

Sklopni aparati s uloščima osigurača

Osigurač-rastavne sklopke

Osigurač-rastavne pruge

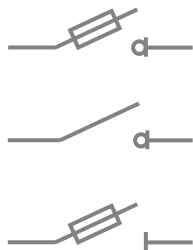
Osigurač-pruge

Switching devices with fuse-links

Fuse-switch disconnector

Fuse-switch strip type

Fuse-rails



OS, ORP, OP





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Sklopni aparati s ulošcima osigurača serije **OS; ORP; OP**

OPIS

Osigurač-rastavna sklopka

Aparat u kojem je uložak osigurača ili nosač uloška osigurača zajedno sa uloškom osigurača dio pomičnog kontakta

Rastavna sklopka

Sklopka čiji kontakti u isklapljenom položaju moraju zadovoljavati izolacijske zahtjeve za rastavljač

Osigurač-rastavljač

Rastavljač u kojem je uložak osigurača ili nosač uloška osigurača zajedno sa uloškom osigurača dio pomičnog kontakta

Osigurač-rastavne sklopke (pruge) tipa OS i ORP su niskonaponski sklopni aparati koji omogućavaju sigurno uklapanje i isklapanje električnih strujnih krugova pod teretom, ovisno o naponu i kategoriji upotrebe, a osnovna namjena im je zaštita električne opreme od kratkog spoja i preopterećenja korištenjem nožastih uložaka osigurača vel. 000 (00C) do vel. 3. Ukoliko se osigurač-rastavne sklopke (pruge) koriste bez uložaka osigurača, tj. sa kratkospojnicima, tada imaju funkciju rastavnih-sklopki koje u otvorenom položaju zadovoljavaju izolacijske zahtjeve određene za rastavljače.

Osigurač-pruge tipa OP predstavljaju trolpolno podnožje u vertikalnoj izvedbi za montažu na sabirnički sistem (100/185mm). Koristeći uloške osigurača vel.000 (00C) do vel.3 štite električnu opremu od kratkog spoja i preopterećenja. Posebno oblikovane zaštitne kape omogućuju sigurno ulaganje i vađenje uložaka pomoću za to predviđene ručice. Tijekom razvoja osigurač-rastavnih sklopki (pruga) i podnožja korišteni su najsuvremeniji principi i dostignuća na području sklopnih aparata uz upotrebu visokokvalitetnih izolacijskih materijala.

Područje primjene

Svoju primjenu osigurač-rastavne sklopke (pruge) i podnožja pronalaze u svim područjima niskoga napona, kako u industriji, tako i u kućanstvima:

- transformatorske stanice
- razvodna polja u pogonima
- javna rasvjeta (ormari javne rasvjete)
- napajanje kućanstava (kućni priključno mjerni ormari) itd.

Dizajn

Specijalno oblikovani i zaštićeni kontakti, zajedno sa lučnim komorama, omogućuju visoku sklopnu moć, male gubitke, te su garancija visoke električne i mehaničke trajnosti. Svi kontaktni dijelovi izrađeni su od posrebnog bakra.

Norme

Osigurač-rastavne sklopke (pruge) i podnožja u skladu su sa sljedećim normama:

- IEC 60947-1; IEC 60947-3; IEC 60269-1; IEC 60269-2-1

Temperatura okoline, klimatski utjecaji

Osigurač-rastavne sklopke (pruge) i podnožja mogu se koristiti pri temperaturama okoline od -25°C do +55°C, do 2000m nadmorske visine, u područjima bez prisustva agresivnih i eksplozivnih plinova.

Switching devices with fuse-links series **OS; ORP; OP**

DESCRIPTION

Fuse-switch disconnecter

switch-disconnector in which a fuse-link or a fuse-carrier with fuse-link forms the moving contact

Switch-disconnector

switch which, in the open position, satisfies the isolating requirements specified for a disconnecter

Fuse-disconnector

disconnecter in which a fuse-link or fuse-carrier with fuse-link forms the moving contact

Fuse-switch disconnectors types OS, ORP are low-voltage switching devices which enables safely manual connecting and disconnecting electrical circuits under load, depending on voltage and utilization category. Their purpose is protection of low voltage electrical equipment against specified overload and short circuit using fuse-links size 000 (00C) up to size 3. It can be used with disconnecting knives and then have function of switch-disconnector. Fuse-rails type OP are three-pole fuse-bases in vertical design for mounting on busbar system (100/185mm). Using fuse-links size 000 (00C) up to size 3 fuse-rails protect equipment in electrical circuits from overload and short circuit. Special designed contact cover enables safe manipulation with fuse-links (insertion / pull out) with special handle. During the development of the fuse-switch disconnectors (stripes) and fuse-rails are used the most modern principles and achievements in the field of switching devices with the use of high quality insulation materials.

Application

Fuse-switch disconnectors and fuse-rails are intended for:

- transformer substation
- distribution boards, distribution panels
- public lightening cabinets
- operation at the point of supply between the public network distribution and the consumer's installation

Design

Special designed and protected lyra contact with arching chambers enable high switching capacity and they are guarantee of high electrical and mechanical durability and low power losses.

All contact parts are made of silver-plated copper.

Standards

Fuse-switch disconnectors and fuse-rails are in accordance with the next standards:

- IEC 60947-1; IEC 60947-3; EC 60269-1; EC 60269-2-1

Ambient temperature

Fuse-switch disconnectors and fuse-rails can be used from -25°C to +55°C ambient temperature up to 2000m altitude. Fuse-switch disconnecter to be used in area without aggressive and explosive gases.

Osigurač-rastavne sklopke tip **OS-...** *Fuse-switch disconnectors type **OS-...***

Osnovne izvedbe *Basic versions*

Veličine

Sizes

000 (00C) - 160A

00 - 160A



OPIS

Osigurač-rastavne sklopke tipa OS dostupne su u jednopolnoj, dvopolnoj, trolpolnoj i četveropolnoj izvedbi. Proizvode se u veličinama 000 (00C) i 00 za nazivne napone do 690V i nazivne struje do 160A.

Priključci

Priključci osigurač-rastavnih sklopki predviđeni su za direktan priključak kablova (obuhvatna stezaljka OS00, prizma stezaljke P00, P002, stezni okvir BT-00), te za kabele sa kabelskim stopicama (vijak M8). Osigurač-rastavne pruge standardno se isporučuju s vijčanim priključcima.

Montaža

Osigurač-rastavne sklopke montiraju se direktno na montažnu ploču (vijak M6) ili na profilne nosače 35mm (DIN EN 50022). Mogućnost montaže u vertikalnom i horizontalnom položaju.

DESCRIPTION

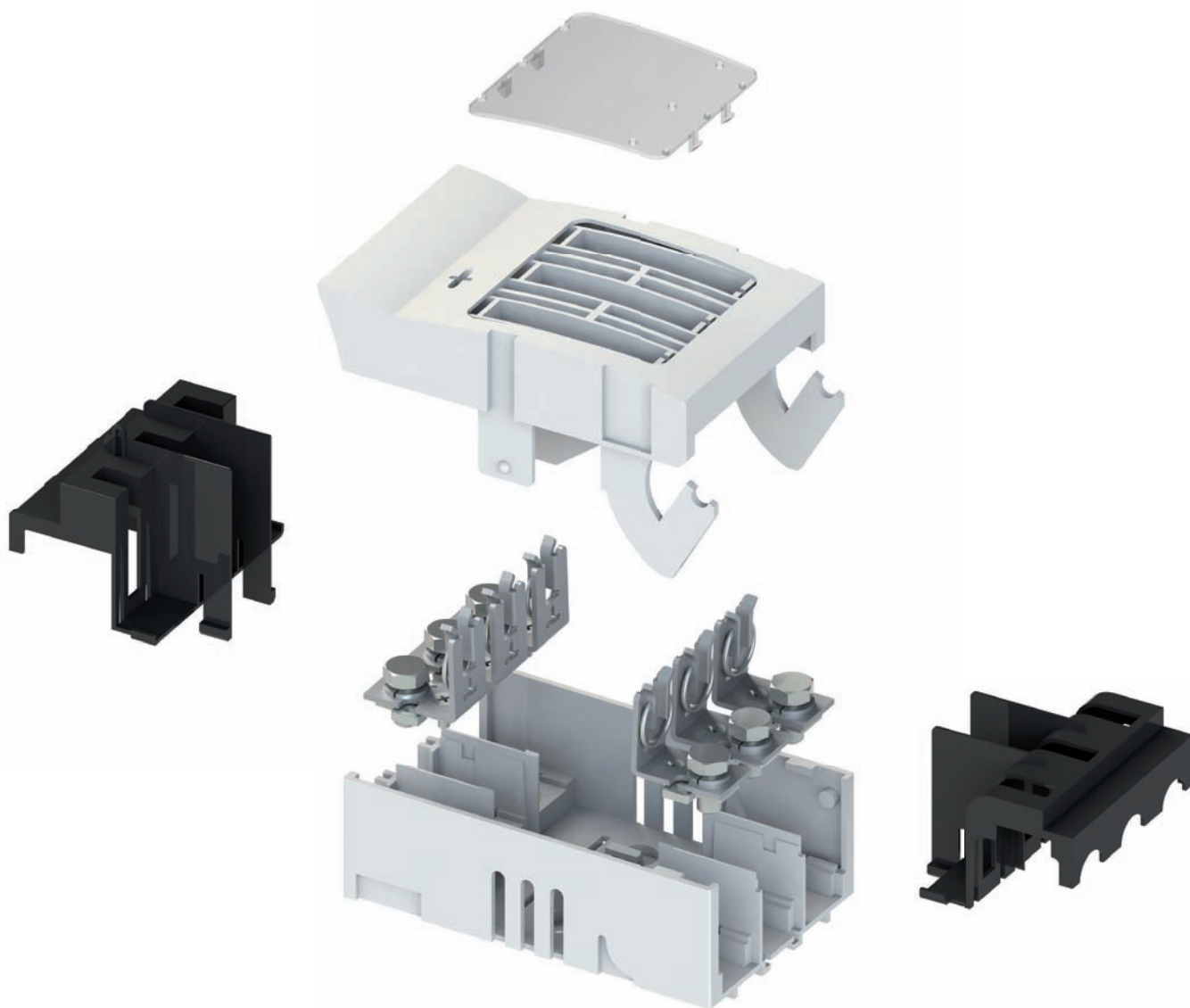
Fuse-switch disconnectors types OS are available in one-pole version, two-pole version, three-pole version and four-pole version. They are produced in sizes 000 (00C) and 00 for rated voltages up to 690V and rated currents up to 160A.

