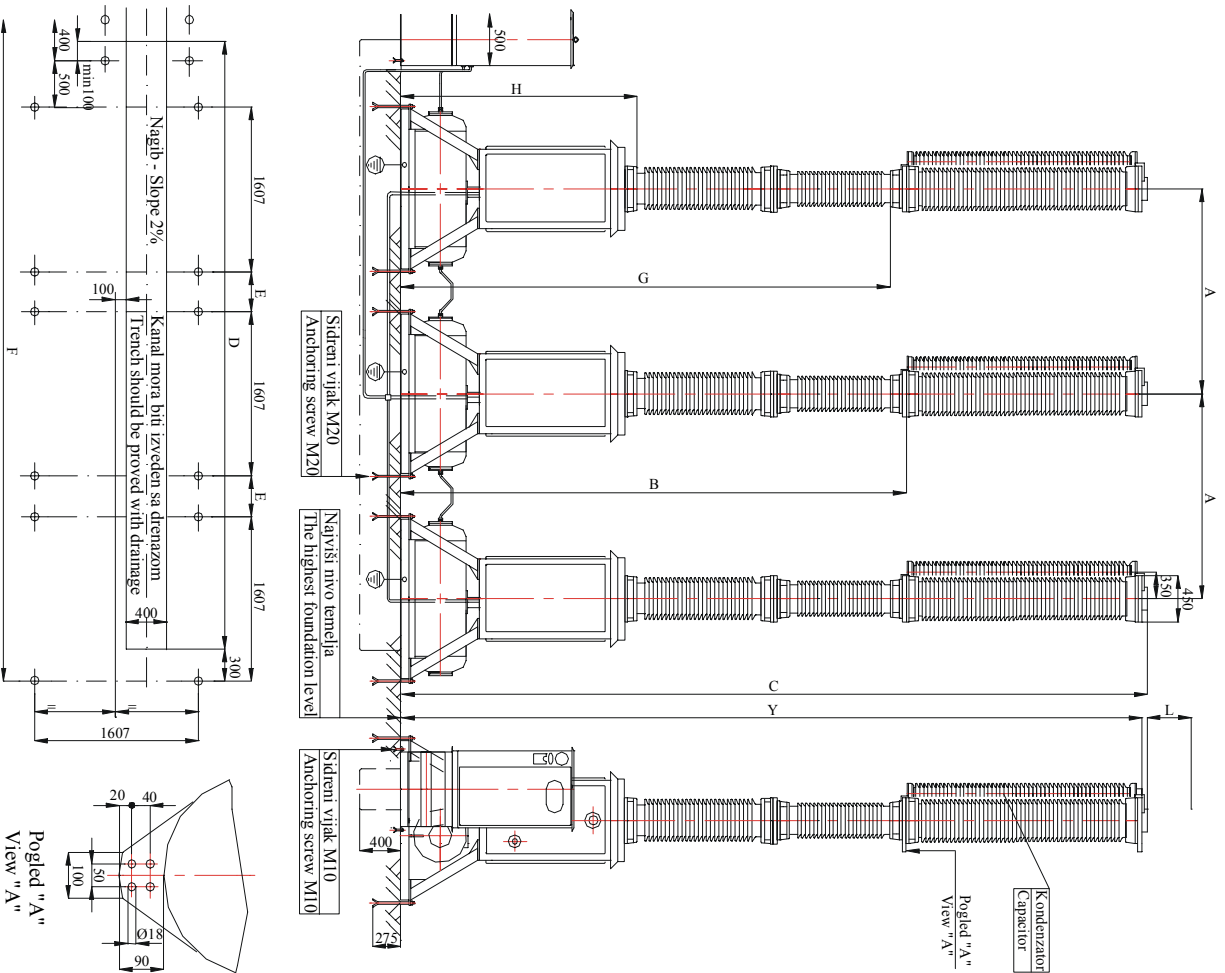
Interrupter is composed of fixed contact assembly, movable contact assembly with piston and cylinder for gas "puffing" and of porcelain housing. The connection between operating mechanism and interrupter is realized by means of insulating lever accommodated in insulator column and mechanism housing.

Electropneumatic operating mechanism is used for circuit breaker opening operation and spring charging for closing operation. Air supply is performed by motor-compressor unit placed in the circuit breaker control cabinet. Control cabinet also accommodates the equipment for circuit breaker control.

Switching tests of the circuit breaker have been performed in accordance with IEC Recommendation in KEMA test laboratory-Holland. Other tests have been carried out in our own laboratories.

- Rated supply voltage of control circuits 110 or 220 V dc
- Rated supply voltage of motor-compressor unit 380/220 V, 50/60 Hz
- Rated supply voltage of heaters 220 V, 50/60Hz
- Rated air pressure of operating mechanism 1,8 MPa
- Rated SF6 gas pressure in circuit breaker 0,5 MPa

Note: For other values of auxiliary circuits supply voltage and motor-compressor supply voltage consult the manufacturer.



Rasporod rupe za sidrene vijke
Holes disposition for anchoring screws

Prekidac tip		SFE 14 - 1	
Circuit breaker type			
Variant		10	8
Variant		20	17
Variant		30	18
Variant		40	19
Variant		50	20
Variant		60	21
Variant		70	22
Variant		80	23
Variant		90	24
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Variant		110	26
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Variant		160	31
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Variant		210	36
Variant		220	37
Variant		230	38
Variant		240	39
Variant		250	40
Variant		260	41
Variant		270	42
Variant		280	43
Variant		290	44
Variant		300	45
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Variant		380	53
Variant		390	54
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Variant		420	57
Variant		430	58
Variant		440	59
Variant		450	60
Variant		460	61
Variant		470	62
Variant		480	63
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Variant		3210	336
Variant		3220	

