Metalom oklopljeni, plinom SF_6 izolirani KOMPAKTNI SKLOPNI MODULI serije KSMV 24

Metal enclosed, SF_6 gas-insulated COMPACT MODULES series KSMV 24

OSNOVNE KARAKTERISTIKE

- Sigurnost pogonskog osoblja
- Visoka pouzdanost
- Visoka raspoloživost pogona
- Minimalne ukupne dimenzije
- Fleksibilnost jednopolnih shema
- Jednostruki sustav sabirnica
- Plinom izoliran aparatni odjeljak
- Plinom izolirane sabirnice u sabirničkom odjeljku
- Primarni krug ne zahtijeva održavanje
- Ekološka prihvatljivost

BASIC CHARACTERISTICS

- Personnel safety
- High reliability
- High operational availability
- Minimal overall dimensions
- Single-line diagram flexibility
- Single busbar system
- Gas-insulated apparatus compartment
- Gas-insulated busbar compartment
- Maintenance-free primary circuit
- Environmental compatibility

1. OPĆENITO

Kompaktni sklopni moduli serije KSMV koriste se za izgradnju svih varijanti kompaktnih, metalom oklopljenih sklopnih postrojenja.

Svi sklopovi i elementi glavnog strujnog puta modula smješteni su u zajedničkim plinonepropusnim kućištima od čeličnog lima, a međusobno i prema kućištima izolirani su plinom SF_6. Sabirnički odjeljci također su izolirani plinom za cijeli životni vijek proizvoda (minimalno 20 godina).

Električni luk u prekidačima gasi se u vakuumskim komorama. Plin SF6 služi isključivo kao izolacija između dijelova pod naponom i prema kućištu, što osigurava potpunu ekološku podobnost postrojenja, te isključuje potrebu eksploatacijskog održavanja primarnog kruga.

Primjena: Srednjenaponska postrojenja, elektrane, rasklopišta, industrijska postrojenja, izrazito zagađen okoliš itd.

Sabirničke veze između pojedinih modula izvedene su izoliranim sabirnicama u plinu.

Moduli imaju mogućnost daljinskog upravljanja sa svakim od aparata u svaki od položaja, što omogućava potpunu automatizaciju ovog tipa postrojenja. Naručitelj ima mogućnost odabira modula zaštite u skladu s projektom.

Sklopna postrojenja serije KSMV namijenjena su ugradnji u zatvorene prostore i normalne pogonske uvjete, u skladu normom IEC 62271-200.

Nazivni parametri kompaktnih sklopnih modula potvrđeni su odgovarajućim certifikatima.

1. GENERAL INFORMATION

Compact modules series KSMV are intended for design of various compact, metal enclosed switchgear variants.

All live parts are placed in SF_6 gas-insulated steel containers, which provide mutual insulation of current path elements, as well as insulation to the earth level potential. Busbar compartments are also gas-insulated, hermetically enclosed and sealed for entire operation life (minimum 20 years).

Electric arc quenching takes place in vacuum interrupters built in circuit breakers. Gas is not used as arc-quenching medium, which provides complete environment acceptability of this product and eliminates operational maintenance of the primary circuits.

Application:
Medium voltage transformer substations, power plants, electrical network nodal points, industrial switchgear; highly polluted environment etc.

Busbar and cable connections between the modules are performed by insulated busbars in busbar compartments filled with SF_6.

Compact modules series KSMV are equipped with motor drive and set of releases for remote control of each device. This feature enables complete automatization of these switchgear type. The choice of protection module is possible in accordance with project requirements.

Compact modules series KSMA are built for indoor installation at normal service conditions, in accordance with IEC 62271-200.

Nominal parameters of these modules have been confirmed by adequate certificates.