Connections

The connections of fuse-switch disconnectors are made for direct terminal clamps (clip type terminal OS00, prism clamp P00, prism clamp P002, box terminal BT-00), and for cable with cable lugs (screw M8). Fuse-switch disconnectors are supplied as standard with screw type of terminal.

Mounting

Fuse-switch disconnectors can be mounted on mounting board (screw M6) or can be snapped onto 35mm mounting rails (DIN EN 50022). Mounting in vertical and horizontal position.



VELIČINA (Osnovne izvedbe) *SIZE (Basic versions)* (000) 00C



OS-00C/1

Narudžbeni broj
Order number 0Z2594

Jednopolno rastavljiva
Osigurač - rastavna sklopka

One - pole
Fuse - switch disconnector



OS-00C/2

Narudžbeni broj
Order number 0Z2616

Dvopolno rastavljiva
Osigurač - rastavna sklopka

Two - pole
Fuse - switch disconnector



OS-00C

Narudžbeni broj
Order number 0Z2590

Tropolno rastavljiva
Osigurač - rastavna sklopka

Three - pole
Fuse - switch disconnector



OS-00C/4

Narudžbeni broj
Order number 0Z2620

Četveropolno rastavljiva
Osigurač - rastavna sklopka

Four - pole
Fuse - switch disconnector

TIPOVI PRIKLJUČAKA ZA OS-00C *TYPE OF TERMINALS FOR OS-00C*



Tip/Type	M8	OS00 (6-16)	OS00 (25-50)	P00 (10-35)	P00 (50-70)	P002 (10-16)	P002 (25-35)	P002 (50)
Nar.br/Order code*	OZ2590	OZ5071	OZ5072	OZ5073	OZ5074	OZ5075	OZ5076	OZ5077
Priključni presjek <i>Clamping range</i>	70mm ²	(6-16)mm ² Cu	(25-50)mm ² Cu	(10-35)mm ² Al/Cu	(50-70)mm ² Al/Cu	2x(10-16)mm ² Al/Cu	2x(25-35)mm ² Al/Cu	2x50mm ² Al/Cu
Vijak <i>Screw</i>	M8x12 DIN 933	2x(M5x12) DIN 912	2x(M5x14) DIN 912	2x(M5x20) DIN 912	2x(M5x25) DIN 912	2x(M5x25) DIN 912	2x(M5x30) DIN 912	2x(M5x35) DIN 912
Moment pritezanja <i>Tightening torque</i>	12-15 Nm	2-3 Nm	2-3 Nm	4-5 Nm	4-5 Nm	4-5 Nm	4-5 Nm	4-5 Nm
Pakiranje (kom) <i>Package (pcs)</i>	3	3	3	3	3	3	3	3

* Odnosi se na trolpolne izvedbe / *refer to the three-pole types*

Napomena: Osnovna varijanta osigurač-rastavne sklopke isporučuje se sa vijcima M8 i crnim poklopcima

Note: Basic type of fuse-switch disconnecter is delivered with screws M8 and with black covers

Oznaka za naručivanje / *Order designation*

A **B**

A **B**

Primjer / Example: OS-00C P002 (10-16)

A - tip sklopke / *type of fuse-switch disconnecter*

B - tip priključka / *type of terminal*

PRIBOR *ACCESSORIES*



ZK-00C/1

Narudžbeni broj
Order number OZ2615

Zaritne kape za

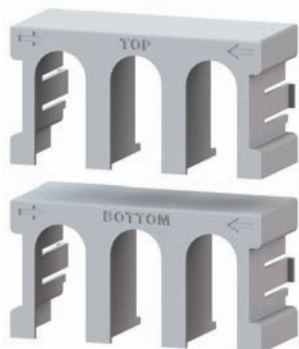
Osigurač - rastavnu sklopku

Tip: OS-00C/1; OS-00C/2; OS-00C/4

Protecting covers for

Fuse - switch disconnecter

Type: OS-00C/1; OS-00C/2; OS-00C/4



ZK-00C/3

Narudžbeni broj
Order number OZ2614

Zaritne kape za

Osigurač - rastavnu sklopku

Tip: OS-00C; OS-00C/4;

Protecting covers for

Fuse - switch disconnecter

Type: OS-00C; OS-00C/4;

VELIČINA (Osnovne izvedbe) *SIZE (Basic versions) 00*



OS-00/1

Narudžbeni broj
Order number 0Z2600

Jednopolno rastavljiva
Osigurač - rastavna sklopka

OS-00/1 BT00

Narudžbeni broj
Order number 0Z3594

Single - pole
Fuse - switch disconnecter



OS-00/2

Narudžbeni broj
Order number 0Z3138

Dvopolno rastavljiva
Osigurač - rastavna sklopka

OS-00/2 BT00

Narudžbeni broj
Order number 0Z3139

Two - pole
Fuse - switch disconnecter



OS-00

Narudžbeni broj
Order number 0Z2599

Tropolno rastavljiva
Osigurač - rastavna sklopka

OS-00 BT00

Narudžbeni broj
Order number 0Z3224

Three - pole
Fuse - switch disconnecter



OS-00/4

Narudžbeni broj
Order number 0Z2622

Četveropolno rastavljiva
Osigurač - rastavna sklopka

OS-00/4 BT00

Narudžbeni broj
Order number 0Z3140

Four - pole
Fuse - switch disconnecter

TIPOVI PRIKLJUČAKA ZA OS-00 TYPE OF TERMINALS FOR OS-00



Tip/Type	M8	BT00	OS00 (6-50)	P00 (10-70)	P00 95(35-95)	P002 (10-35)	P002 (50)	P002 95(35-70)
Nar.br./Order code*		OZ3224	OZ5078	OZ5079	OZ5172	OZ5170	OZ5171	OZ5194
Priključni presjek Clamping range	70mm ²	(6-70)mm ² Al/Cu	(6-50)mm ² Cu	(10-70)mm ² Al/Cu	(35-95)mm ² Al/Cu	2x(10-35)mm ² Al/Cu	2x50mm ² Al/Cu	2x(35-70)mm ² Al/Cu
Vijak Screw	M8x12 DIN 933	M6 DIN 912	2x(M5x14) DIN 912	2x(M5x25) DIN 912	2x(M5x30) DIN 912	2x(M5x30) DIN 912	2x(M5x40) DIN 912	2x(M5x45) DIN 912
Moment pritezanja Tightening torque	12-15Nm	4-5 Nm	2-3 Nm	4-5 Nm	4-5 Nm	4-5 Nm	4-5 Nm	4-5 Nm
Pakiranje (kom) Package (pcs)	3	3	3	3	3	3	3	3

* Odnose se na trolpolne izvedbe / Refer to the three-pole types

Napomena: Osnovna varijanta osigurač-rastavne sklopke isporučuje se sa vijcima M8 i crnim poklopcima

Note: Basic type of fuse-switch disconnecter is delivered with screws M8 and with black covers

Oznaka za naručivanje / Order designation

A **B**

A **B**

Primjer / Example: OS-00 P002 (10-35)

A - tip sklopke / type of fuse-switch disconnecter **B** - tip priključka / type of terminal

TEHNIČKI PODACI TECHNICAL DATA

Osigurač-rastavne sklopke OS-00C/1; OS-00C; OS-00; OS-00/1 Fuse-switch disconnectors OS-00C/1; OS-00C; OS-00; OS-00/1

IEC / EN 60947

Tip / Type		OS-00C/1	OS-00C	OS-00/1	OS-00
Nazivna termička struja / Conventional free air thermal current ¹⁾	I_{th} (A)	160	160	160	160
Nazivni napon izolacije / Rated insulation voltage	U_i (V)	690	690	690	690
Nazivni podnosivi udarni napon / Rated withstand impulse voltage	U_{imp} (kV)	6	6	6	6
Kategorija upotrebe / Utilization category		AC-22B	AC-21B AC-22B	AC-22B	AC-21B AC-22B
Nazivna pogonska struja / Rated operational current	I_o (A)	160	125 160	160	125 160
Nazivni pogonski napon / Rated operational voltage	U_o (V)	230 AC	690 AC 400 AC	230 AC	690 AC 400 AC
Uvjetovana kratkospojna struja / Rated conditional short-circuit current	(kA)	63	63	63	63
Nazivna frekvencija / Rated frequency	(Hz)	50	50	50	50
Električna trajnost / Electrical durability		200	200	200	200
Stupanj zaštite (poklopac zatvoren) / Degree of protection (cover closed)		IP20	IP20	IP20	IP20
Tip priključka / Type of terminals		3)	3)	4)	4)
Dopuštena radna temperatura / Permissible ambient temperature ²⁾	(°C)	-25 ÷ +55	-25 ÷ +55	-25 ÷ +55	-25 ÷ +55
Temperatura skladištenja / Storage temperature	(°C)	-30 ÷ +70	-30 ÷ +70	-30 ÷ +70	-30 ÷ +70
Stupanj zagađenja / Pollution degree		3	3	3	3
Težina (bez uložaka osigurača) / Weight (without fuse-links)	(kg)	0,23	0,58	0,28	0,61

¹⁾ U slučaju montaže osigurač-rastavne sklopke u ormar potrebno je korigirati termičku struju (I_{th} x faktor korekcije), ovisno o broju ugrađenih aparata (vidi Tabelu 1)
In case of mounting of the fuse-switch disconnecter in cabinet, the thermal current should be correcting (I_{th} x derating factor), depending on number of built apparatuses (see Table 1)

²⁾ U slučaju korištenja osigurač-rastavne sklopke na temperaturama +40°C do + 55°C, termička struja I_{th} treba biti smanjena za: 5% (41°C-45°C); 10% (46°C-55°C)
In case of using the fuse-switch disconnecter at temperatures +40°C to + 55°C, the thermal current I_{th} should be reduced; 5% (41°C-45°C); 10% (46°C-55°C)

