ELEKTROPOMŮCKY PARDUBICE s.r.o.

ISO 9001, ISO 14001

CATALOGUE OF PRODUCTS

PROTECTIVE AND WORK SAFETY AIDS FOR ENERGETICS

PRODUCER

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No. 18/07/14EN

SUMMARY

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GLOW TUBE TESTERS HV

General description:

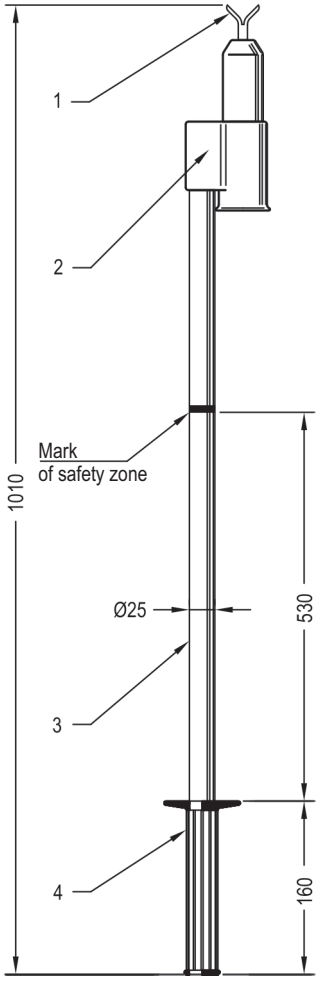
This type of testers is used for detection of high voltage with a frequency of 50 Hz on electrical equipment. Voltage presence on a contact point uniquely signalized by flashing glow tube. This type of testers is designed for indoor use with lighting intensity up to 1,000 Lx, which means that these testers are intended for use inside of transformer stations as a component of compulsory equipment according to PNE 381981. These testers do not require any power supply for their operation.

Operating conditions:

The testers are designed for indoor use with temperature ranging from -25°C to +55°C with lighting intensity up to 1,000 Lx.

Maintenance instruction:

The operator is obliged to present the tester for periodical tests in prescribed time intervals (according to PNE 359700) and to check regularly the external mechanical state and the way of storing in the time between periodical tests.
The testers must be kept clean, dry, non-deformed, mechanically intact and complete.



TYPE	NOMINAL VOLTAGE OF TESTER
101 006	7,2kV
101 010	12kV
101 022	25kV
101 035	38,5kV

1) Point of contact
2) Signalling head
3) Insulating rod
4) Handle with collar

SPECIFICATION

- The product complies with the PNE 359700 and ČSN EN 61243-1
- The capacitance tester, frequency 50 Hz
- Group indication - III
- Climate class: N (-25°C to + 55°C)
- Design category: L - no extended touch electrodes
- Weight: 0.6 kg
- The tester is delivered in case
- The tester does not require any power supply for its operation

HV, EHV TESTERS WITH COMBINED SIGNALLING

General description:

This type of testers is used for high voltage detection with a frequency of 50 Hz on electrical equipment. Voltage presence on a contact point is uniquely signalized by optical and sound signal. The sound signal is generated by piezoceramic sounder with shrill fluctuating tone. The optical signaling consist of two flashing bright red LEDs. Proper functioning of the tester including the condition of its power supply cells is controlled by a testing button. While pressed, the tester must deliver both, an optical and sound signal. The tester is equipped by built-in electrical circuit permanently monitoring the condition of power supply cells. If their voltage drops below the limit set, the circuit automatically blocks the optical and sound signaling. Subsequently, the tester does not deliver any signal when the testing button is pressed. In this case it is necessary to replace the power supply cells.

Operating conditions for 102 type testers:

The testers are designed for indoor and outdoor operation with regular climatic conditions (regular climatic category with temperatures ranging from -25°C to +55°C). However, the testers can only be used outdoors when the atmospheric conditions comply with the conditions which allow - according to safety regulations - to work on live parts of HV and EHV under voltage. It means that they may not be used in rain, fog, or snow.

Operating conditions for 103 type testers:

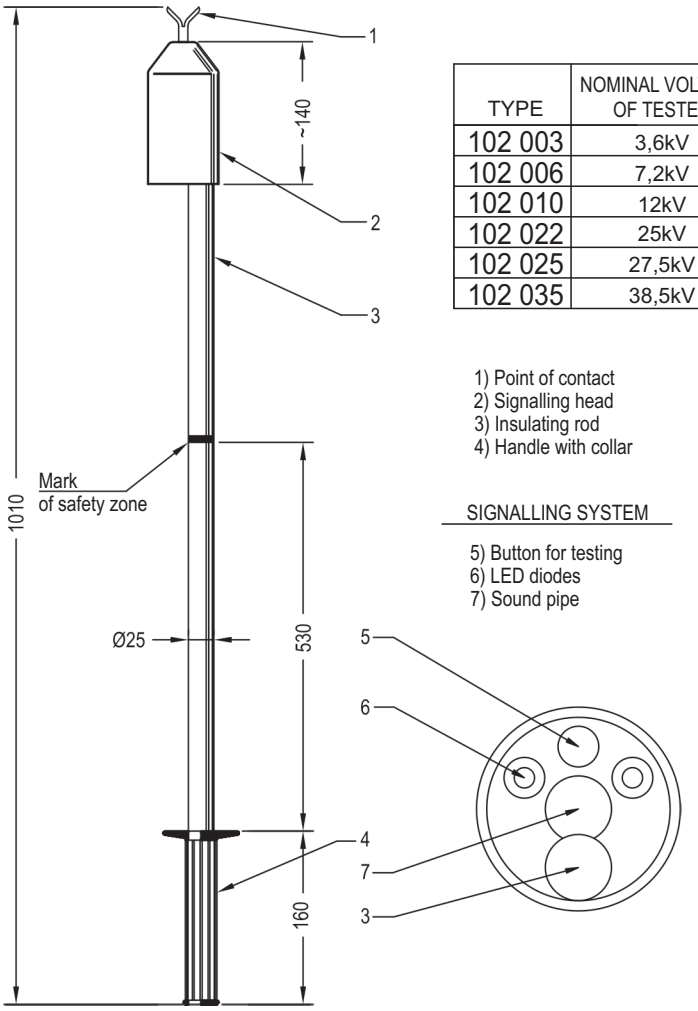
The testers are designed for outdoor operation without any limitation (it means even in rain, fog and snow), and for indoor operation in higher humidity areas. The testers are designed for regular climatic category (-25°C to +55°C).

Power supply unit:

The tester is equipped with build-in power supply unit consisting of four 1.5 V power supply cells (AA batteries). The condition of power supply cells is detected by a testing button. The power supply cells can be replaced after the contact point is unscrewed and upper cover of indication head is removed. Durability of the batteries is app. 2 years if used under regular conditions. After this time period we recommend to change the batteries (usage of alkaline batteries is highly recommended).

Maintenance instruction:

The operator is obliged to present the tester for periodical tests in prescribed time intervals (according to PNE 359700) and to check regularly the external mechanical state and the way of storing in the time between periodical tests.
The testers must be kept clean, dry, non-deformed, mechanically intact and complete.



TYPE	NOMINAL VOLTAGE OF TESTER
102 003	3,6kV
102 006	7,2kV
102 010	12kV
102 022	25kV
102 025	27,5kV
102 035	38,5kV

1) Point of contact
2) Signalling head
3) Insulating rod
4) Handle with collar

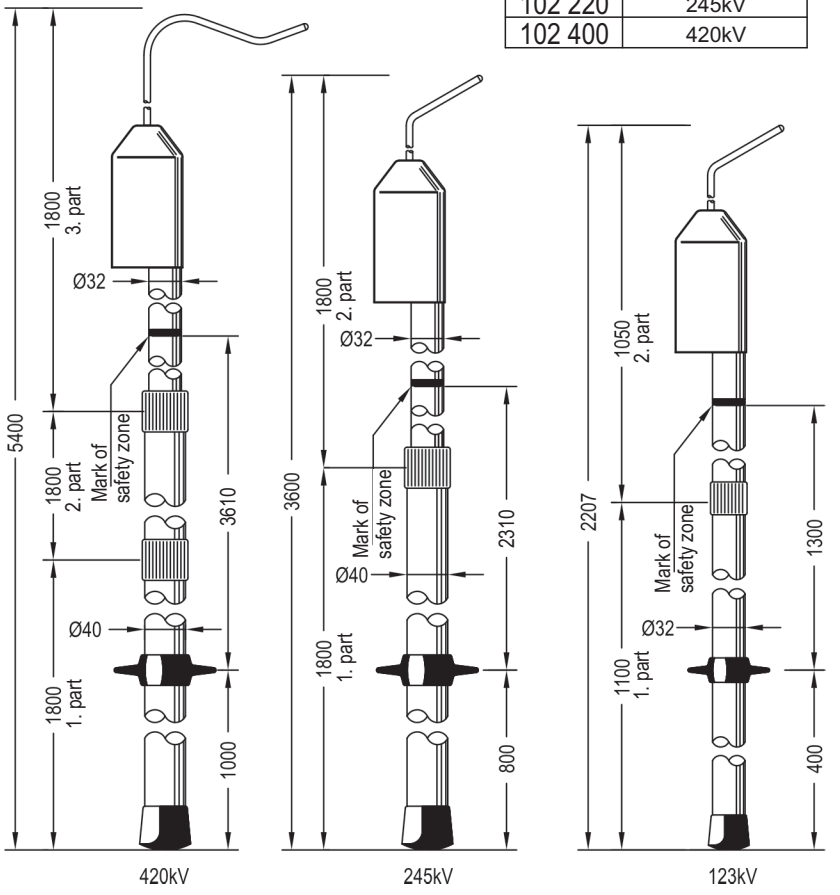
SIGNALLING SYSTEM

5) Button for testing
6) LED diodes
7) Sound pipe

SPECIFICATION

- The product complies with the PNE 359700 and ČSN EN 61243-1
- Nominal voltage: 3,6 kV – 38,5 kV
- The capacitance tester, frequency 50 Hz
- Power supply: 1.5 V AA batteries - 4 pcs
- Use category: internal
- Climate class: N (-25°C to + 55°C)
- Design category: L - no extended touch electrodes, Group indication - III
- Weight: 0.7 kg
- The tester is delivered in case

TYPE	NOMINAL VOLTAGE OF TESTER
102 110	123kV
102 220	245kV
102 400	420kV

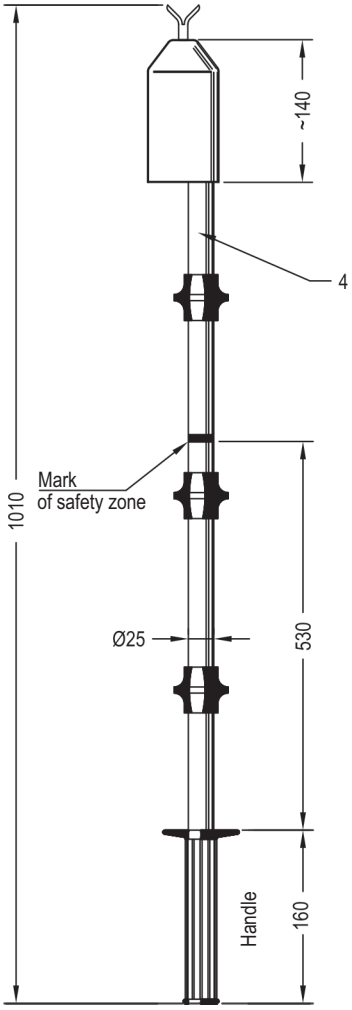


SPECIFICATION

- The product complies with the PNE 359700 and ČSN EN 61243-1
- Nominal voltage 110 kV – 420 kV
- The capacitance tester, frequency 50 Hz
- Power supply: 1.5 V AA batteries - 4 pcs
- Use category: internal
- Climate class: N (-25°C to + 55°C)
- Design category: L - no extended touch electrodes, Group indication - III
- Weight: 102110 – 1,5 kg, 102220 – 2,1 kg, 102400 – 3,2 kg
- The tester is delivered in case

HV TESTERS WITH COMBINED SIGNALLING
- outdoor design

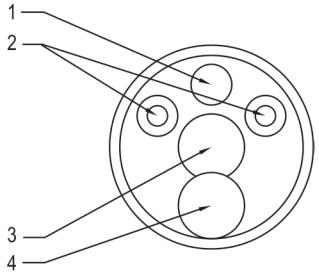
type 103 ...



