

# Central break disconnectors and earthing devices

Series CB-N and CB-N2

## Pantograph disconnectors Series PD

- Suitable for all climatic conditions
- High-performance contact system
- High-voltage terminals according to client's request
- Reliable motor-operated or manual drive with padlocking possibility
- Simple and fast installation at site
- Minimum maintenance

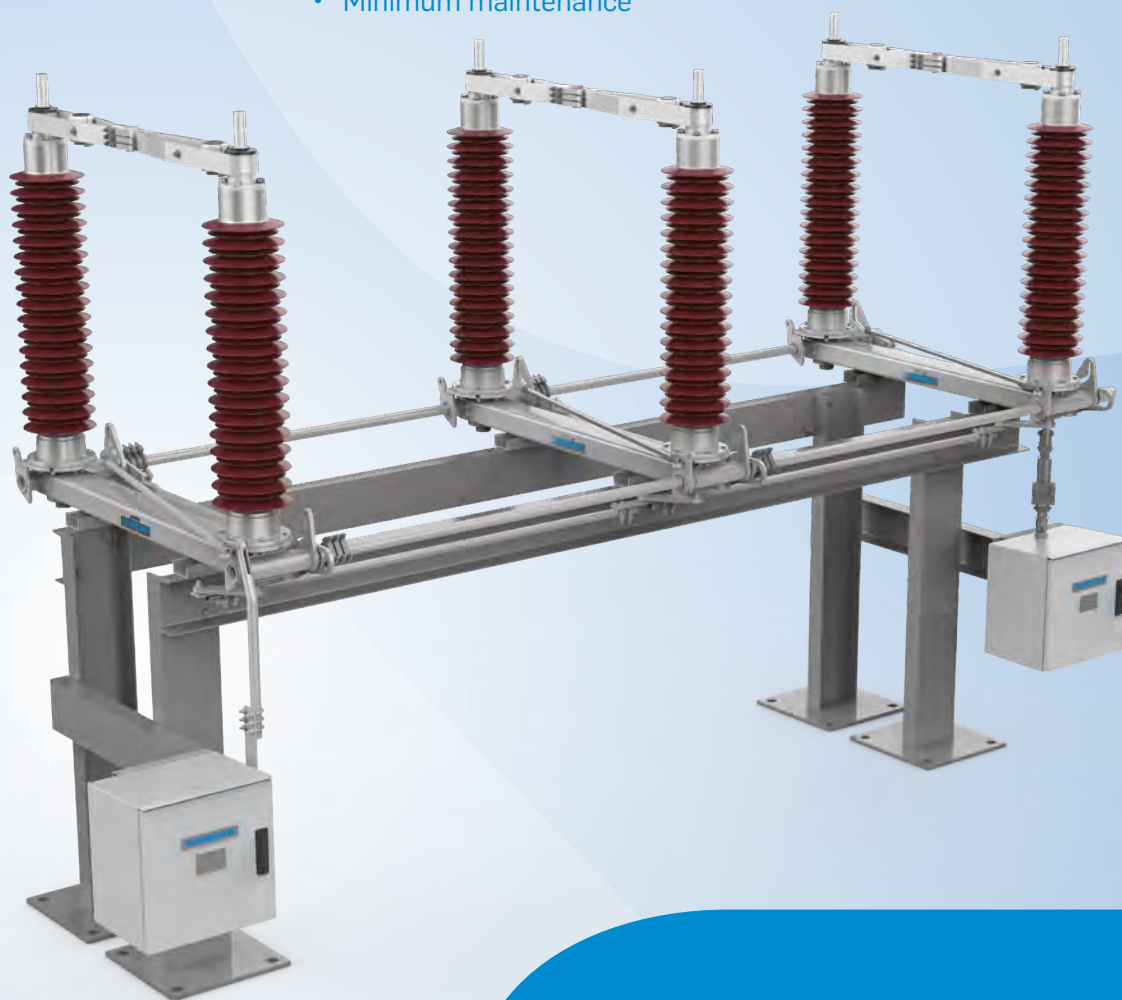


Figure 1. Central-break disconnector series CBe-N2 with one earthing blade – disconnector in closed position

**KONČAR**  
SWITCHGEAR

## 1. INTRODUCTION

KONČAR has been a manufacturer of high-voltage power transmission equipment for over 70 years.