³⁾ Vidi str. 8 / See page 8

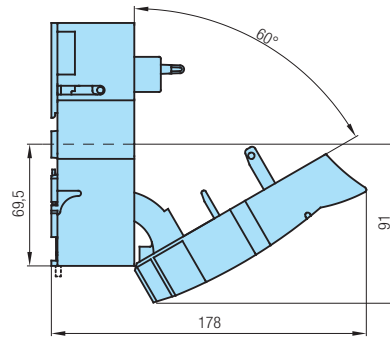
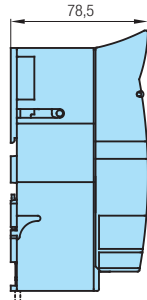
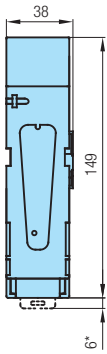
⁴⁾ Vidi str. 10 / See page 10

Tabela 1 / Table 1

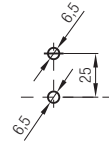
Broj ugrađenih aparata / Number of built apparatuses	2 - 3	4 - 5	6 - 9	>9
Faktor korekcije / Correction factor	0,9	0,8	0,7	0,6

MJERNE SKICE *DIMENSIONAL DRAWINGS* (mm)

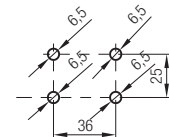
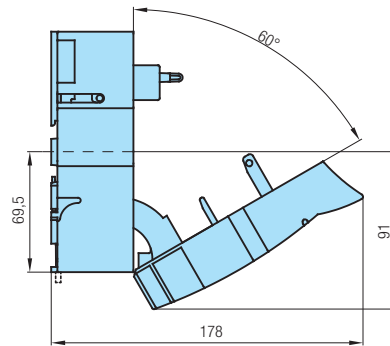
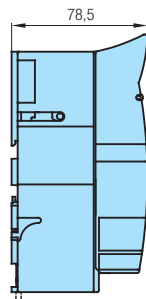
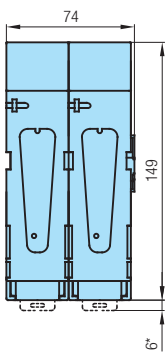
OS-00C/1



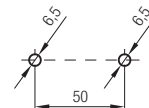
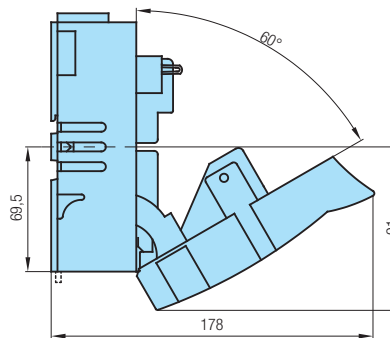
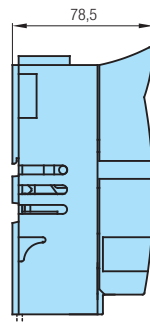
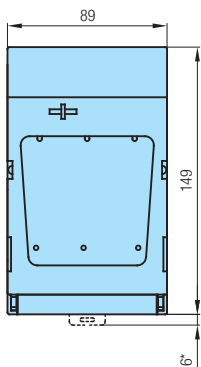
Plan bušenja / *Drilling plan*
Stražnji lim / *Rear panel*



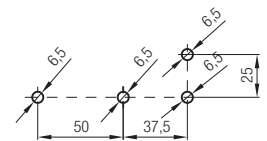
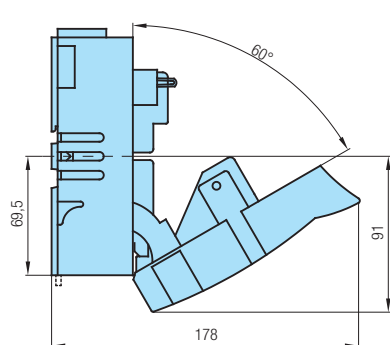
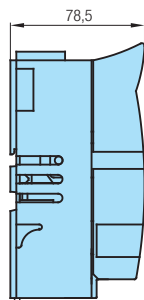
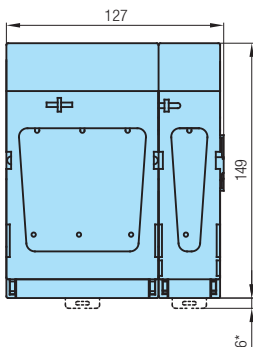
OS-00C/2



OS-00C



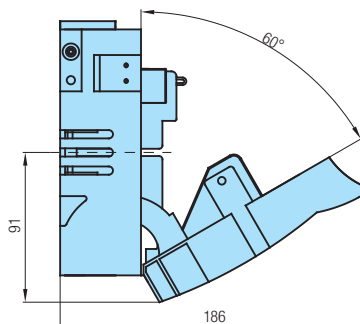
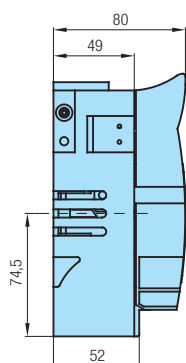
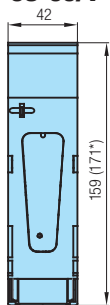
OS-00C/4



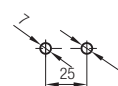
* Sa priborom za pričvršćenje na profilni nosač 35mm
* *With accessories for snapping onto 35mm mounting-rail*

MJERNE SKICE *DIMENSIONAL DRAWINGS* (mm)

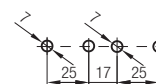
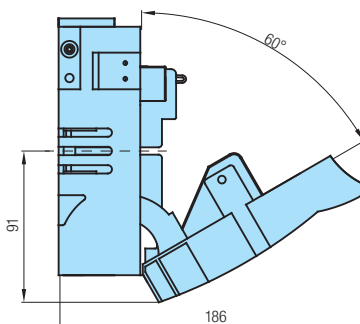
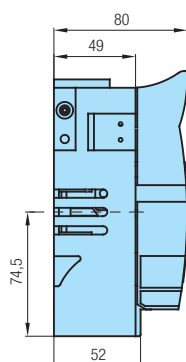
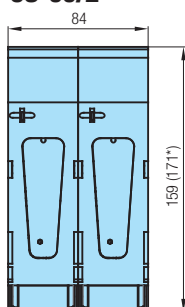
OS-00/1



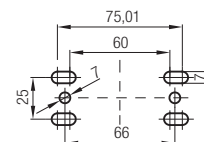
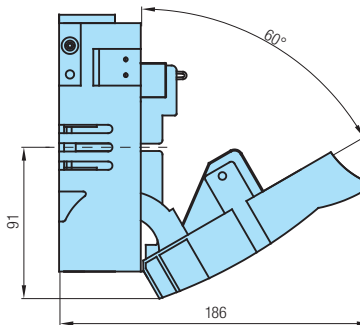
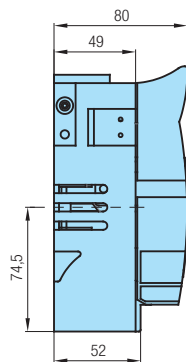
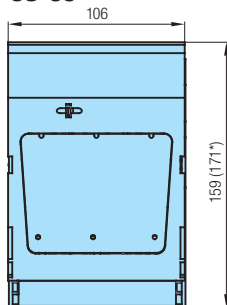
Plan bušenja / *Drilling plan*
Stražnji lim / *Rear panel*



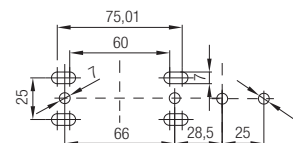
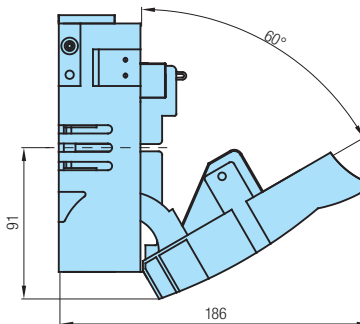
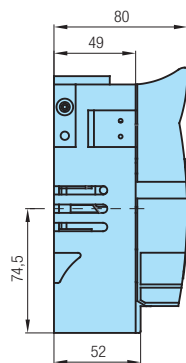
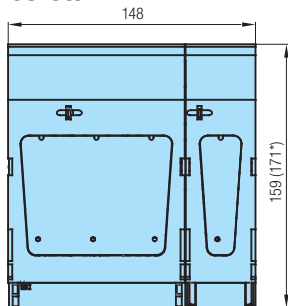
OS-00/2



OS-00



OS-00/4



* Sa priborom za pričvršćenje na profilni nosač 35mm
* With accessories for snapping onto 35mm mounting-rail

Osigurač-rastavna sklopka tip **OS-00C/S**
*Fuse-switch disconnecter type **OS-00C/S***

Specijalna izvedba
za sabirnički sistem 60mm
*Special version
for busbar system 60mm*

Veličina
Size
000 (00C) -160A



OPIS

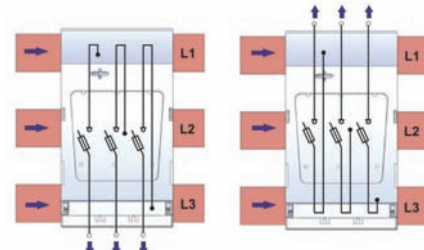
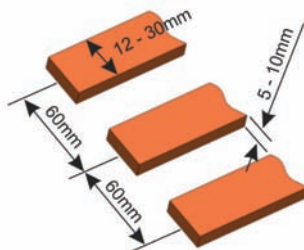
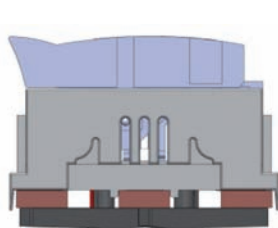
Osigurač-rastavna sklopka OS-00C/S predviđena je za montažu na sabirnički sistem 60mm. Montira se u vertikalnom ili horizontalnom položaju.

Mogućnost montaže sa odlaznim priključcima s gornje ili donje strane.

DESCRIPTION

Fuse-switch disconnecter type OS-00C/S is for snapping onto busbar system 60mm. It can be mounted in horizontal and vertical position.