TYPE	NOMINAL VOLTAGE OF TESTER
103 003	3,6kV
103 006	7,2kV
103 010	12kV
103 022	25kV
103 025	27,5kV
103 035	38,5kV

SIGNALLING SYSTEM

1) Button for testing
2) LED diodes
3) Sound pipe
4) Insulating rod



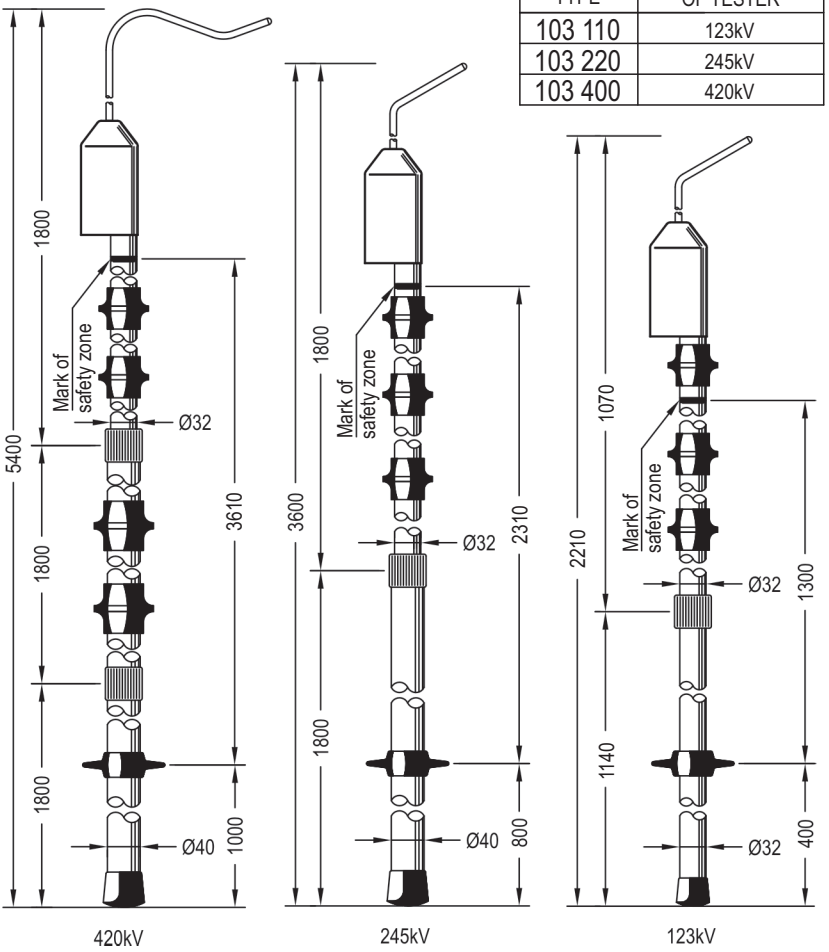
SPECIFICATION

- The product complies with the PNE 359700 and ČSN EN 61243-1
- Nominal voltage: 3,6 kV – 38,5 kV
- The capacitance tester, frequency 50 Hz
- Power supply: 1.5 V AA batteries - 4 pcs
- Use category: outdoor
- Climate class: N (-25°C to + 55°C)
- Design category: L - no extended touch electrodes, Group indication - III
- Weight: 0.7 kg
- The tester is delivered in case

EHV TESTERS WITH COMBINED SIGNALLING
- outdoor design

type 103 ...

TYPE	NOMINAL VOLTAGE OF TESTER
103 110	123kV
103 220	245kV
103 400	420kV



SPECIFICATION

- The product complies with the PNE 359700 and ČSN EN 61243-1
- Nominal voltage 110 kV – 420 kV
- The capacitance tester, frequency 50 Hz
- Power supply - 1.5 V AA batteries - 4 pcs
- Use category: outdoor
- Climate class: N (-25°C to + 55°C)
- Design category: L - no extended touch electrodes, Group indication - III
- Weight: 103110 – 1,5 kg, 103220 – 2,1 kg, 103400 – 3,2 kg
- The tester is delivered in case

SINGLE-POLE PHASE COMPARATOR HV

General description:

The phase comparator is designed for determining phase balance (unbalance) on the high voltage (HV) electrical devices with 38.5 kV nominal voltage at 50 Hz frequency.
This is a new type of product, which works based on comparing and assessing of phases´ shifts by means of electronic circuitry under the microprocessor control. Unlikely preliminary types, it is a single pole device, i.e. it is composed from single insulation bar with the indicator. Consequently, such a device does not require any connecting circuitry for functioning.
The determination of phase´s balance (unbalance) is unambigously signalized by the three highly illuminative LED-light in the way as follows:

- Yellow continuous light - phase comparator is ready for use
- Yellow flashing light - phase comparator has read up and downloaded data of a given phase
- Green continuous light - assessing phase balance (-40 ° to +40 °)
- Red continuous light - assessing unbalance phase

Operating conditions - type 111

The phase comparator sets are designed for use in both indoor and outdoor environment at the standard atmospheric conditions (-25°C to +55°C). Using these devices outdoors is only allowed when the atmospheric conditions meet the work safety ordinances permiting the operation on the live parts of the HV appliances under voltage. It means that they may be used in rain, fog, or snow.

Operating conditions - type 113

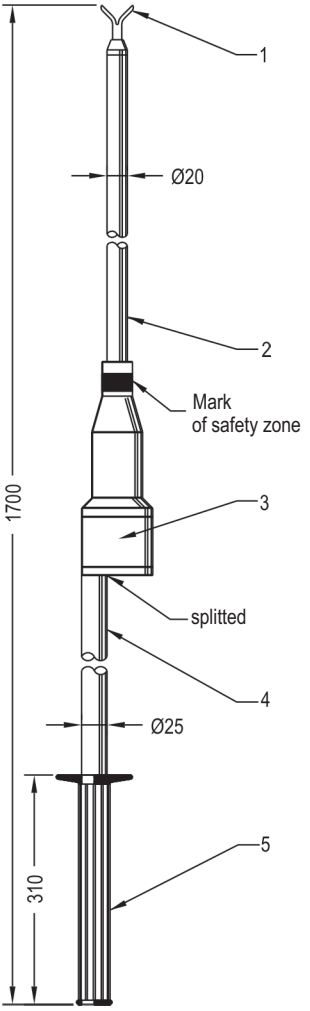
The testers are designed for outdoor operation without any limitation (it means even in rain, fog and snow), and for indoor operation in higher humidity areas. The testers are designed for regular climatic category (-25°C to +55°C).

Power supply unit:

The phase comparator set is equipped with build-in power supply unit consisting of two units LS 14500 3,6 V lithium batteries. The current charge status of batteries is checked by testing press-button.

SINGLE-POLE
PHASE COMPARATOR HV

type 111 ...



TYPE	NOMINAL VOLTAGE
111 006	7,2-12kV
111 022	25kV
111 035	38,5kV

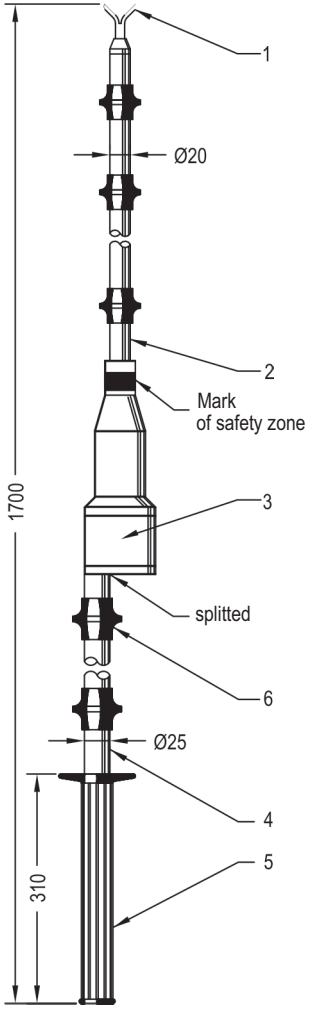
1) Point of contact
2) Contact electrode
3) Signalling head
4) Insulating rod
5) Handle with collar

SPECIFICATION

- The product meets PNE 359700 and ČSN EN 61481
- Power supply - lithium batteries type LS 14500 3,6V - 2 pcs
- Weight - 1,1kg
- The product is delivered in case

SINGLE-POLE PHASE COMPARATOR HV
- outdoor design

type 113 ...



TYPE	NOMINAL VOLTAGE
113 006	7,2-12kV
113 022	25kV
113 035	38,5kV

1) Point of contact
2) Contact electrode
3) Signalling head
4) Insulating rod
5) Handle with collar
6) Insulator against rain

SPECIFICATION

- The product meets PNE 359700 and ČSN EN 61481
- Power supply - lithium batteries type LS 14500 3,6V - 2 pcs
- Weight - 1,1kg
- The product is delivered in case

SHORT-CIRCUITING SETS LV, HV, EHV 1 - 420 kV

General description:

Short-circuiting sets are designed for short-circuiting and grounding of electrical circuits, usually of three phases in equipment with non-insulated or indirectly grounded node. This device is designed for Cu and Al conductors.
The short-circuiting stes consist of three basic parts:
- conductors clamps and grounding clamps
- short-circuiting ropes
- insulating rods.