The technical solutions of the disconnecter series are the result of our own research and development, as well as many years of experience. The disconnectors and earthing devices were type tested in certified international laboratories.

## 2. DESCRIPTION

Depending on the type and rated voltage, high voltage disconnectors are produced as single-pole or three-pole units. Up to a nominal voltage of 245 kV, all three poles can be operated by a single drive (three-pole gang operation).

The disconnector base is made of steel profiles, with high-quality anticorrosive protection.

Either one or two earthing blades can be attached to each pole of the disconnector. Earthing devices are manufactured also as self-standing units. Various forms of bus connections (bolts and flanges according to the customer's choice) are available on request.

Motor or manual drives with padlocking possibility in both operating positions are available for operation of main blades and earthing blades.

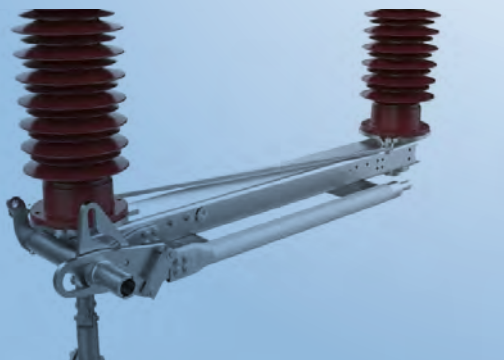
Disconnectors are delivered in assemblies, which enable easy and simple installation, as well as simple adjustment at site.

For transferring load from one bus system to another, the disconnector can be equipped with bus-transfer switching contacts.

Simple part design and high quality materials ensure high operation reliability with minimal maintenance requirements.



*Fig. 2. Central break disconnector current path in closed position*



*Fig. 3 Earthing blade in open position*



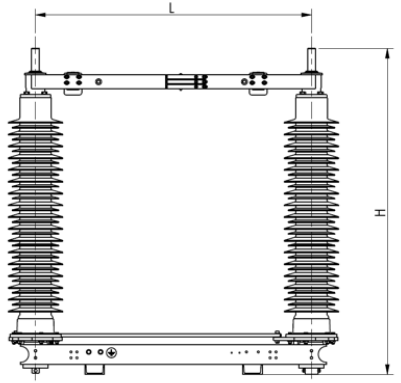
*Figure 4. Electric motor drive type MP-100, KONČAR*

### NOTICE:

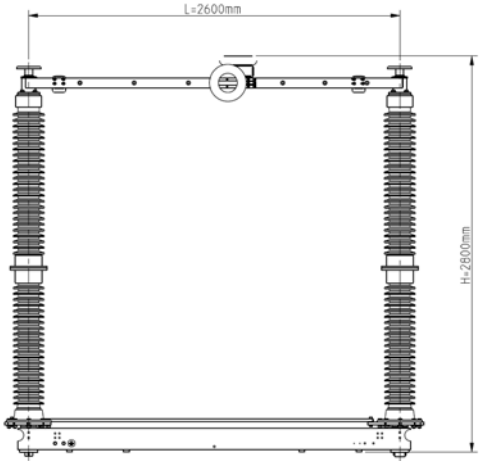
Technical characteristics and dimensional drawings of electric motor or manual drive are available on request