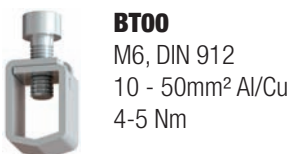
It can be mounted in two variant with top terminal connection and with bottom terminal connection.



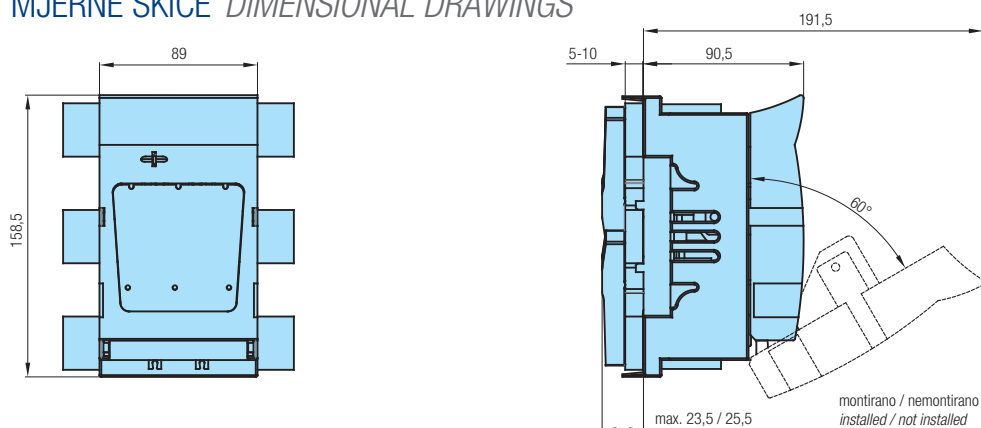
TEHNIČKI PODACI / TECHNICAL DATA

Nazivna termička struja / Conventional free air thermal current I_{th}	160A
Nazivni napon izolacije / Rated insulation voltage U_i	AC 690V
Nazivna frekvencija / Rated frequency	50Hz
Kategorija upotreba / Utilization category	400V 100A AC-22B

TIPOVI PRIKLJUČAKA TYPES OF TERMINALS



MJERNE SKICE DIMENSIONAL DRAWINGS



Napomena: Osnovna varijanta osigurač-rastavne sklopke isporučuje se sa vijcima M8 i crnim poklopcima
Note: Basic type of fuse-switch disconnecter is delivered with screws M8 and with black covers

Oznaka za naručivanje / Order designation

A B

A B

Primjer / Example: OS-00C/S P002 (10-16)

A - tip sklopke / type of fuse-switch disconnecter **B** - tip priključka / type of terminal

Osigurač-rastavna sklopka tip **OS-.../P** *Fuse-switch disconnecter type **OS-.../P***

Specijalna izvedba
sa produženim priključcima
*Special version
with extended terminals*

Veličine

Sizes

000 (00C) - 160A

00 - 160A



OPIS

Osigurač-rastavna sklopka tip OS-.../P predviđena je za korištenje kod električnog odvajanja objekata (kuće sa katovima "prizemlje-kat"; "kat-potkrovlje"; zgrada-zgrada i sl...)

DESCRIPTION

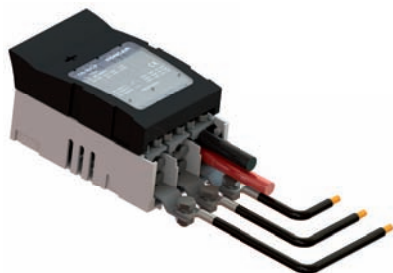
Fuse-switch disconnecter type OS-.../P is intended for use in the electrical separation of objects (houses with floors "ground floor- floor"; "floor-loft"; building-building, etc. ..)

Montaža na montažnu ploču!

Installation on mounting-plate!

TEHNIČKI PODACI / TECHNICAL DATA

Nazivna termička struja / Conventional free air thermal current I_{th}	160A
Nazivni napon izolacije / Rated insulation voltage U_i	AC 690V
Nazivna frekvencija / Rated frequency	50Hz
Kategorija upotreba / Utilization category	400V 160A AC-22B



TIPOVI PRIKLJUČAKA TYPES OF TERMINALS

M8
M8x12, DIN 933
70mm²
12-15 Nm

OS00
2xM5, DIN 912
6-50mm² Cu
2-3 Nm

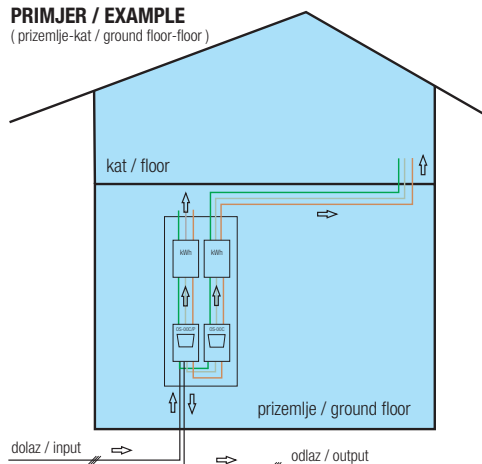
P00/70; P00/95
2xM5, DIN 912
10-70mm² Al/Cu
35-95mm² Al/Cu*
4-5 Nm

P002; P002 95
2xM5, DIN 912
2x (10-50)mm² Al/Cu
2x (35-70)mm² Al/Cu*
4-5 Nm

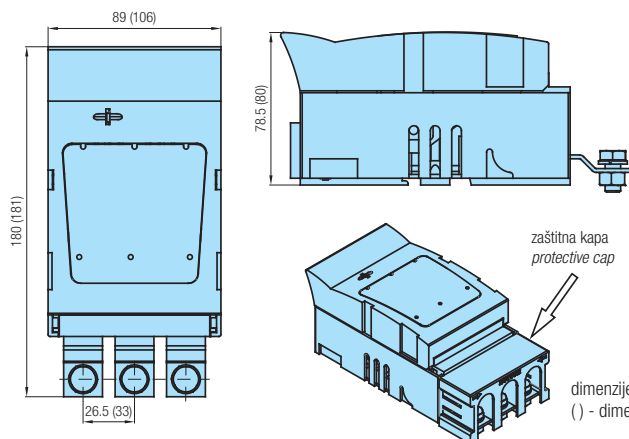
* samo u vel./only in size 00

PRIMJER / EXAMPLE

(prizemlje-kat / ground floor-floor)



MJERNE SKICE DIMENSIONAL DRAWINGS

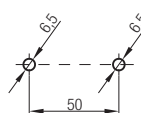


Napomena: Osnovna varijanta isporučuje se sa vijcima M8.

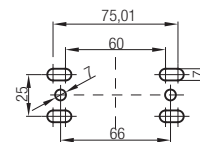
Note: Basic type is delivered with screws M8.

Plan bušenja / Drilling plan
Stražnji lim / Rear panel

vel. 00C / size 00C



vel. 00 / size 00



- isporučuje se sa zaštitnom kapom sa donje strane (samo u vel.00C)
- supplied with protective cap - bottom (only in size 00C)

Napomena: Osnovna varijanta osigurač-rastavne sklopke isporučuje se sa vijcima M8 i crnim poklopcima

Note: Basic type of fuse-switch disconnecter is delivered with screws M8 and with black covers

Oznaka za naručivanje / Order designation

A B

A B

Primjer / Example: OS-00C/P P002 (10-16)

A - tip sklopke / type of fuse-switch disconnecter B - tip priključka / type of terminal

Osigurač-rastavne pruge tip **ORP-...**

*Fuse-switch disconnecter type **ORP-...**
strip type*

za sabirnički sistem
100/185mm
*for busbar system
100/185mm*

Veličine

Sizes

00 - 160A

1 - 250A

2 - 400A

3 - 630A



OPIS

Osigurač-rastavne pruge tip ORP dostupne su u četiri veličine (00-160A; 1-250A; 2-400A; 3-630A).

Priključci

Direktan priključak kablova (obuhvatna stezaljka OS00; prizma stezaljke P00, P002; stezni okvir BT; KU priključak; V tip stezaljke) i za kabele sa kabelskim stopicama (vijak M8/M12).

Osigurač-rastavne pruge standardno se isporučuju s vijčanim priključcima.

Montaža

Osigurač-rastavne pruge predviđene su za direktnu montažu na sabirnički sistem razmaka 100mm (veličina 00), te za sabirnički sistem razmaka 185mm (veličina 1, 2, 3).

Korištenjem adaptera za vel.00 moguća je ugradnja na sabirnički sistem razmaka 185mm.

Mogućnost montaže u vertikalnom i horizontalnom položaju.

DESCRIPTION

Fuse-switch disconnectors strip type ORP are available in four sizes (00-160A; 1-250A; 2-400A; 3-630).

Connections

Depending on the size the connections are designed for direct terminal clamps (clip type terminal OS00, prism clamp P00, and P002; KU terminal; box terminal BT; V type terminal), and for cable with cable lugs (screw M8/M12). Fuse-switch disconnectors are supplied as standard with screw type of terminal.

Mounting

Fuse-switch disconnectors can be mounted on 100mm busbar system (size 00) and 185mm busbar system (size 1, 2, 3). Using additional adapters fuse-switch disconnecter size 00 can be mounted on 185mm busbar system.

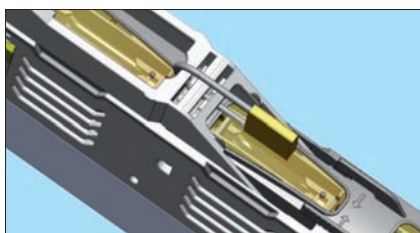
Mounting in vertical and horizontal position.