Conductor and grounding clamps:

These clamps are used to connect the short-circuiting set to the electric line of a circular, flat and tubular cross-section, or to short-circuiting globular points. These clamps are made of copper or aluminium alloys. The clamps made of copper alloy are tin-plated.

Short-circuiting ropes:

The ropes ended with cable lugs according to DIN 46235 are used to ensure conductive connection of conductor and grounding clamps. A reliable connection between the rope and its cable lugs is ensured by pressing in the lug in according to DIN. Such connection complies with requirements for tensile load testing according to PNE 359705. The rope and lug connection is protected from moisture penetration by special shrinking insulation, which also provides mechanical strength to this connection.
In order to ensure easy checking and detection of mechanical damage of Cu core the ropes are insulated with a transparent material.

Insulating rods:

These rods are made of a laminated composition material with excellent electrical insulating parameters complying with the requirements for materials to be used for outdoor devices according to PNE 359700. The material for rods, which are designed in yellow-color tint, features high mechanical resistance and stability. Depending on individual types of sets and their application, the rods are supplied either undivided or divided in two; eventually into more sections. The connection of these divided sections is secured by means of a bolted connection. The rod can be ended with a put-on cup or it is firmly connected with a conductor clamp bolt. Those parts of the rods that are to be gripped when working with conductor under voltage are clearly determined; i.e. by means of rubber handle or by protective rubber collar.
These products are manufactured according to PNE 359700, PNE 359705 and ČSN EN 61230.

Non-standard design:

Upon an agreement between customer and producer it is possible to deliver devices in non-standard design; i.e. by means of available combination of particular segments.
It is possible to combine insulating rods including their ending, conducting clamps, grounding clamps. It is also possible to choose ropes of different length and cross-section diameter including selection of hole diameter in cable lugs.

Short-circuit resistance:

In catalog pages the short-circuit resistance is indicated by means of nominal short-term current I_{th} related to time t = 1 sec. It is not allowed to expose any active part of a short-circuiting set to a current greater than I_{th}. However, the short-circuiting set can be used for short-circuit periods longer than 1 sec., but the thermal effect I_{th}^2 x t (so-colled Joule's integral) must not be exceeded, see PNE 359705.
The above-stipulated condition results in a relation between the values of maximum, short-circuit, short-term current I_{thp} and short-circuit time periods longer than 1 second.

$$I^2_{thp} \cdot t_x = I^2_{th} \cdot t_i$$

$$I_{thp} = \frac{I_{th}}{\sqrt{t_x}}$$

Where I_{th} = nominal, short-term, short-circuiting current [kA]
$t1$ = time of short circuit [s] (in our case t1 = 1 s)
I_{thp} = recalculated maximum value of short-term, short-circuiting current at a t_x time period of short circuit duration
t_x = time of short circuit duration [s]

In practice it derives from the above given data that, for instance, a short-circuiting set with an indicated short-circuit resistance of 10 kA/1s can be used for short circuits longer than 3 seconds. However, the value of minimum short-circuit current will drop from 10 kA/1s to 5.7 kA/3s following the relation given in this equation:

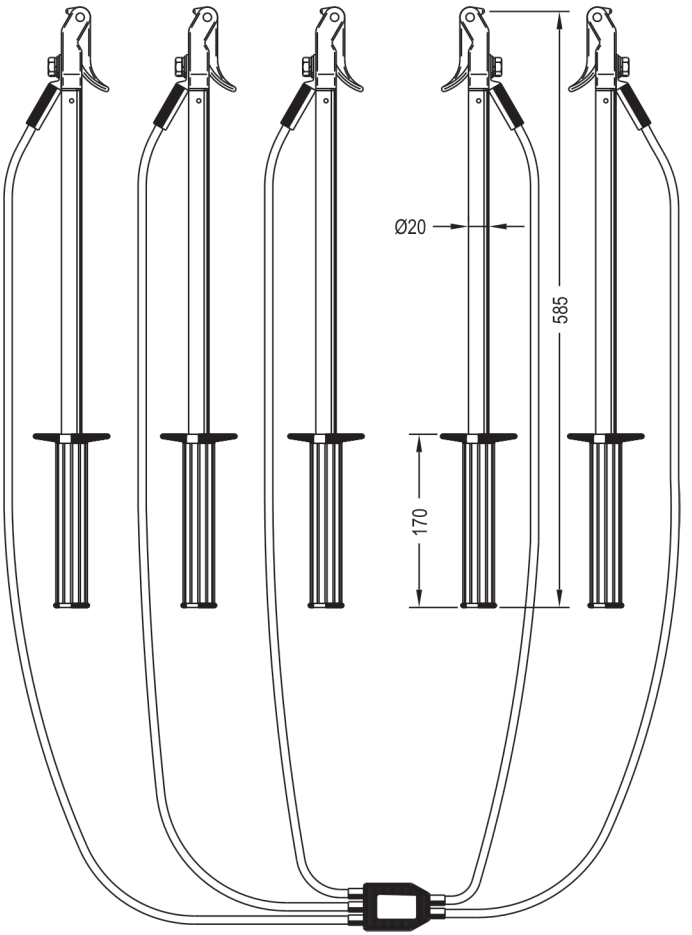
$$I_{thp} = \frac{I_{th}}{\sqrt{t_x}} = \frac{10}{\sqrt{3}} = 5{,}7 \text{ kA}$$

The appropriate short-circuiting set must be selected not only with regard to the shape and cross-section of the short circuit line, but also with regard to the short circuit capacity in the point of application. The short-circuiting resistance of a selected short-circuiting set must always be greater than the maximum short-circuit current resulting from the short-circuit capacity in that point. This condition can be met when two or more identical short-circuiting sets are connected i parallel. When this is the case, the short-circuiting resistance from the individual sets is added up.

SHORT-CIRCUITING SET 1kV

type 152 001

Short-circuiting set for overhead line with max. voltage 1kV.



SPECIFICATION

Attachable to:

- circular conductor Ø 2-15 mm

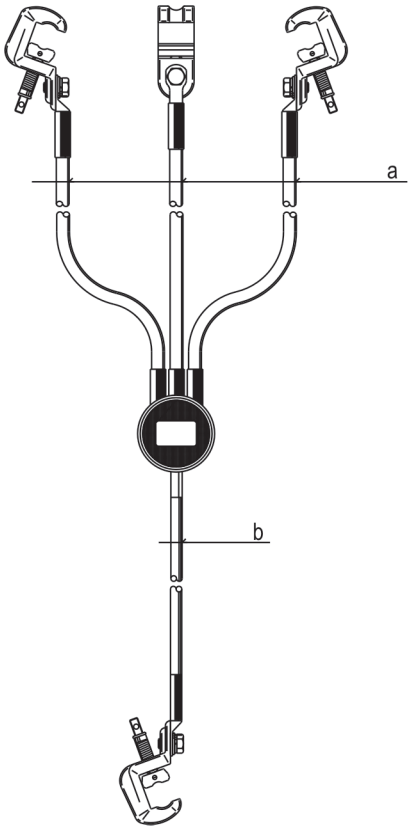
The set is delivered in case.

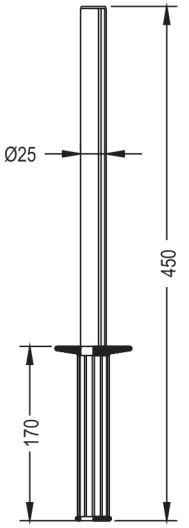
Short-circuit resistance	3 kA/1s
Rope's cross-section	16 mm ^{2}
Rope's length	5 x 800 mm
Weight	4 kg

SHORT-CIRCUITING SET 1kV

type 153 001

General-purpose short-circuiting set for distribution substation with voltage up to 1kV.





Note: It is necessary to specify demanded short-circuiting resistance in the order.

SPECIFICATION

Attachable to:

- ball-shaped point Ø 20 mm
- flat conductor up to ≠ 20 mm
- circular conductor Ø 5-20 mm
- T-point Ø 15 mm

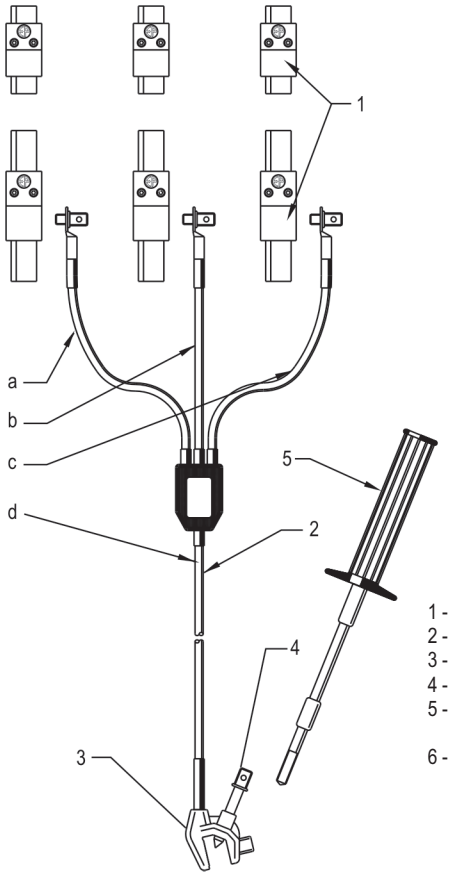
The set is delivered in plastic case.

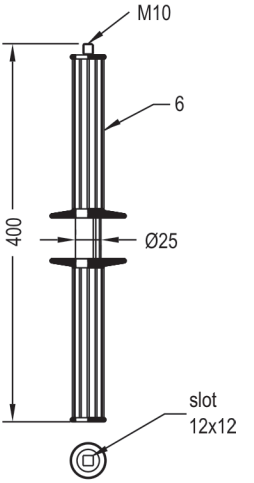
Short-circuit resistance		6kA/1s	8kA/1s	10kA/1s
Rope's cross-section	a	25 mm^2	35 mm^2	50 mm^2
	b	25 mm^2	35 mm^2	50 mm^2
Rope's length	a	800 mm	800 mm	800 mm
	b	1 500 mm	1 500 mm	1 500 mm
Insulating rod		1 piece	1 piece	1 piece
Set's weight		4 kg	4,5 kg	5 kg

SHORT-CIRCUITING SET 1kV

type 154 001

This short-circuiting set is designed for short-circuiting of power fuse outlets.
in particular of switch-disconnector-fuses.