2. OSNOVNI SKLOPOVI

- Vakuumski prekidač
- Dvopoložajni rastavljač
- Zemljospojnik

2. BASIC ASSEMBLIES

- Vacuum circuit breaker
- Two-positional disconnector
- Earthing device

3. OSNOVNI TEHNIČKI PODACI MODULA NAZIVNE STRUJE DO 1250 A

3. BASIC TECHNICAL DATA FOR NOMINAL CURRENT UP TO 1250 A

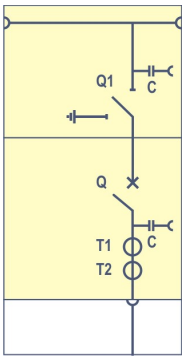
Sklopni moduli serije KSMA; nazivna struja sabirnica do 1250 A **Compact modules series KSMA; rated busbar current up to 1250 A**		**24 kV**
Nazivni napon Rated voltage		24 kV
Nazivni podnosivi udarni napon 1,2/50 μs Rated lightning impulse voltage 1,2/50 μs		125 kV
Nazivni podnosivi jednominutni napon 50 Hz/1min Rated power frequency withstand voltage 50 Hz/1min		50 kV
Nazivna frekvencija Rated frequency		50 Hz
Nazivna struja sabirnica Rated busbar current		2500 A
Nazivna struja prekidača Rated current of the circuit breaker		2500 A
Vakuumski prekidač **Vacuum circuit breaker**		**24 kV**
Nazivni napon Rated voltage		24 kV
Nazivni podnosivi udarni napon 1,2/50 μs Rated lightning impulse voltage 1,2/50 μs		125 kV
Nazivni podnosivi jednominutni napon 50Hz/1min Rated power frequency withstand voltage 50 Hz/1min		50 kV
Nazivna struja Rated current		2500 A
Nazivna prekidna moć Rated breaking capacity		25 kA
Nazivna uklopna moć Rated making capacity		63 kA
Nazivna kratkotrajna podnosiva struja (1s) Rated short-time withstand current (1s)		25 kA
Isklopno vrijeme za kratki spoj Switch-off time (short circuit)		45 ms
Sklopni ciklus Operation cycle		O-0,3s-CO-15s-CO
Dvopoložajni rastavljač **Two-positional disconnector**		**24 kV**
Nazivni napon Rated voltage		24 kV
Nazivni podnosivi udarni napon 1,2/50 μs Rated lightning impulse voltage 1,2/50 μs	prema zemlji to earth	125 kV
	na rastavnom razmaku across insulating distance	145 kV
Nazivni podnosivi jednominutni napon industrijske frekvencije Rated power frequency withstand voltage 50 Hz/1min	prema zemlji to earth	50 kV
	na rastavnom razmaku across insulating distance	60 kV
Nazivna struja Rated current		2500 A
Nazivna kratkotrajna podnosiva struja (1s) Short-time withstand current		25 kA

Zemljospojnik Earthing device	24 kV
Nazivni napon Rated voltage	24 kV
Nazivna kratkotrajna podnosiva struja (1s) Short-time withstand current (1s)	25 kA
Dopuštena udarna struja kratkog spoja (ampl.) Nominal peak withstand current (1s)	63 kA

4. OSNOVNE KONFIGURACIJE 4. BASIC CONFIGURATIONS

4.1. KSMV 24-VP

Jednopolna shema / Single line diagram



Opis / Description

Dovodno-odvodno polje (izolirano plinom)

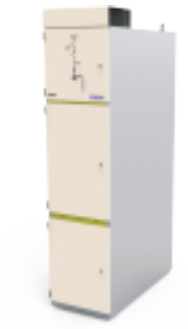
- Širina 600 mm
- Q - vakuumski prekidač
- Q1 - tropoložajni rastavljač
- T1 - strujni transformatori
- T2 - strujni transformatori
- C - kapacitivni indikatori napona

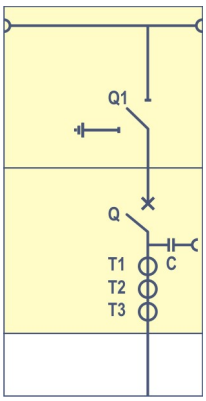
Incoming-outgoing feeder (gas-insulated)