VELIČINA SIZE 00**ORP-00**

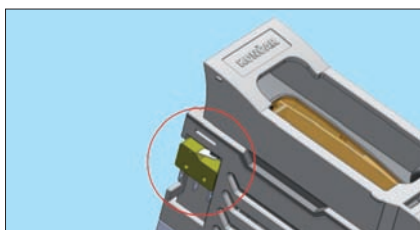
Tropolno sklopiva
Osigurač - rastavna pruga

*Three - pole switcable
Fuse - switch disconnecter*

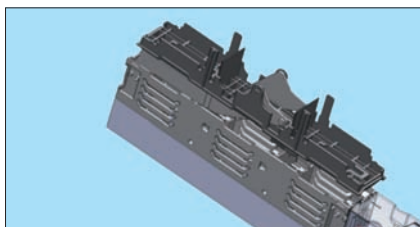
VELIČINA *SIZE* 00



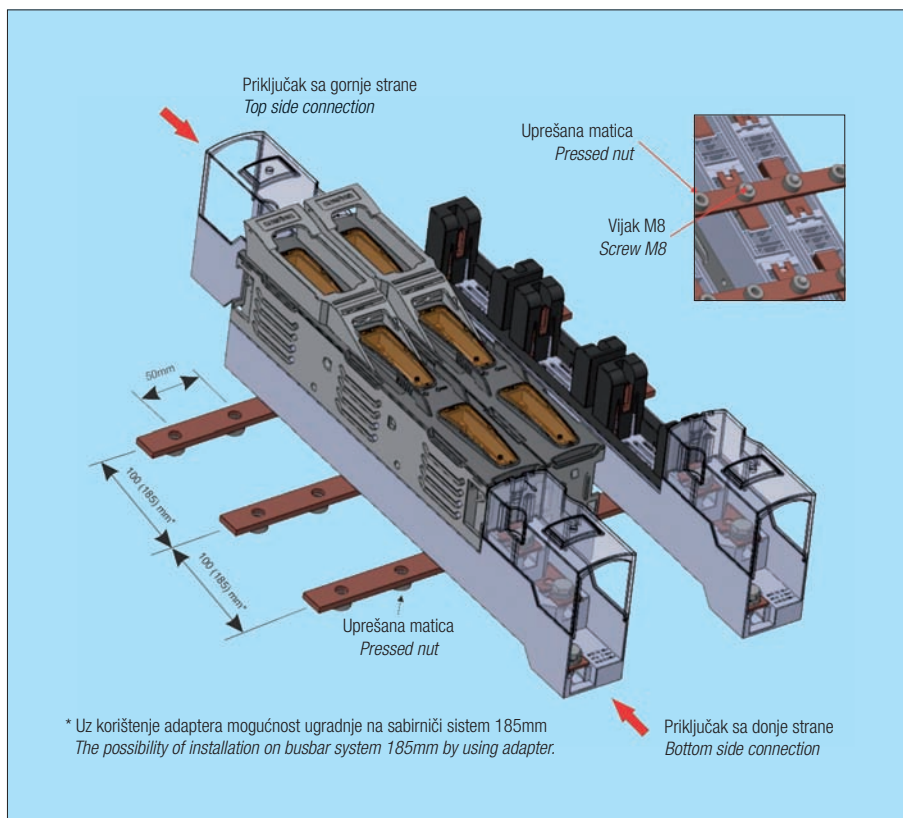
a) Zaključavanje / *Sealing*



b) Indikacija položaja otvoreno / zatvoreno
Open/close indication by micro-switch



c) Park položaj / *Park position*



TIPOVI PRIKLJUČAKA *TYPES OF TERMINALS*



M8
M8x12, DIN 933
70mm²
12-15 Nm



OS00
2xM5, DIN 912
6-50mm² Cu
2-3 Nm



BT00
M6, DIN 912
10-70mm² Al/Cu
4-5 Nm



P00/70
2xM5, DIN 912
10-70mm² Al/Cu
4-5 Nm



KU00
M10, DIN 912
10-95mm² Al/Cu
10 Nm



P002
2xM5, DIN 912
2x(10-50)mm² Al/Cu
4-5 Nm



Adapter AJ-00 185/100
(za jednu prugu)

Adapter AJ-00 185/100
(for one fuse-switch disconnecter)
(nar. broj / order number: 0Z5080)



Adapter AD-00 185/100
(za dvije pruge-dupli)

Adapter AD-00 185/100
(for two fuse-switch disconnectors)
(nar. broj / order number: 0Z5084)

VELIČINA *SIZE* 1, 2, 3



ORP-...

Tropolno sklopiva
Osigurač - rastavna pruga
(sklapanje sva tri pola istovremeno)

*Three - pole switcable
Fuse - switch disconnecter
(switching of all three poles at the same time)*



ORP-... 3/1

Jednopolno sklopiva
Osigurač - rastavna pruga
(sklapanje svakog pola zasebno)

*One - pole switcable
Fuse - switch disconnecter
(switching each pole separately)*

Osigurač-pruge tip **OP-...**

*Fuse-rails type **OP-...***

za sabirnički sistem
100/185mm
*for busbar system
100/185mm*

Veličine

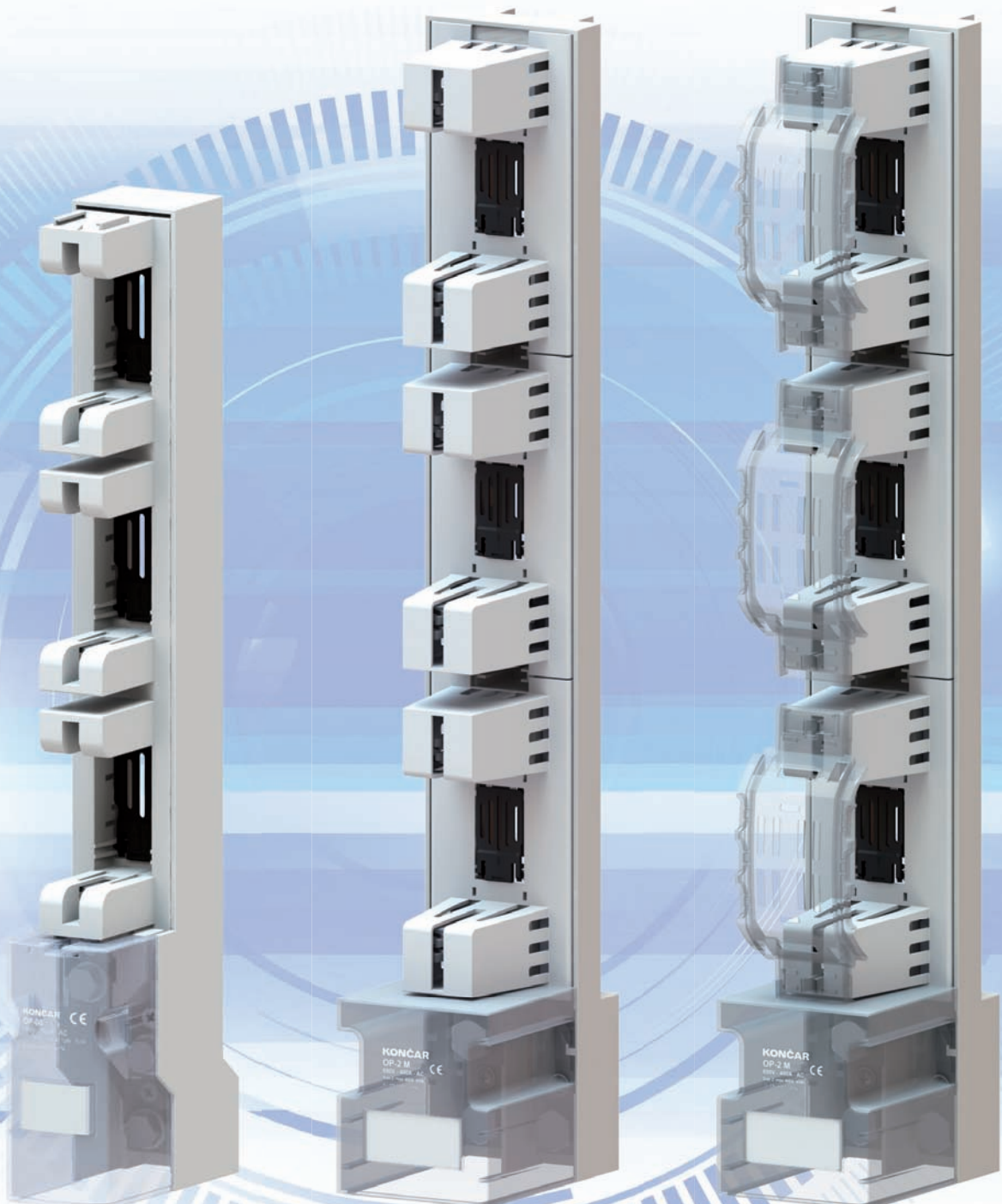
Sizes

00 - 160A

1 - 250A

2 - 400A

3 - 630A



OPIS

Osigurač-pruge tip OP dostupne su u četiri veličine (00-160A; 1-250A; 2-400A; 3-630A). Osigurač-pruge tip OP predstavljaju troljno podnožje u vertikalnoj izvedbi za montažu na sabirnički sistem 100/185mm. Posebno oblikovane zaštitne kape omogućuju sigurno ulaganje i vađenje uložaka pomoću za to predviđene ručice.

Priključci

Ovisno o veličini pruge priključci pruga predviđeni su za direktan priključak kablova (obuhvatna stezaljka OS00, prizma stezaljke P00, P002, stezni okvir BT, KU priključak, tip stezaljke) i za kabele sa kabelskim stopicama (vijak M8/M12). Osigurač pruge standardno se isporučuju s vijčanim priključcima.

Montaža

Osigurač-pruge predviđene su za montažu na sabirnički sistem razmaka 100mm (veličina 00), te za sabirnički sistem razmaka 185mm (veličina 1, 2, 3).

Korištenjem adaptera za vel.00 moguća je ugradnja na sabirnički sistem razmaka 185mm. Mogućnost montaže u vertikalnom i horizontalnom položaju.

DESCRIPTION

Fuse-rails type OP are available in four sizes (00-160A; 1- 250A; 2-400A; 3-630A). Fuse-rails type OP are three-pole fuse-bases in vertical design for mounting on busbar system 100/185mm.

Connections

Depending on the size the connections are designed for direct erminal clamps (clip type terminal OS00, prism clamp P00, prism clamp P002, KU terminal, box terminal BT, V type terminal), and for cable with cable lugs (screw M8/M12). Fuse rails are supplied as standard with screw type of terminal.

Mounting

Fuse- rails can be mounted on 100mm busbar system (size 00) and 185mm busbar system (size 1, 2, 3) . Using additional adapters fuse rails size 00 can be mounted on 185mm busbar system. Mounting in vertical and horizontal position.