1 - short-circuiting cartridge
2 - short-circuiting rope
3 - insulated grounding clamp
4 - grounding bolt I
5 - grounding bolt II with flexible insulating shaft and with handle
6 - insulated handling rod

SPECIFICATION

Attachable to:

- fuse bases SPH 00
  SPH 1;2;3
- fuse-switch-disconnectors

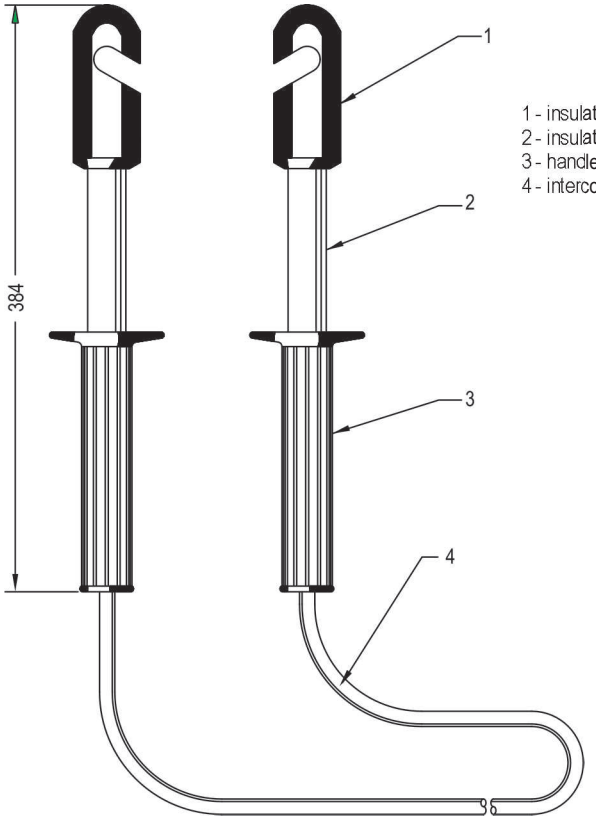
The set is delivered in plastic case.

Short-circuit resistance	5 kA/1s
Rope's cross-section a,b,c,d	25 mm^2
Rope's length a	350 mm
b	550 mm
c	750 mm
d	1 500 mm
Insulating rod	1 pcs
Short-circuiting cartridge	for SPH00 - 3 pcs
	for SPH1;2;3 - 3 pcs
Weight	5 kg

INTERCONNECTION SET 1kV

type 156 001

This device is used to create substitute conductive connection on overhead low voltage (VN) line, during reparation and maintainance.



1 - insulated conductor clamp
2 - insulating rod
3 - handle
4 - interconnection cable

SPECIFICATION

Connection:

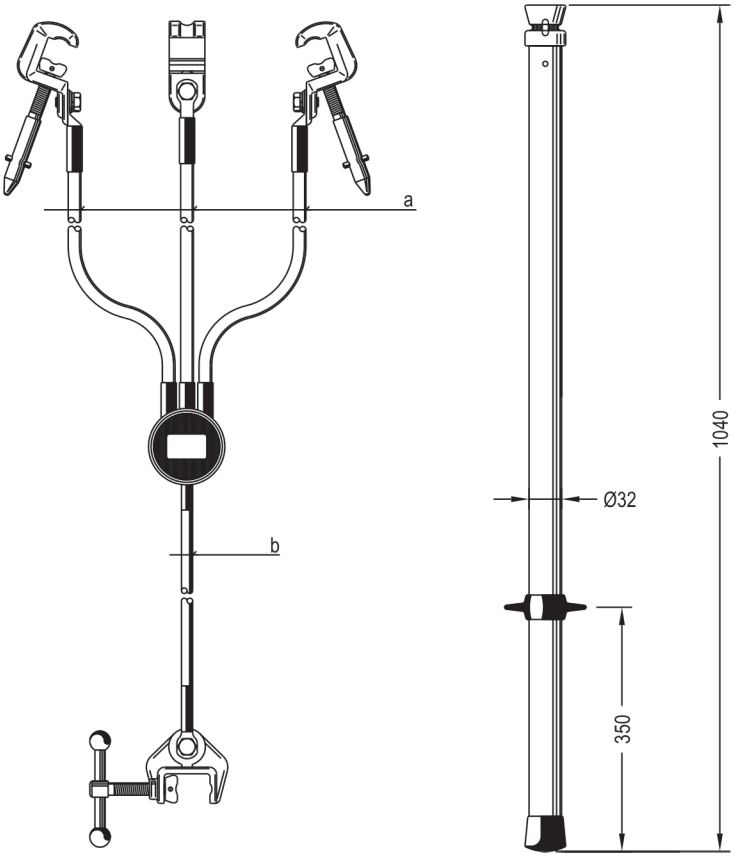
- line wire Ø 5 - 15 mm

Highest voltage	1 kV
Current capacity	100 A/2hod
Rope's cross-section	10 mm^2
Length of interconnection	1,5 m
Weight	2 kg
Product satisfy	ČSN EN 60900

SHORT-CIRCUITING SET 38,5kV

type 151 035

General-purpose short-circuiting set for distribution substation with voltage up to 38,5 kV.



Note: It is necessary to specify demanded short-circuiting resistance in the order and delivery of transport case in case of need.

SPECIFICATION

Attachable to:

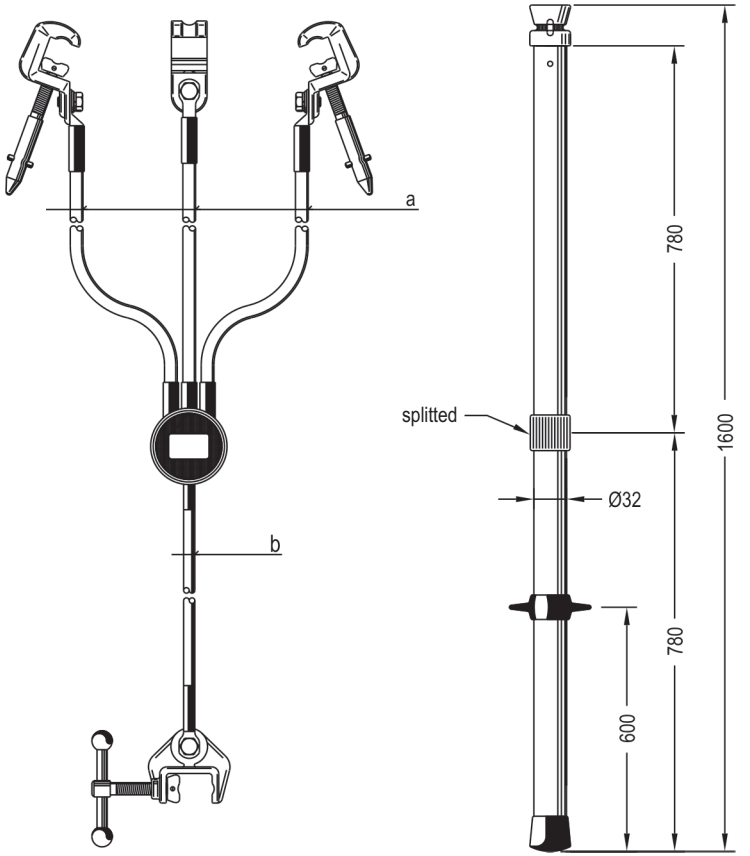
- ball-shaped point	Ø 20 mm
- flat line wire up to	≠ 20 mm
- circular conductor	Ø 5-20 mm
- T-point	Ø 15 mm

Short-circuiting resistance		10 kA/1s	15 kA/1s
Rope's cross-section	a	50 mm^2	70 mm^2
	b	25 mm^2	35 mm^2
Rope's length	a	800 mm	800 mm
	b	1 500 mm	1 500 mm
Insulating rod		1 piece	1 piece
Set's weight		5,5 kg	6,25 kg

SHORT-CIRCUITING SET 38,5kV

type 152 035

General-purpose short-circuiting set for overhead line with max. voltage 38,5 kV.



Note: It is necessary to specify demanded short-circuiting resistance in the order.

SPECIFICATION

Attachable to:

- circular conductor Ø 5-20 mm
- flat line wire up to ≠ 20 mm
- ball-shaped point Ø 20 mm
- T-point Ø 15 mm

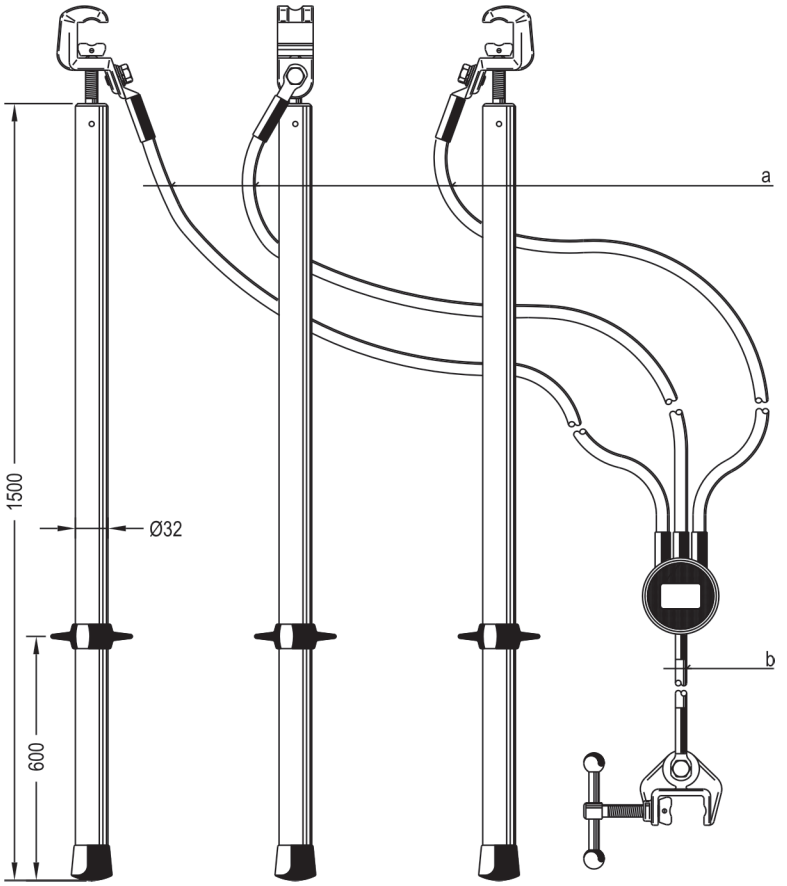
The set is delivered in case.

Short-circuit resistance		6 kA/1s	8 kA/1s	10 kA/1s
Rope's cross-section	a	25 mm^2	35 mm^2	50 mm^2
	b	25 mm^2	25 mm^2	25 mm^2
Rope's length	a	2 000 mm	2 000 mm	2 000 mm
	b	1 500 mm	1 500 mm	1 500 mm
Two-piece insulating rod		1 piece	1 piece	1 piece
Set's weight		6,5 kg	7 kg	7,5 kg

SHORT-CIRCUITING SET 38,5kV

type 153 035

General-purpose short-circuiting set for overhead line with max. voltage 38,5 kV



Note: It is necessary to specify demanded short-circuiting resistance in the order.