3. DIMENSIONS OF THE DISCONNECTORS SERIES CB AND CBn

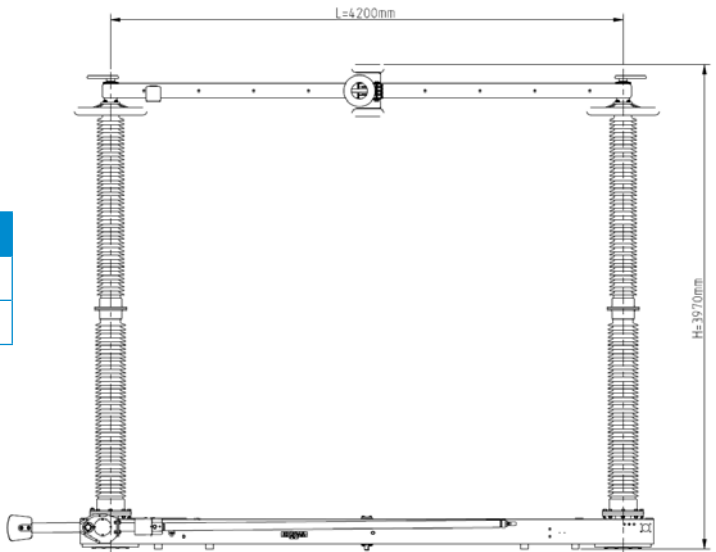
Disconnecter 72,5 – 170 kV		
Type	L (mm)	H (mm)
CB-N2 72,5-I	930	1210
CB-N2 123-I	1400	1660
CB-N2 145-I	1700	1940
CB-N2 170-I	1850	2140



Disconnecter 245 kV		
Type	L (mm)	H (mm)
CB-N2 245-I	2600	2800

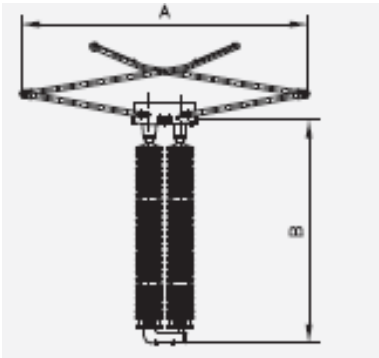


Disconnecter 420 kV		
Type	L (mm)	H (mm)
CB-N 420-I	4200	3970



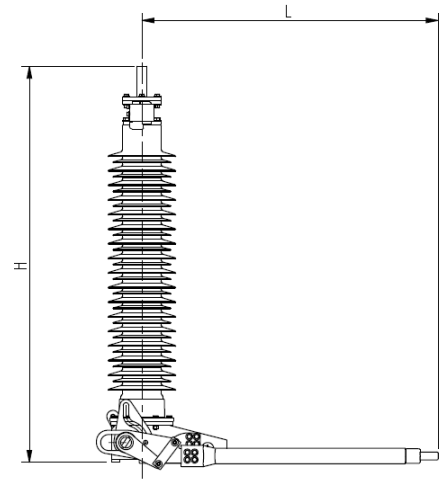
4. DIMENSIONS OF THE PANTOGRAPH DISCONNECTORS SERIES PD