VELIČINA *SIZE* 00



OP-00

Izolirana izvedba
Osigurač - pruga

*Isolated version
Fuse - rail*

VELIČINA *SIZE* 1, 2, 3



OP-...

Izolirana izvedba
Osigurač - pruga

*Isolated version
Fuse - rail*



OP-... I

Izolirana izvedba sa zaštitnim poklopcima
Osigurač - pruga

*Isolated version with protective cover
Fuse - rail*

TEHNIČKI PODACI *TECHNICAL DATA*

 Osigurač-rastavne pruge ORP-..., ORP-...3/1, vel. 00 (160A); vel. 1 (250A); vel. 2 (400A); vel. 3 (630A)
Fuse-switch disconnectors ORP-..., ORP-...3/1, size 00 (160A); size 1 (250A); size 2 (400A); size 3 (630A)

IEC / EN 60947

Veličina / Size		00	1		2		3	
Nazivna termička struja / <i>Conventional free air thermal current</i> ¹⁾	I_{th} (A)	160	250		400		630	
Nazivni napon izolacije / <i>Rated insulation voltage</i>	U_t (V)	690	1000		1000		1000	
Nazivni podnosivi udarni napon / <i>Rated withstand impulse voltage</i>	U_{imp} (kV)	6	12		12		12	
Kategorija upotrebe / <i>Utilization category</i>		AC-22B	AC-21B	AC-22B	AC-21B	AC-22B	AC-21B	AC-22B
Nazivna pogonska struja / <i>Rated operational current</i>	I_o (A)	160	250	250	400	400	630	630
Nazivni pogonski napon / <i>Rated operational voltage</i>	U_o (V)	230 AC	690 AC	500 AC	690 AC	500 AC	690 AC	500 AC
Uvjetovana kratkospojna struja / <i>Rated conditional short-circuit current</i>	(kA)	63	70		70		70	
Nazivna frekvencija / <i>Rated frequency</i>	(Hz)	50	50		50		50	
Električka trajnost / <i>Electrical durability</i>		200	200		200		100	
Stupanj zaštite (poklopac zatvoren) / <i>Degree of protection (cover closed)</i>		IP30	IP30		IP30		IP30	
Tip priključka / <i>Type of terminals</i>		4)	M; V ³⁾		M; V ³⁾		M; V ²⁾	
Dopuštena radna temperatu / <i>Permissible ambient temperature</i> ²⁾	(°C)	-25 ÷ +55	-25 ÷ +55		-25 ÷ +55		-25 ÷ +55	
Temperatura skladištenja / <i>Storage temperature</i>	(°C)	-30 ÷ +70	-30 ÷ +70		-30 ÷ +70		-30 ÷ +70	
Stupanj zagađenja / <i>Pollution degree</i>		3	3		3		3	
Težina (bez uložaka osigurača) / <i>Weight (without fuse-links)</i>	(kg)	1,2	4,9		5,3		5,7	

 Osigurač-pruge OP-..., OP-...I, vel. 00 (160A); vel. 1 (250A); vel. 2 (400A); vel. 3 (630A)
Fuse-rails OP-..., OP-...I, size 00 (160A); size 1 (250A); size 2 (400A); size 3 (630A)

IEC / EN 60269

Veličina / Size		00	1	2	3
Nazivna termička struja / <i>Conventional free air thermal current</i> ¹⁾	I_{th} (A)	160	250	400	630
Nazivni napon izolacije / <i>Rated insulation voltage</i>	U_t (V)	690	1000	1000	1000
Nazivni podnosivi udarni napon / <i>Rated withstand impulse voltage</i>	U_{imp} (kV)	6	12	12	12
Nazivna frekvencija / <i>Rated frequency</i>	(Hz)	50	50	50	50
Stupanj zaštite (poklopac zatvoren) / <i>Degree of protection (cover closed)</i>		IP20	IP20	IP20	IP20
Tip priključka / <i>Type of terminals</i>		4)	M; V ³⁾		M; V ³⁾
Dopuštena radna temperatu / <i>Permissible ambient temperature</i> ²⁾	(°C)	-25 ÷ +55	-25 ÷ +55	-25 ÷ +55	-25 ÷ +55
Temperatura skladištenja / <i>Storage temperature</i>	(°C)	-30 ÷ +70	-30 ÷ +70	-30 ÷ +70	-30 ÷ +70
Stupanj zagađenja / <i>Pollution degree</i>		3	3	3	3
Težina (bez uložaka osigurača) / <i>Weight (without fuse-links)</i>	(kg)	0,85	3,4	3,4	4,1

¹⁾ U slučaju montaže osigurač-rastavne sklopke u ormar potrebno je korigirati termičku struju (I_{th} x faktor korekcije), ovisno o broju ugrađenih aparata (vidi Tabelu 1)
In case of mounting of the fuse-switch disconnecter in cabinet, the thermal current should be correcting (I_{th} x derating factor), depending on number of built apparatuses (see Table 1)

²⁾ U slučaju korištenja osigurač-rastavne sklopke na temperaturama +40°C do +55°C, termička struja I_{th} treba biti smanjena za: 5% (41°C-45°C); 10% (46°C-55°C)
In case of using the fuse-switch disconnecter at temperatures +40°C to +55°C, the thermal current I_{th} should be reduced; 5% (41°C-45°C); 10% (46°C-55°C)

Tabela 1 / Table 1

Broj ugrađenih aparata / <i>Number of built apparatuses</i>	2 - 3	4 - 5	6 - 9	>9
Faktor korekcije / <i>Correction factor</i>	0,9	0,8	0,7	0,6

³⁾ M tip / type: Vijak / *Screw M12x30; za/for Kabelska stopica / Cable lug max 300mm²; 30-35Nm*
 V tip / type: 35-240mm² (300mm² na zahtjev / *on request*); 23-25Nm