SPECIFICATION

Attachable to:

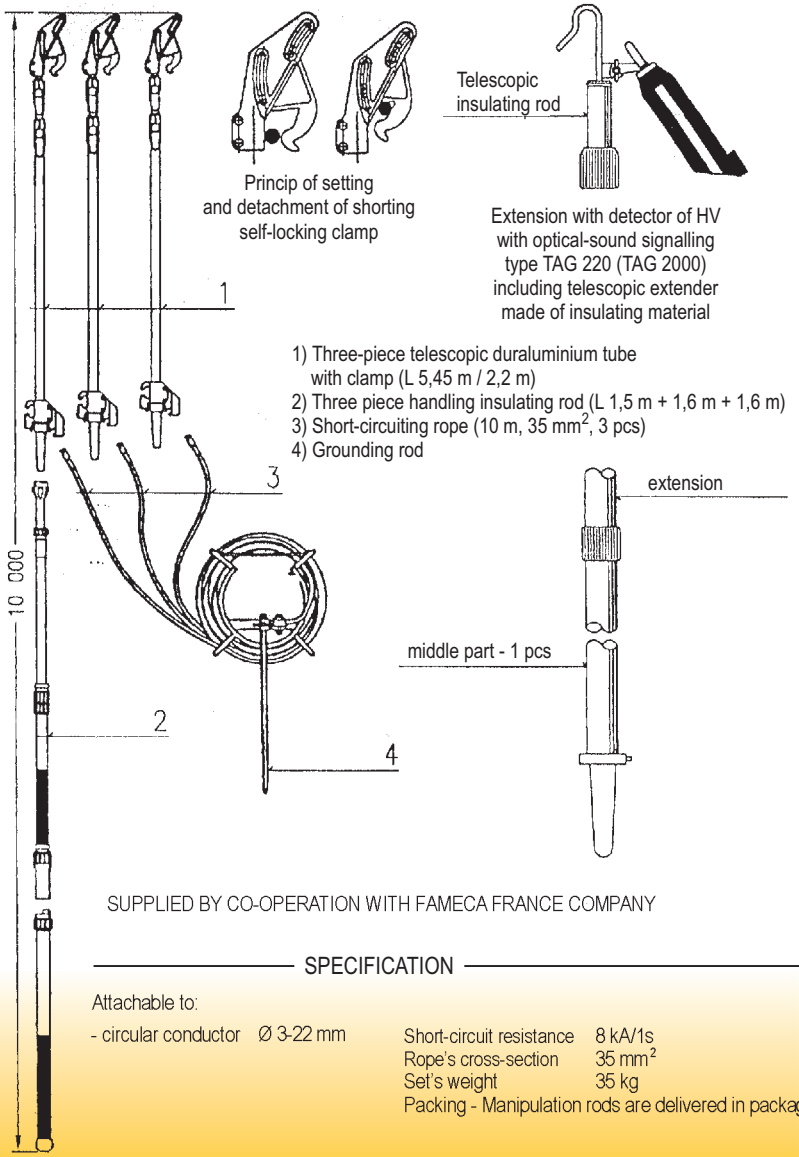
- circular conductor	Ø 5-20 mm
- flat line wire up to	≠ 20 mm
- ball-shaped point	Ø 20 mm
- T-point	Ø 15 mm

Short-circuit resistance		6 kA/1s	8 kA/1s	10 kA/1s
Rope's cross-section	a	25 mm^2	35 mm^2	50 mm^2
	b	25 mm^2	25 mm^2	25 mm^2
Rope's length	a	2 000 mm	2 000 mm	2 000 mm
	b	1 500 mm	1 500 mm	1 500 mm
Insulating rod		3 pcs	3 pcs	3 pcs
Set's weight		7,5 kg	8 kg	8,5 kg

SHORT-CIRCUITING SET 38,5kV

type PA3 GTI

Short-circuiting set for overhead line with max. voltage 38,5kV. This set is designed for shorting of outdoor electric line from the ground to the height of 11,5 m.



SUPPLIED BY CO-OPERATION WITH FAMECA FRANCE COMPANY

SPECIFICATION

Attachable to:

- circular conductor Ø 3-22 mm

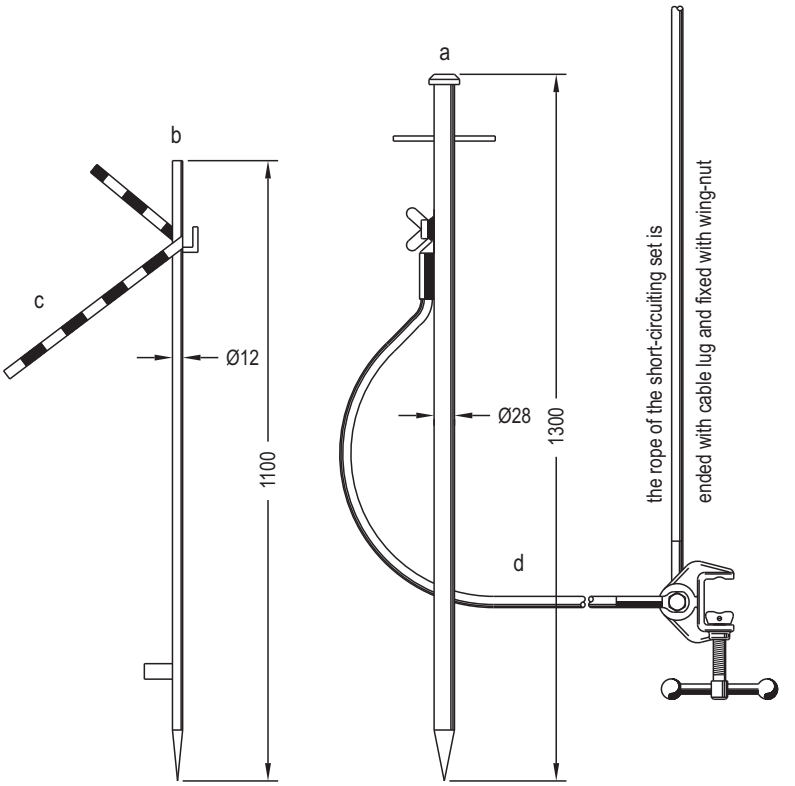
Short-circuit resistance	8 kA/1s
Rope's cross-section	35 mm^2
Set's weight	35 kg

Packing - Manipulation rods are delivered in package.

GROUNDING ROD

type 154 035-0700

The grounding rod with mobile barrier for short-circuiting sets. It is designed mainly for short-circuiting set type 152 035.



SPECIFICATION

Fixation of grounding rope to the screw bolt M12.
Barrier - 4x4 m.

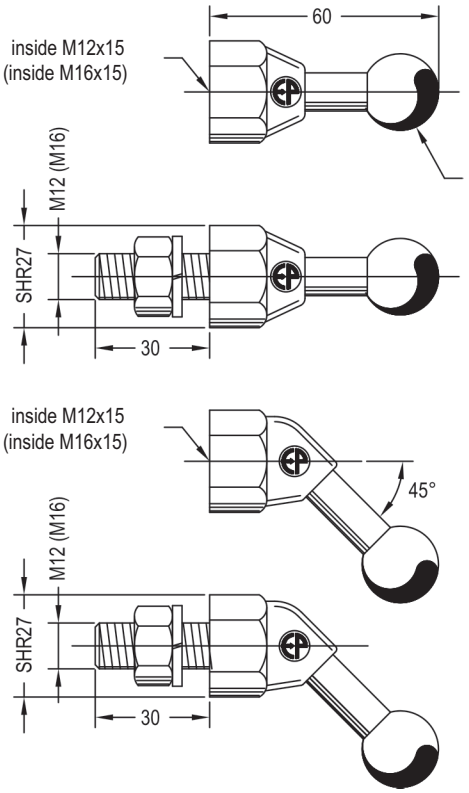
Pozition c) and d) are delivered in case.

a grounding rod		1 pcs
b the rod of mobile barrier		4 pcs
c barrier - rope Ø 9 mm		16 000 mm
d grounding rope	cross-section:	25 mm^2
	length:	15 000 mm

SHORT-CIRCUIT BALL-SHAPED POINTS

type 161 035

Short-circuit point is designed to be set on stable short-circuit spots of low voltage facilities.
It may be used also for grounding.



M12x15	161035-0002
M16x15	161035-0006

M12	161035-0004
M16	161035-0008

M12x15	161035-0003
M16x15	161035-0007

M12	161035-0005
M16	161035-0009

SPECIFICATION

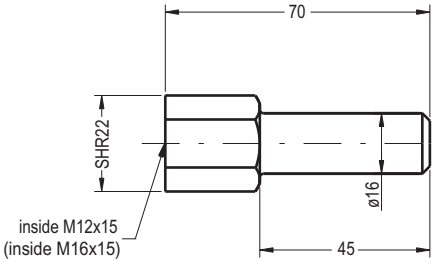
Material - copper alloy
Surface treatment - Sn

Short-circuit resistance 15 kA/1s
Weight ~0,2 kg

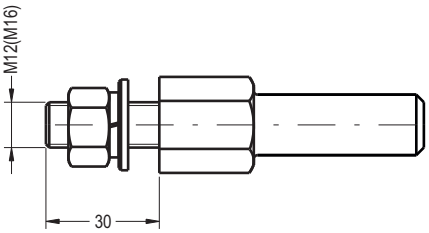
SHORT-CIRCUIT CYLINDRICAL POINTS

type 162 035

Short-circuit point is designed to be set on stable short-circuit spots of low voltage facilities.
It may be used also for grounding.



M12x15	162035-0002
M16x15	162035-0006



M12	162035-0004
M16	162035-0008

SPECIFICATION

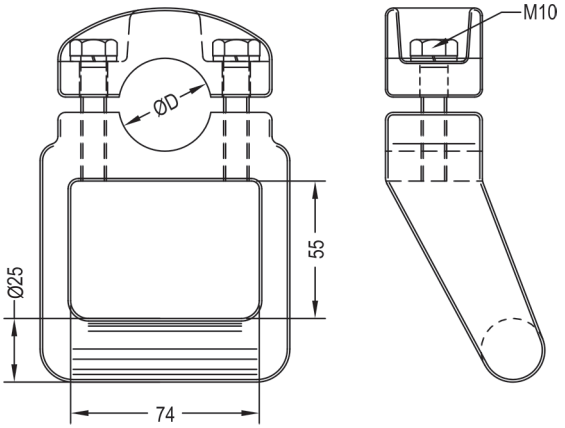
Material - copper alloy
Surface treatment - Sn

Short-circuit resistance 19 kA/1s
Weight ~0,2 kg

STATIONARY SHORT-CIRCUIT POINT FOR OVERHEAD LINE

type 163 110

It is used establish permanent shorting points on the lines AlFe in distribution substations.