- Width 600 mm
- Q - vacuum circuit breaker
- Q1 - three-positional disconnector
- T1 - current transformers
- T2 - current transformers
- C - capacitive voltage indicators

4.2. KSMV 24-TP

Jednopolna shema / Single line diagram





Opis / Description

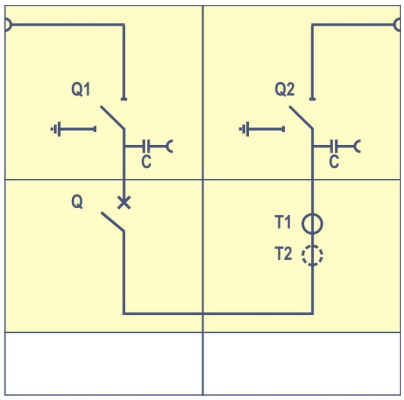
Transformatorsko polje (izolirano plinom)

- Širina 600 mm
- Q - vakuumski prekidač
- Q1 - tropoložajni rastavljač
- T1 - strujni transformatori
- T2 - strujni transformatori
- T3 - strujni transformatori
- C - kapacitivni indikatori napona

Transformer feeder (gas-insulated)

- Width 600 mm
- Q - vacuum circuit breaker
- Q1 - three-positional disconnector
- T1 - current transformers
- T2 - current transformers
- T3 - current transformers
- C - capacitive voltage indicators

4.3. KSMV 24-SP	Jednopolna shema / Single line diagram	Opis	Description



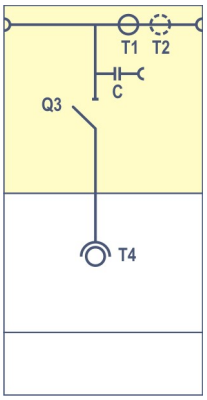
Spojno polje (izolirano plinom)

- Širina 2 x 600 mm
- Q - vakuumski prekidač
- Q1 - tropoložajni rastavljač
- Q2 - tropoložajni rastavljač
- T1 - strujni transformatori
- T2 - strujni transformatori
- C - kapacitivni indikatori napona

Bus coupling feeder (gas-insulated)

- Width 2 x 600 mm
- Q - vacuum circuit breaker
- Q1 - three-positional disconnector
- Q2 - three-positional disconnector
- T1 - current transformers
- T2 - current transformers
- C - capacitive voltage indicators

4.3. KSMV 24-SP	Jednopolna shema / Single line diagram	Opis	Description



Mjerno polje (izolirano zrakom)

- Q3 - rastavljač
- T1 - strujni transformatori
- T2 - strujni transformatori
- T4 - strujni transformatori
- C – kapacitivni indikatori napona

Konstrukcija i širina mjernog polja uvijek je u u skladu s projektom,

odnosno zahtjevima naručitelja.

Metering feeder (air-insulated)

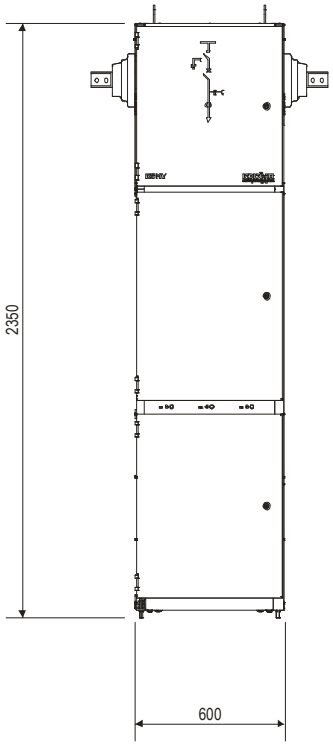
- Q1 - disconnector
- T1 - current transformers
- T2 - current transformers
- T4 - current transformers
- C - capacitive voltage indicators