⁴⁾ Vidi str. 25 / *See page 25*

NARUDŽBENI BROJEVI *ORDER NUMBERS*

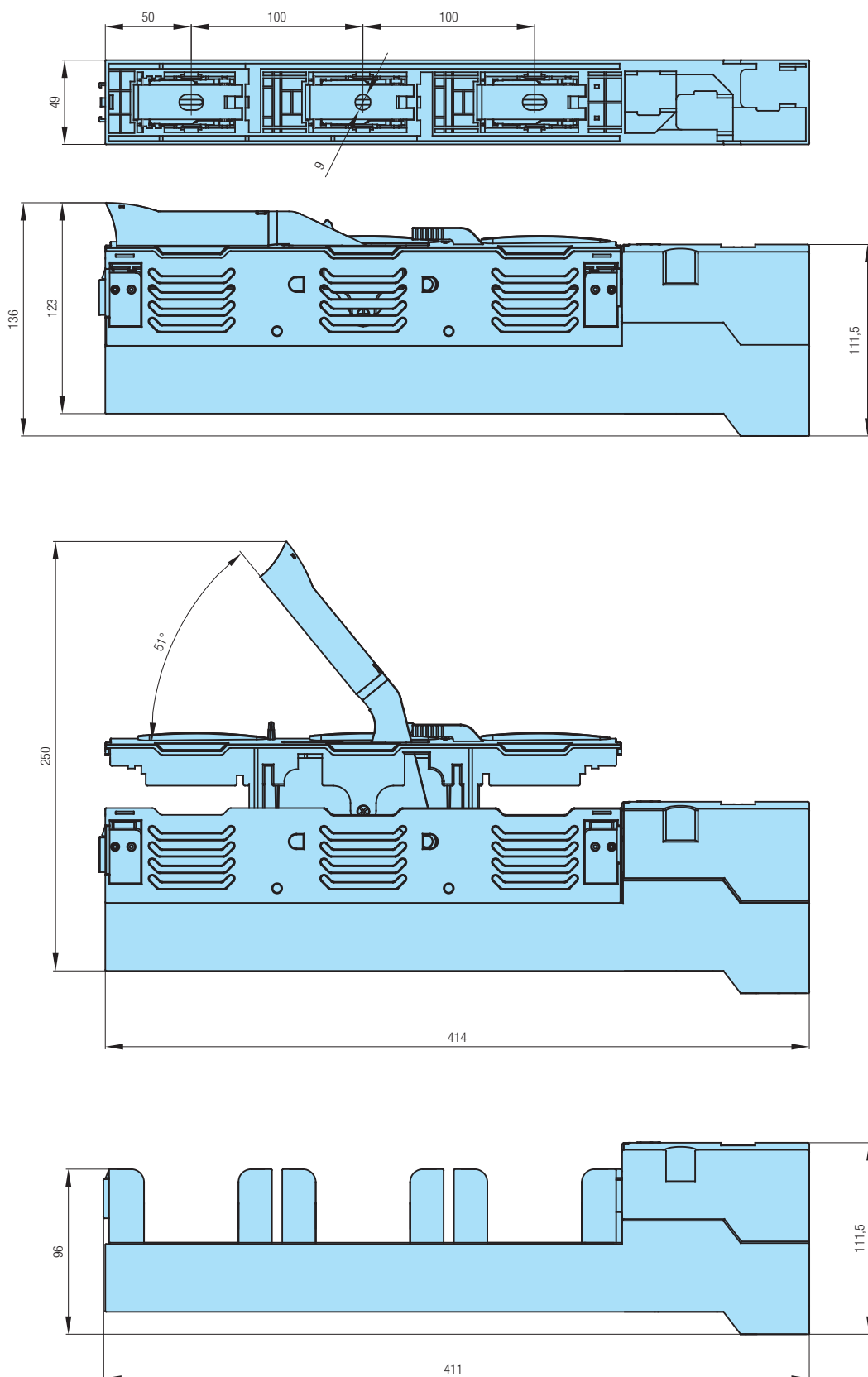
Tip / <i>Type</i>	Opis / <i>Description</i>	Narudžbeni broj / <i>Order number</i>
Osigurač-rastavne pruge / <i>Fuse-switch disconnectors - vertical</i>		
ORP-00	Tropolno sklopiva (s vijčanim priključcima) / <i>Three-pole switchable (with screw type of terminals)</i> ; 160A	OZ3127
ORP-00 BT	Tropolno sklopiva (sa steznim okvirima tipa BT00) / <i>Three-pole switchable (with box terminals type BT00)</i> ; 160A	OZ3132
ORP-00 KU	Tropolno sklopiva (s priključcima tipa KU00) / <i>Three-pole switchable (with terminals type KU00)</i> ; 160A	OZ3133
ORP-00 OS00	Tropolno sklopiva (s obuhvatnim stezaljkama tipa OS00) / <i>Three-pole switchable (with clip/bridge terminals typ OS00)</i> ; 160A	OZ3142
ORP-00 P00	Tropolno sklopiva (s prizma stezaljkama tip P00) / <i>Three-pole switchable (with prism clamps type P00)</i> ; 160A	OZ3227
ORP-00 P002	Tropolno sklopiva (s duplim prizma stezaljkama tip P002) / <i>Three-pole switchable (with double prism clamps type P002)</i> ; 160A	OZ3144
ORP-1 M	Tropolno sklopiva (s vijčanim priključcima) / <i>Three-pole switchable (with screw type of terminals)</i> ; 250A	OZ3157
ORP-1 V	Tropolno sklopiva (s "V" stezaljkama) / <i>Three-pole switchable (with "V" type of terminals)</i> ; 250A	OZ3165
ORP-1 3/1 M	Jednopolno sklopiva (s vijčanim priključcima) / <i>One-pole switchable (with screw type of terminals)</i> ; 250A	OZ3163
ORP-1 3/1 V	Jednopolno sklopiva (s "V" stezaljkama) / <i>One-pole switchable (with "V" type of terminals)</i> ; 250A	OZ3166
ORP-2 M	Tropolno sklopiva (s vijčanim priključcima) / <i>Three-pole switchable (with screw type of terminals)</i> ; 400A	OZ3134
ORP-2 V	Tropolno sklopiva (s "V" stezaljkama) / <i>Three-pole switchable (with "V" type of terminals)</i> ; 400A	OZ3168
ORP-2 3/1 M	Jednopolno sklopiva (s vijčanim priključcima) / <i>One-pole switchable (with screw type of terminals)</i> ; 400A	OZ3159
ORP-2 3/1 V	Jednopolno sklopiva (s "V" stezaljkama) / <i>One-pole switchable (with "V" type of terminals)</i> ; 400A	OZ3167
ORP-3 M	Tropolno sklopiva (s vijčanim priključcima) / <i>Three-pole switchable (with screw type of terminals)</i> ; 630A	OZ3158
ORP-3 V	Tropolno sklopiva (s "V" stezaljkama) / <i>Three-pole switchable (with "V" type of terminals)</i> ; 630A	OZ3170
ORP-3 3/1 M	Jednopolno sklopiva (s vijčanim priključcima) / <i>One-pole switchable (with screw type of terminals)</i> ; 630A	OZ3169
ORP-3 3/1 V	Jednopolno sklopiva (s "V" stezaljkama) / <i>One-pole switchable (with "V" type of terminals)</i> ; 630A	OZ3171
Osigurač-pruge / <i>Fuse-rails</i>		
OP-00	Izolirana izvedba (s vijčanim priključcima) / <i>Isolated version (with screw type of terminals)</i> ; 160A	OZ3128
OP-00 BT	Izolirana izvedba (sa steznim okvirima tipa BT00) / <i>Isolated version (with box terminals type BT00)</i> ; 160A	OZ3129
OP-00 KU	Izolirana izvedba (s priključcima tipa KU00) / <i>Isolated version (with terminals type KU00)</i> ; 160A	OZ3130
OP-00 OS00	Izolirana izvedba (s obuhvatnim stezaljkama tipa OS00) / <i>Isolated version (with clip/bridge terminals typ OS00)</i> ; 160A	OZ3145
OP-00 P00	Izolirana izvedba (s prizma stezaljkama tip P00) / <i>Isolated version (with prism clamps type P00)</i> ; 160A	OZ3146
OP-00 P002	Izolirana izvedba (s duplim prizma stezaljkama tip P002) / <i>Isolated version (with double prism clamps type P002)</i> ; 160A	OZ3148
OP-1 M	Izolirana izvedba (s vijčanim priključcima) / <i>Isolated version (with screw type of terminals)</i> ; 250A	OZ3136
OP-1 V	Izolirana izvedba (s "V" stezaljkama) / <i>Isolated version (with "V" type of terminals)</i> ; 250A	OZ3178
OP-1 M I	Izolirana izvedba sa zaštitnim poklopcima (s vijčanim priključcima) / <i>Isolated version with protective covers (with screw type of terminals)</i> ; 250A	OZ3172
OP-1 V I	Izolirana izvedba sa zaštitnim poklopcima (s "V" stezaljkama) / <i>Isolated version with protective covers (with "V" type of terminals)</i> ; 250A	OZ3174
OP-2 M	Izolirana izvedba (s vijčanim priključcima) / <i>Isolated version (with screw type of terminals)</i> ; 400A	OZ3135
OP-2 V	Izolirana izvedba (s "V" stezaljkama) / <i>Isolated version (with "V" type of terminals)</i> ; 400A	OZ3179
OP-2 M I	Izolirana izvedba sa zaštitnim poklopcima (s vijčanim priključcima) / <i>Isolated version with protective covers (with screw type of terminals)</i> ; 400A	OZ3182
OP-2 V I	Izolirana izvedba sa zaštitnim poklopcima (s "V" stezaljkama) / <i>Isolated version with protective covers (with "V" type of terminals)</i> ; 400A	OZ3183
OP-3 M	Izolirana izvedba (s vijčanim priključcima) / <i>Isolated version (with screw type of terminals)</i> ; 630A	OZ3137
OP-3 V	Izolirana izvedba (s "V" stezaljkama) / <i>Isolated version (with "V" type of terminals)</i> ; 630A	OZ3180
OP-3 M I	Izolirana izvedba sa zaštitnim poklopcima (s vijčanim priključcima) / <i>Isolated version with protective covers (with screw type of terminals)</i> ; 630A	OZ3184
OP-3 V I	Izolirana izvedba sa zaštitnim poklopcima (s "V" stezaljkama) / <i>Isolated version with protective covers (with "V" type of terminals)</i> ; 630A	OZ3185

Napomena: Spojni materijal (vijci, stezaljke) isporučuje se zajedno sa prugama.

Note: Connection materials (screws, clamps) are supplied together with stripes.

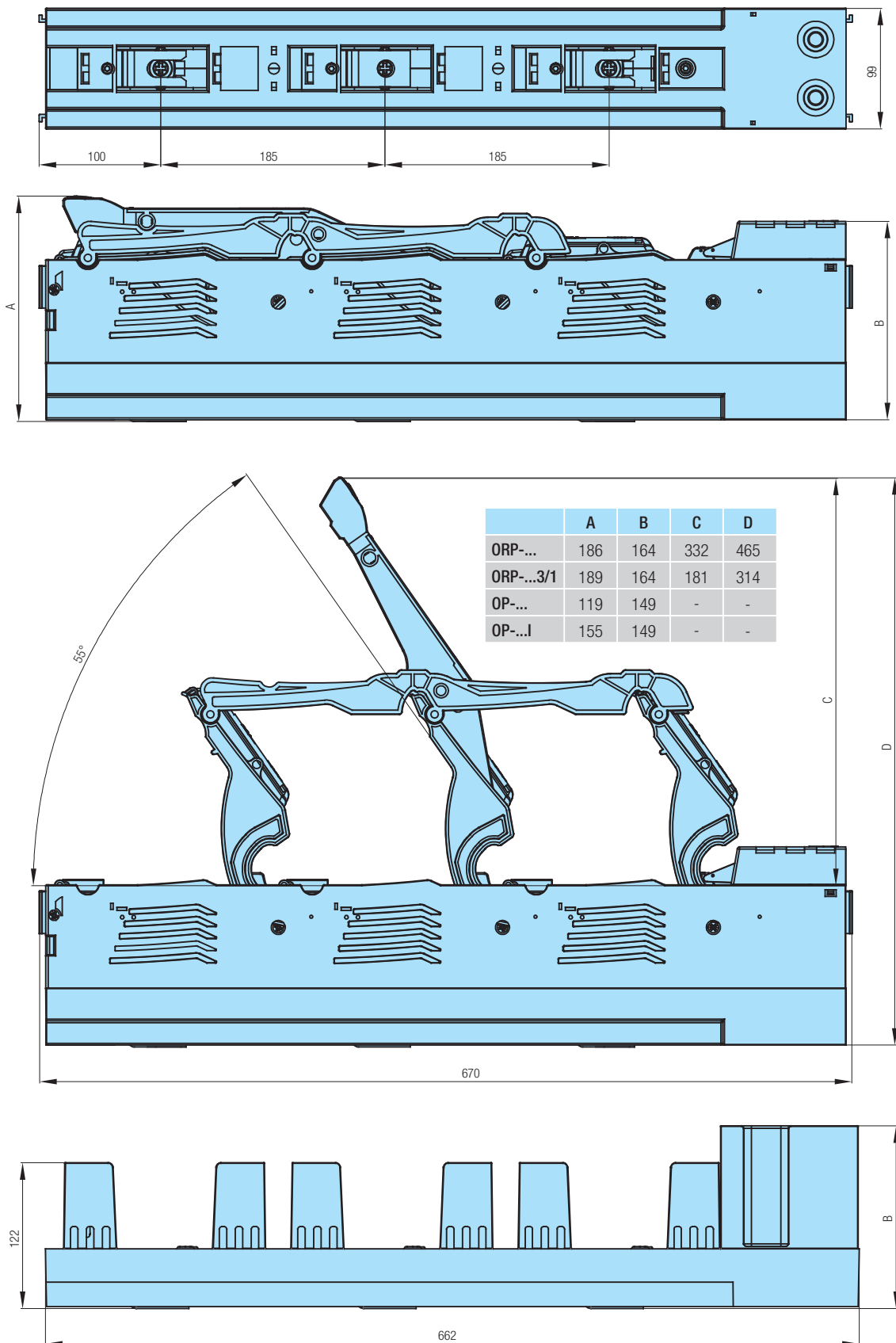
MJERNE SKICE *DIMENSIONAL DRAWINGS* (mm)