Designed for short-circuiting set
type 154110, 154220

Connection to conductor:

110 mm^2	ØD	15	163110-0040
185-240 mm^2	ØD	21,5	163110-0030
350 mm^2	ØD	26,5	163110-0010
450 mm^2	ØD	29,3	163110-0050
670-750 mm^2	ØD	36,5	163110-0020

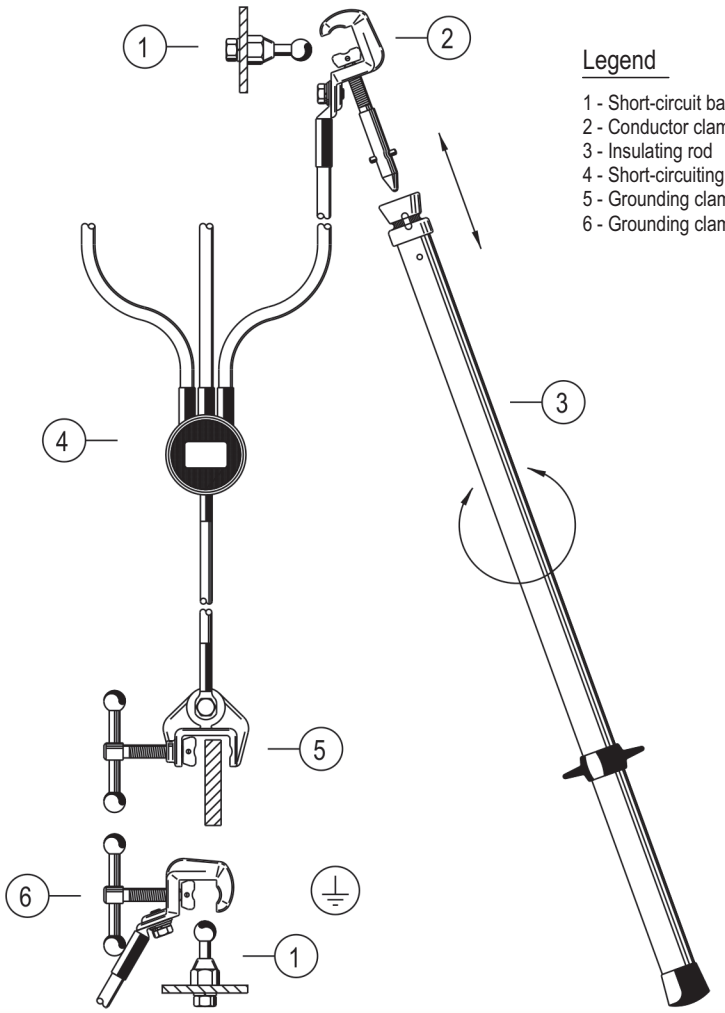
Different diameters are possible based on discussion with producer.

SPECIFICATION

Short-circuit resistance 30 kA/1s
Weight 0,65 kg

Material - Al alloy

EXAMPLE OF APPLICATION OF SHORT-CIRCUITING SET FOR FIXED SHORT-CIRCUIT BALL-SHAPED POINTS



Legend

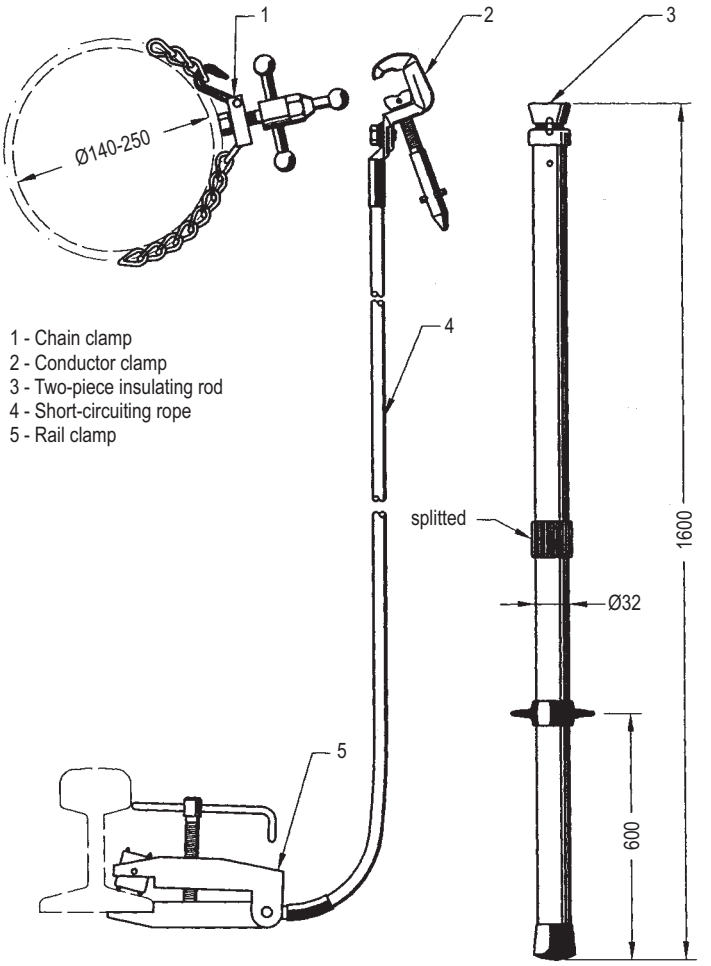
1 - Short-circuit ball-shaped point
2 - Conductor clamp
3 - Insulating rod
4 - Short-circuiting rope
5 - Grounding clamp (variant I)
6 - Grounding clamp (variant II)

Presented application solves problems with short-circuiting of flat conductors used in distribution plant. By means of short-circuit ball-shaped points,which are permanently fixed to chosen spots distribution facilities, and by means of special conductor clamps, it is created safe and quick connection of short-circuiting set.
Additionally, short-circuit ball-shaped points enable placing of short-circuiting set on hard to reach places. Using of this solution is not harmful to line wires of distribution facilities.
Short-circuiting ball-shaped points are produced in different variants - see our catalougue pages.

SHORT-CIRCUITING SET TH

type 151 025

This short-circuiting set is designed to be used on contact line of circuitry with direct (DT) or alternating (AC) voltage up to 27,5 kV.



1 - Chain clamp
2 - Conductor clamp
3 - Two-piece insulating rod
4 - Short-circuiting rope
5 - Rail clamp

SPECIFICATION

Attachable to:

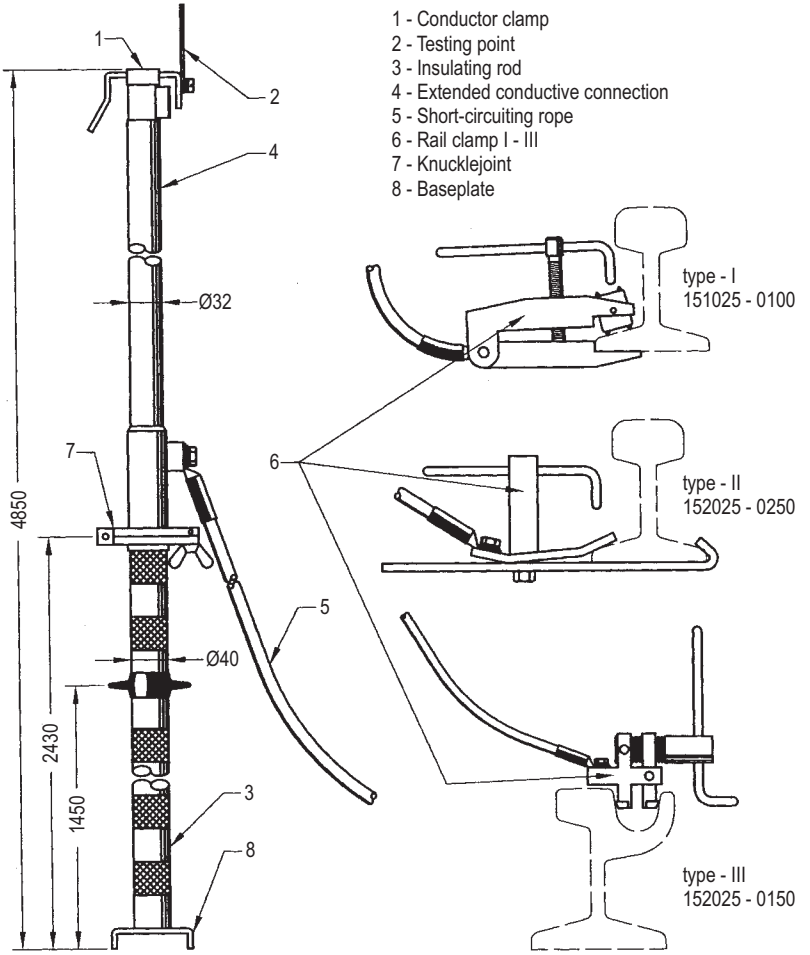
- ball-shaped point	Ø 20 mm
- flat conductor up to	≠ 20 mm
- circular conductor	Ø 5 - 20 mm
- T-point	Ø 15 mm

Nominal voltage of device	27,5 kV
Current capacity	800 A/ 10 min
Short-circuit resistance	10 kA/ 1 sec
Rope's cross-section	50 mm^2
Rope's length	4 000 mm
Weight	7,7 kg
Short-circuiting set is delivered in case	

SHORT-CIRCUITING SET UTTV 25

type 152 025

This short-circuiting set is designed to be used on contact line of circuitry with direct (DC) or alternating (AC) voltage up to 27,5 kV.



1 - Conductor clamp
2 - Testing point
3 - Insulating rod
4 - Extended conductive connection
5 - Short-circuiting rope
6 - Rail clamp I - III
7 - Knucklejoint
8 - Baseplate

SPECIFICATION

Attachable to:

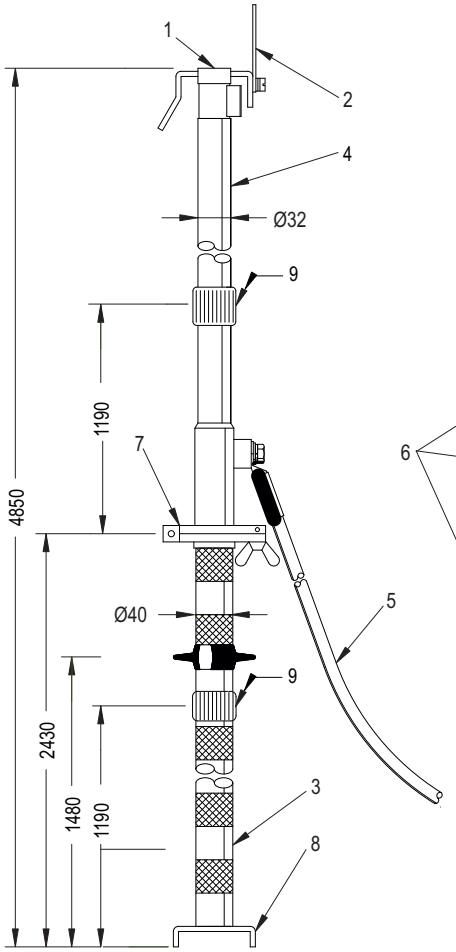
- trolley conductor 80 - 150 mm^2
- satisfy TNŽ 359708, ČSN EN 61230