	72 kV	123 kV	245 kV
A (mm)	1400	2125	3000
B (mm)	1210	1940	2750

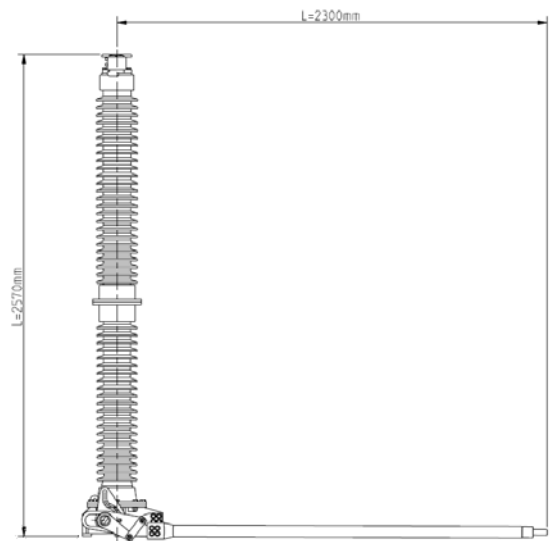


5. EARTHING SWITCH OVERALL DIMENSIONS

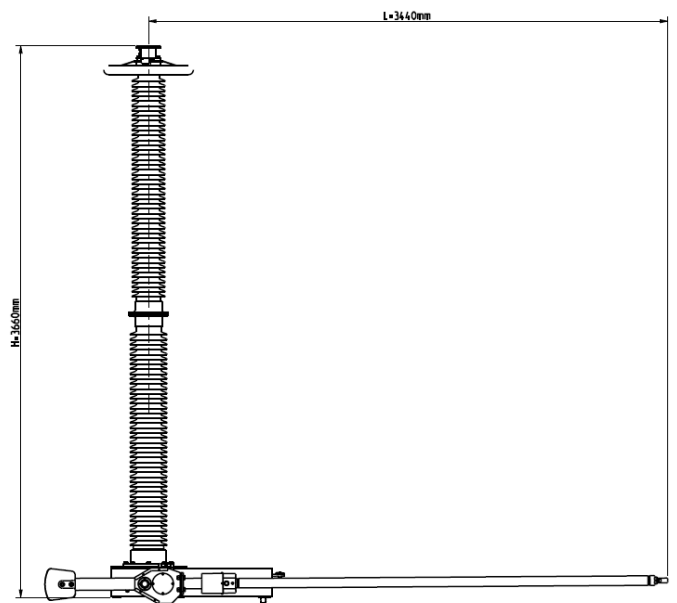
Earthing switch 72,5 – 170 kV		
Type	L (mm)	H (mm)
e-N2 72,5-I	770	1180
e-N2 123-I	1220	1630
e-N2 145-I	1500	1910
e-N2 170-I	1700	2110



Earthing switch 245 kV		
Type	L (mm)	H (mm)
e-N2 245-I	2300	2570



Earthing switch 420 kV		
Type	L (mm)	H (mm)
e-N 420-I	3440	3660



## 6. BASIC TECHNICAL DATA - CENTRAL BREAK DISCONNECTORS SERIES CB AND CBn

Series N2, N – central break	CB; CBe; CBee
Rated voltage	72,5 - 420 kV
Rated normal current	... 4000 A
Rated peak withstand current	... 125 kA
Rated short-time withstand current (3 s)	... 50 kA
Opening time (main contacts)	≥ 7s
Closing time (main contacts)	≥ 7s
Mechanical endurance class	M2
Control voltage	110 VDC, 220 VDC Other control voltages on request
Motor voltage	110VDC, 220VDC, 230VAC Other motor drive voltages on request
Temperature range	-40 ... + 50 °C
Applicable norms	IEC 62271-1; IEC 62271-102



Figure 5. Central-break disconnecter series CBBe-N2 with one earthing blade installed at site (Slovakia)



## 7. BASIC TECHNICAL DATA – PANTOGRAPH DISCONNECTORS SERIES PD

Pantograph disconnector	CB; CBe; CBee
Rated voltage	72,5 - 245 kV
Rated normal current	... 4000 A
Rated peak withstand current	... 125 kA
Rated short-time withstand current (3 s)	... 50 kA
Opening time (main contacts)	≥ 7s
Closing time (main contacts)	≥ 7s
Mechanical endurance class	M2
Control voltage	110 VDC, 220 VDC Other control voltages on request
Motor voltage	110VDC, 220VDC, 230VAC Other motor drive voltages on request
Temperature range	-40 ... + 50 °C
Applicable norms	IEC 62271-1; IEC 62271-102



Figure 6. Pantograph disconnectors series PD in operation, hydro power plant Zakučac, Croatia

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Series CB-N and CB-N2

## Pantograph disconnectors

Series PD

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### 8. ORDERING DATA

Please, contact the manufacturer. In the request, it is important to submit all known technical data, as well as data regarding the method of operation, control voltage, etc.

#### 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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