Veličina / Size: 00



MJERNE SKICE *DIMENSIONAL DRAWINGS* (mm)

Veličina / Size: 1, 2, 3



PRIBOR ZA ORP/OP-1, 2, 3 *ACCESSORIES FOR ORP/OP-1, 2, 3*



«V» stezaljka 35-240mm²
«V» clamp 35-240mm²

Narudžbeni broj T14168
Order number



Umetak za transformator
Spacer sleeve

Narudžbeni broj 654503
Order number



Poklopac za priključak sa gornje strane
Cover for top side connection

Narudžbeni broj OP2694
Order number



Poklopac za izoliranu prugu tip OP
Cover for isolated fuse-rail type OP

Narudžbeni broj OP2727
Order number



Poklopac za produžene priključke
Cover for extended connections

Narudžbeni broj OP2693
Order number



Mikrosklopka za indicaciju pruge
(uklopljena / isključena)
Switch position indicator

Narudžbeni broj 654501
Order number



Dodatna natpisna pločica - gornja
Designation plate - top

Narudžbeni broj OP2699
Order number



Strujni transformatori (75A-600A primarna struja;
1A ili 5A sekundarna struja)
Current transformers (75A-600A primary current;
1A or 5A secondary current)



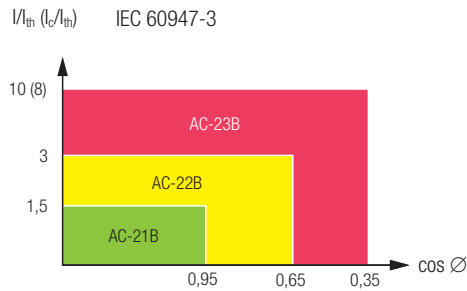
Spojnicica za paralelni spoj pruga (2x...)
Connector for parallel connection (2x...)

Narudžbeni broj OP2700
Order number

PRILOG (izbor za uporabu) *ADDITION (selection for use)*

Uvjeti mreže za ispitivanje prekidne moći osigurač-rastavnih pruga
Conditions for testing making and breaking capacities of fuse-switch disconnectors

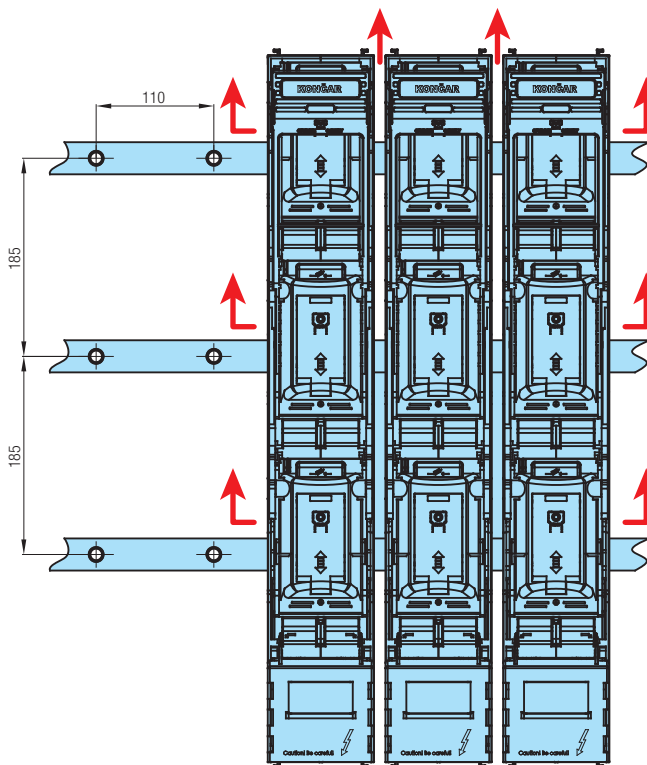
I - uklopna struja / *making current*
 I_c - isklopna struja / *breaking current*
 I_{th} - nazivna termička struja / *rated thermal current*



AC-23B: sklapanje motornih pogona i ostalih velikih induktivnih tereta / *Switching of motor loads or other highly inductive loads*

AC-22B: sklapanje mješovitih otporno-induktivnih tereta / *Switching of mixed resistive and inductive loads, including moderate overloads*

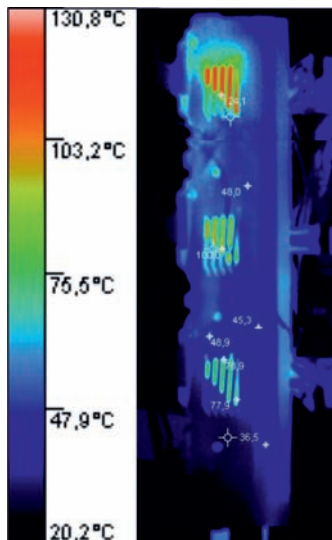
AC-21B: sklapanje otpornih tereta uključujući i slabo induktivne terete / *Switching of resistive loads, including moderate overloads*



Montaža pruge na razmak 110mm ukoliko za to ima mogućnosti zbog dodatnog hlađenja pruga!

Mounting stripes at a spacing 110mm if this is possible due to additional cooling!

Izlaz toplog zraka
 Warm air

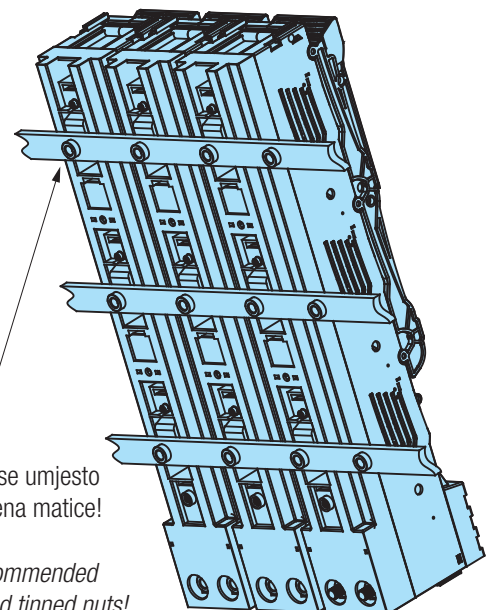


Termalna slika osigurač-rastavne pruge sa ispitivanja!

Thermal picture of fuse-switch disconnector on the test!

Zbog pouzdanijeg spoja preporuka je da se umjesto prolaznih rupa koriste uprešane pokositrena matice!

Because more reliable connection is recommended that instead of passing hole using swaged tinned nuts!



KABELSKI RAZVODNI ORMARI *CABLE DISTRIBUTION CABINETS*

OPĆENITO

Poliesterski ormari izrađuju se od poliestera ojačanog staklenim vlaknima postupkom prešanja. Tako izrađeni ormari imaju veliku otpornost prema atmosferskim utjecajim, UV zrakama, te mehaničkim oštećenjima.

Zbog kvalitete materijala, te same konstrukcije ormara koja omogućava optimalnu ventilaciju, poliesterski ormari mogu se koristiti u ekstremnim klimatskim uvjetima (planinske regije, obalna područja, itd.).

Sama konstrukcija ormara omogućuje brzu i jednostavnu montažu, te brzu i jednostavnu zamjenu oštećenih dijelova. Vrata ormara otvaraju se preko 180° i zaključavaju u tri točke. Sigurnost upotrebe osigurana je dobrim električnim svojstvima materijala.

Ormari su predviđeni za ugradnju na otvorenom te su vanjske površine ormara izrađene u antiplakatoj izvedbi. Izrađeni su u skladu s normama EN 60439-5 i EN 50298.

OPIS

U svojoj ponudi nudimo i poliesterske ormare različitih dimenzija koji mogu biti:

- neopremljeni
- opremljeni sa sabirnicama
- kompletno opremljeni
- Samostojeći razvodni ormari tip SRO
- Samostojeći priključno-mjerni ormari tip SPMO
- Samostojeći priključno-mjerni ormari za poluizravno mjerenje tip SPMO-P
- Kućni priključno-mjerni ormari tip KPMO
- Etažni razdjelnik tip ER
- Sekcijski priključno-mjerni ormar
- Kućni priključni ormari tip KPO
- Mrežni razdjelni ormari tip MRO
- Ormari javne rasvjete
- Ormari za fotonaponske elektrane

Također u ponudi nudimo i kompletno opremljene metalne ormare za različite potrebe (gradilišni ormari, priključno mjerni ormari, ...)

Napomena:

Više o ormarima u katalogu „Kabelski ormari i komponente“

GENERAL

Polyester cabinets are made from glass fiber reinforced polyester molding processes. That made cabinets have a high resistance to weathering, UV light and mechanical damage.

Due to the quality of materials and the construction of cabinets for optimal ventilation, polyester cabinets can be used in extreme climatic conditions (mountain regions, coastal areas, etc.).

The structure of the closet allows quick and easy installation, and quick and easy replacement of damaged parts. The closet doors open through 180 ° and locked in three points. Safety of use is ensured by good electrical properties of materials.

Cabinets are designed for outdoor installation and the outer surface of the closet made in antiplakatoj performance.

They are made in accordance with the standards EN 60439-5 and EN 50298.

DESCRIPTION

We can offer also polyester distribution cabinets of various sizes which can be :

- *unequipped*
- *equipped with busbars*
- *fully equipped*
- *freestanding distribution cabinets type SRO*
- *freestanding power take measuring cabinets type SPMO*
- *freestanding power take measuring cabinets for semi-direct metering type SPMO*
- *home- power take measuring cabinets type KPMO*
- *exclusive distributor type ER*
- *sectional power take measuring cabinets*
- *service connection cabinets type KPO*
- *network distribution cabinets type MRO*
- *cabinets of public lighting*
- *cabinets for photovoltaic power*

Also we offer a fully equipped metal cabinets for different purposes (construction site cabinets, connection terminal cabinets,...)

Note:

For more on the cabinets see in the catalog "Cable cabinets and components"

KABELSKI RAZVODNI ORMARI *CABLE DISTRIBUTION CABINETS*



Tip / Type „SRO“



Tip / Type „SPM0“



Tip / Type „KPM0“



Tip / Type „KPM0“

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Pridržavamo pravo promjene podataka. Ostale podatke dajemo na upit.
We keep the right to change the data. Other data are given on request.

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