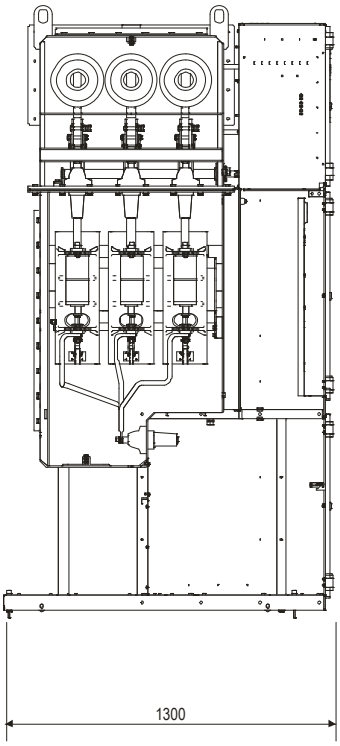
Design and width of metering feeder is tailor-made, always in accordance with project requirements

5. MJERNE SKICE

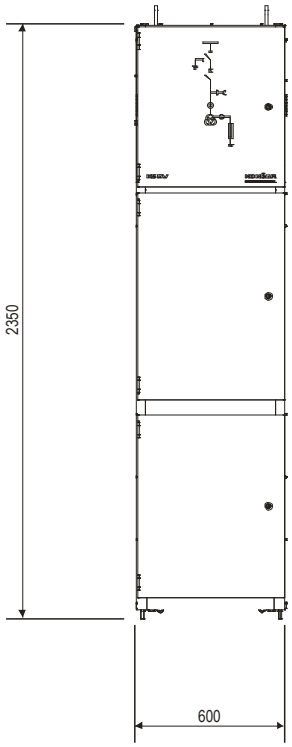
5. OVERALL DIMENSIONS

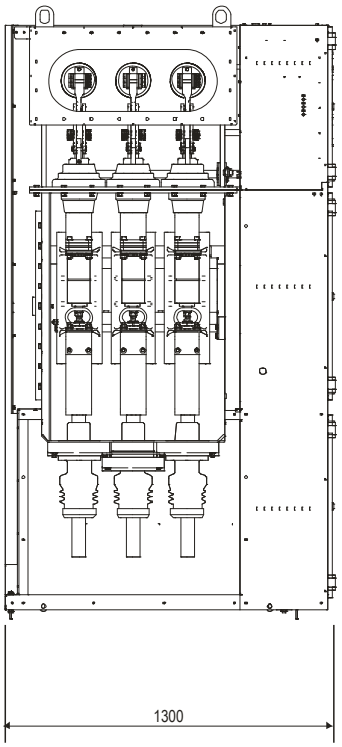
5.1. KSMV 24-VP





5.2. KSMV 24-TP





6. OSTALI PODACI

Za izradu ponude potrebno je dostaviti jednopolnu shemu i pripadajuće tehničke podatke.

Ostale podloge (npr. mjerne skice, sheme unutarnjeg ožičenja, jednopolne sheme modula koji nisu navedeni u ovom letku, izvještaje o tipskim ispitavanjima) dostavljamo na zahtjev.

NAPOMENA:

Svi podaci navedeni u ovom katalogu informacijskog su karaktera. Proizvođač pridržava pravo izmjene.

Obvezujuće podatke i mjerne skice dajemo na zahtjev

6. ADDITIONAL DATA

For more detail information and quotation, please submit single line diagram and relevant technical data.

Obligatory data (e.g. dimensional drawings, wiring diagram, other single line diagrams which are not presented in this leaflet, type test reports) available on request.

NOTICE:

Technical characteristics, dimensional drawings and other relevant data are subject to change.

Obligatory data only on request.

KONČAR

KONČAR – ELEKTROINDUSTRIJA d.d.

KONČAR – APARATI I POSTROJENJA d.d.
Borongajska cesta 81c, 10000 Zagreb, Hrvatska
Tel: +385 1 23 80 000
Fax. +385 1 23 31 058
e-mail: uprava@koncar-ap.hr
Internet: http://www.koncar-ap.hr