Nominal voltage of device	27,5 kV
Current capacity	800 A/ 10 min
Short-circuiting resistance	10 kA/ 1 sec
Rope's cross-section	50 mm^2
Rope's length	14 000 mm
Weight	14 kg

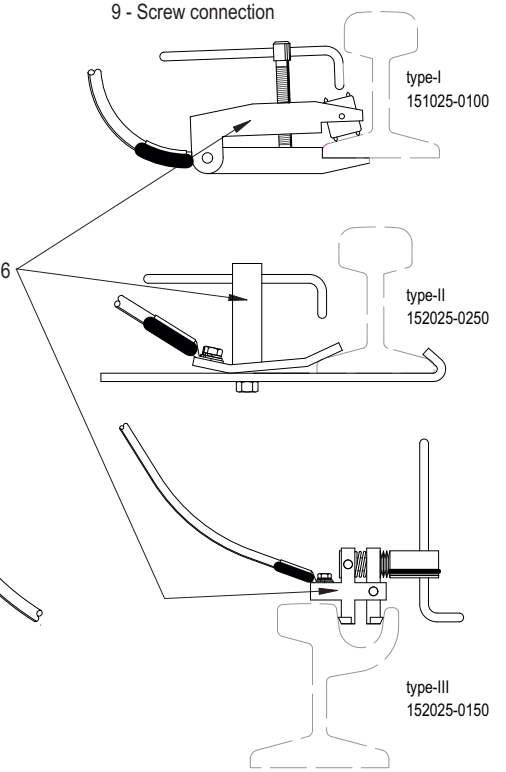
SHORT-CIRCUITING SET UTTV 25

type 152 025 D

This short-circuiting set is designed to be used on contact line of circuitry with direct (DC) or alternating (AC) voltage up to 27,5 kV.



1 - Conductor clamp
2 - Testing point
3 - Insulating rod
4 - Extended conductive connection
5 - Short-circuiting rope
6 - Rail clamp I - III
7 - Knucklejoint
8 - Baseplate
9 - Screw connection



SPECIFICATION

Attachable to:

- trolley conductor 80 - 150 mm^2
- satisfy TNŽ 359708, ČSN EN 61230

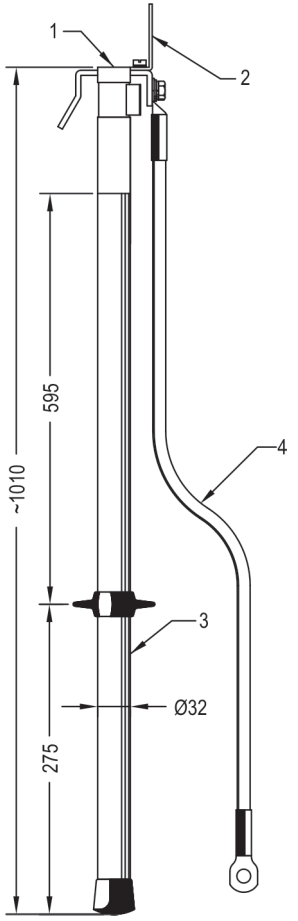
Short-circuiting rope and divided rod is supplied in separate housings.

Nominal voltage of device	27,5 kV
Current capacity	800 A/ 10 min
Short-circuiting resistance	10 kA/ 1 sec
Rope's cross-section	50 mm^2
Rope's length	14 000 mm
Weight	14 kg

SHUNTING SET BS

type 153 025

Shunting set BS is designed to create safety conductive connection of conductive parts of insulated working platform with contact line or to create safety switch-over of electric split of the contact line.



1 - Conductor clamp
2 - Testing point
3 - Insulating rod
4 - Interconnection rope

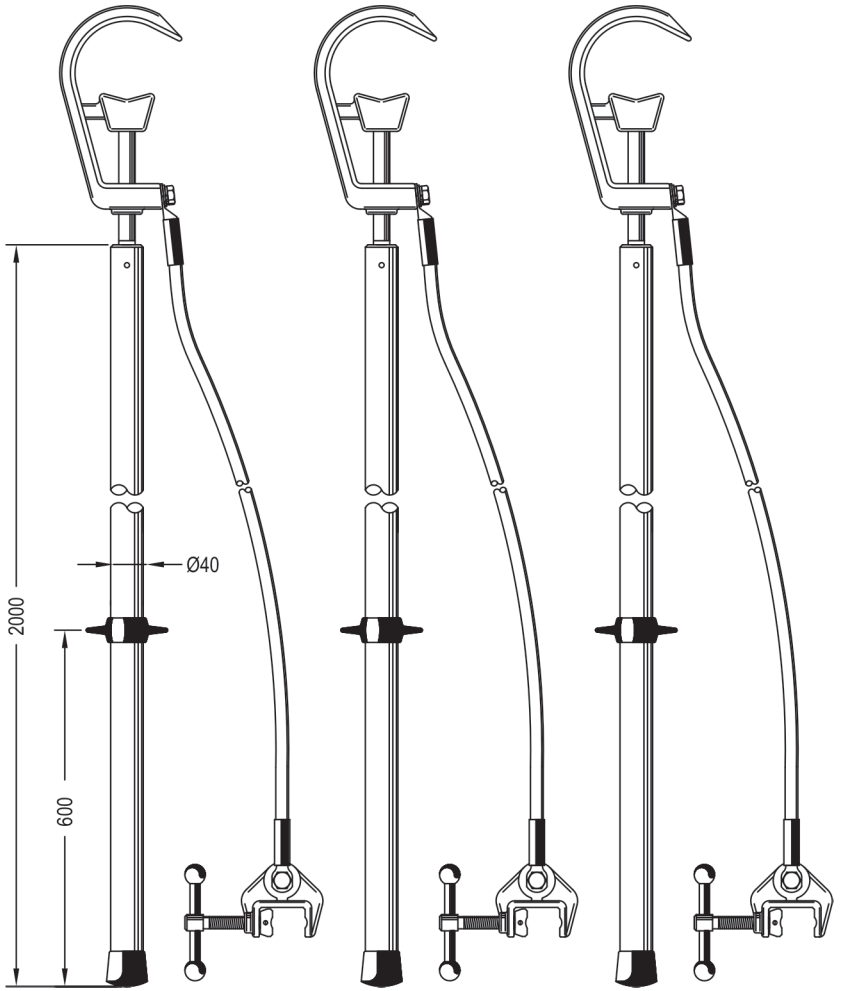
SPECIFICATION

Attachable to:	
- trolley conductor 80-150 mm^2	
- satisfy TNŽ 359708, ČSN EN 61230	
Nominal voltage of device	27,5 kV
Current capacity	800 A/10 min
Short-circuit resistance	10 kA/ 1 sec; 5 kA/ 5 sec
Rope's cross-section	50 mm^2
Rope's length	1 350 mm
Weight	2,1 kg

SHORT-CIRCUITING SET 123kV

type 151 110

Short-circuiting set for tubular line wire with max. voltage 123 kV.



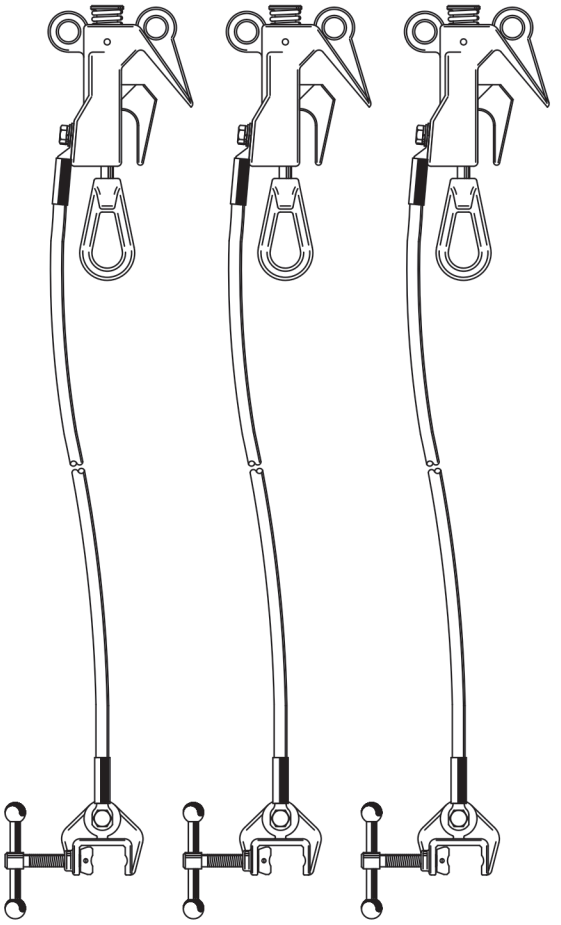
SPECIFICATION

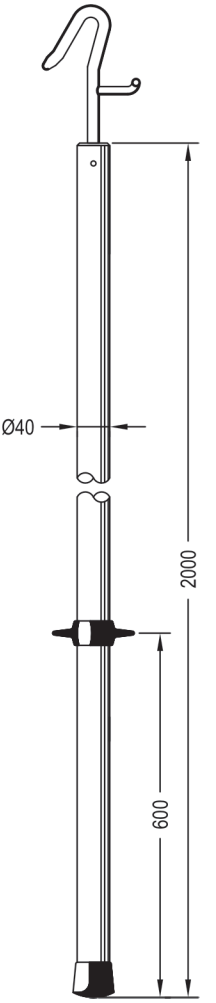
Attachable to:		Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
- tubular conductor	Ø 70-100 mm	Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
		Rope's length	4 000 mm	4 000 mm	4 000 mm
		One-piece insulating rod	3 pcs	3 pcs	3 pcs
		Set's weight	16 kg	19 kg	22 kg

SHORT-CIRCUITING SET 123kV

type 152 110

Short-circuiting set for overhead line with max. voltage 123 kV.





SPECIFICATION

Attachable to:

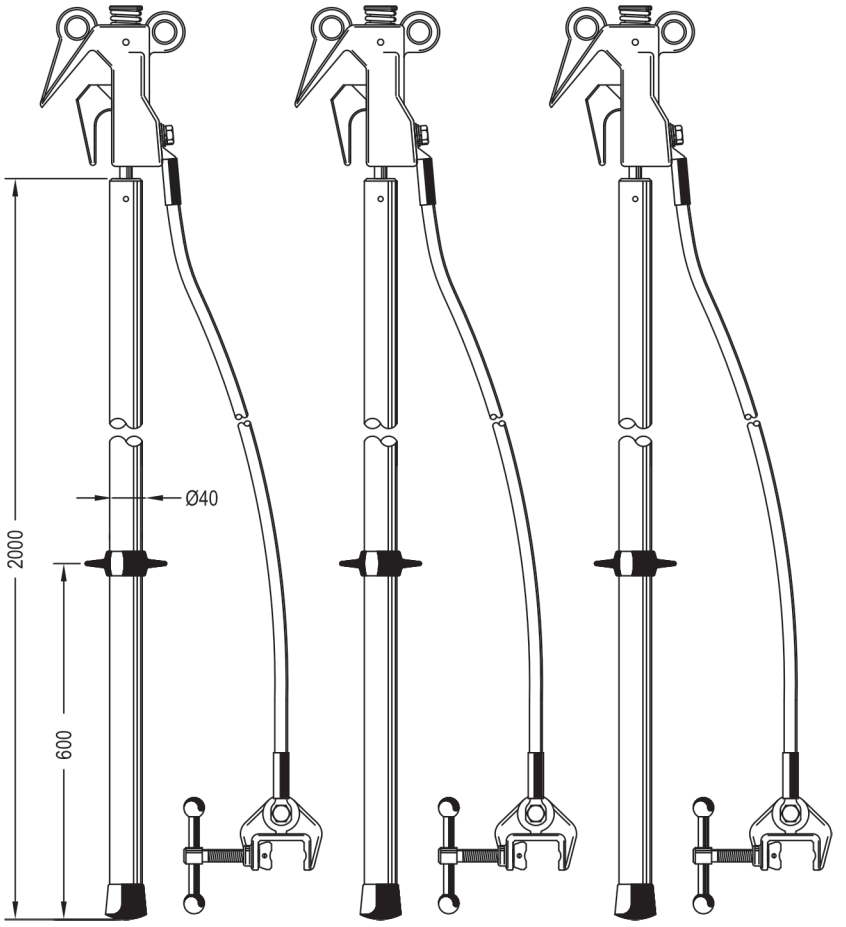
- circular conductor Ø 5-45 mm

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
Rope's length	4 000 mm	4 000 mm	-4 000 mm
One-piece insulating rod	1 piece	1 piece	1 piece
Set's weight	13,5 kg	16,5 kg	19 kg

SHORT-CIRCUITING SET 123kV

type 153 110

Short-circuiting set for overhead line with max. voltage 123 kV.



SPECIFICATION

Attachable to:

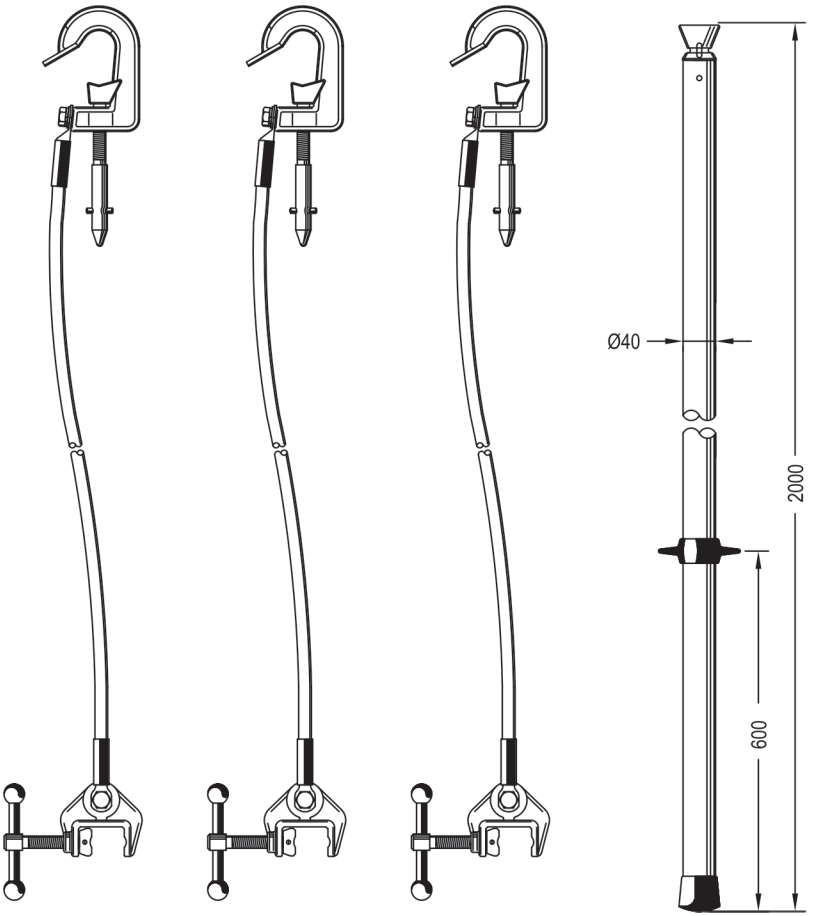
- circular conductor Ø 5-45mm

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
Rope's length	4 000 mm	4 000 mm	4 000 mm
One-piece insulating rod	3 pcs	3 pcs	3 pcs
Set's weight	16 kg	19 kg	22 kg

SHORT-CIRCUITING SET 123kV

type 154 110

Short-circuiting set for overhead line with max. voltage 123 kV.



SPECIFICATION

Attachable to:

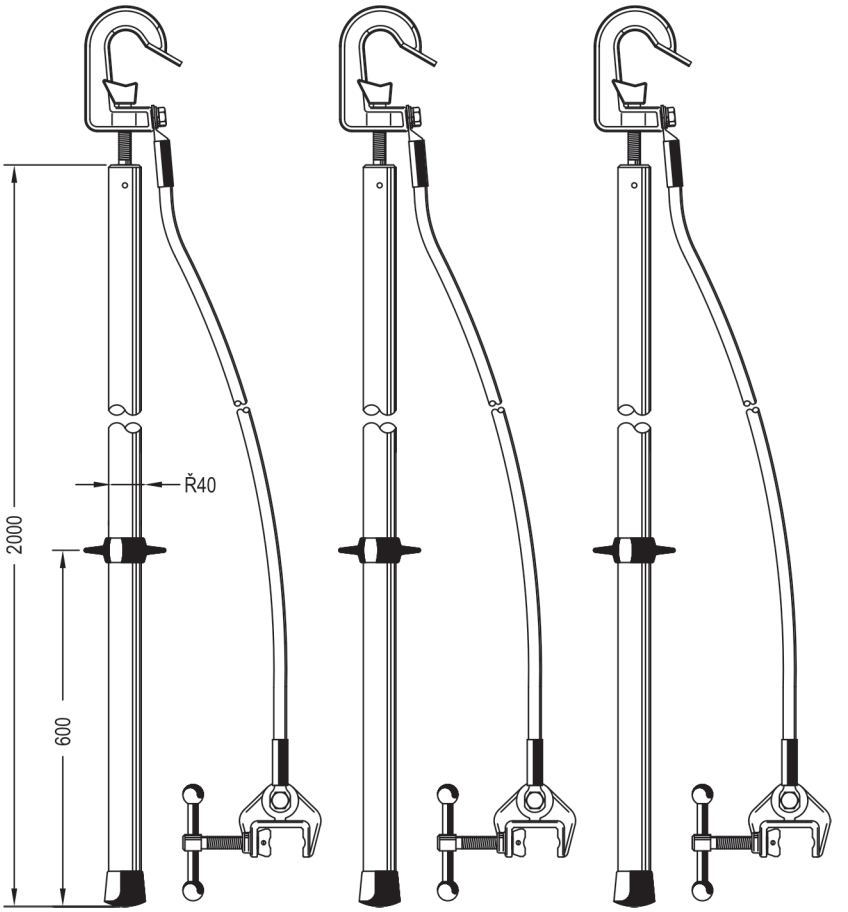
- circular conductor Ø10-45mm
- short-circuit point type 163110

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
Rope's length	4 000 mm	4 000 mm	4 000 mm
One-piece insulating rod	1 piece	1 piece	1 piece
Set's weight	12 kg	15 kg	18 kg

SHORT-CIRCUITING SET 123kV

type 155 110

Short-circuiting set for overhead line with max. voltage 123 kV.



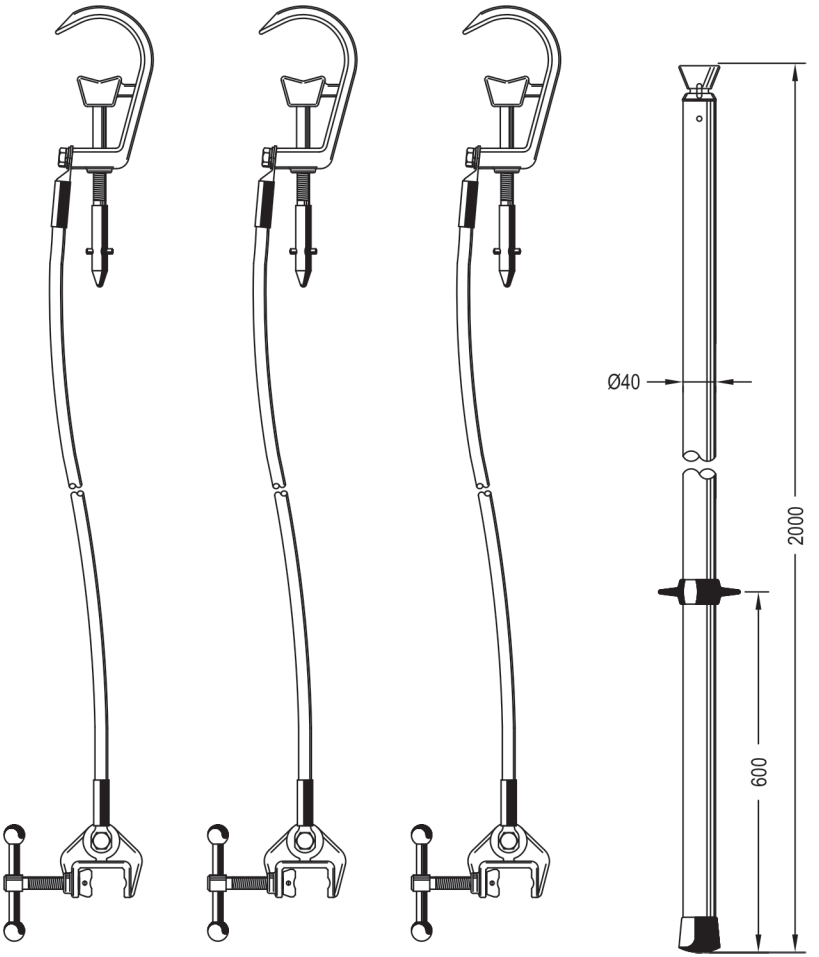
SPECIFICATION

Attachable to:		Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
- circular conductor	Ø 10-45 mm	Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
- short-circuit point	type 163110	Rope's length	4 000 mm	4 000 mm	4 000 mm
		One-piece insulating rod	3 pcs	3 pcs	3 pcs
		Set's weight	15 kg	18 kg	21 kg

SHORT-CIRCUITING SET 123kV

type 156 110

Short-circuiting set for tubular line wire with max. voltage 123 kV.



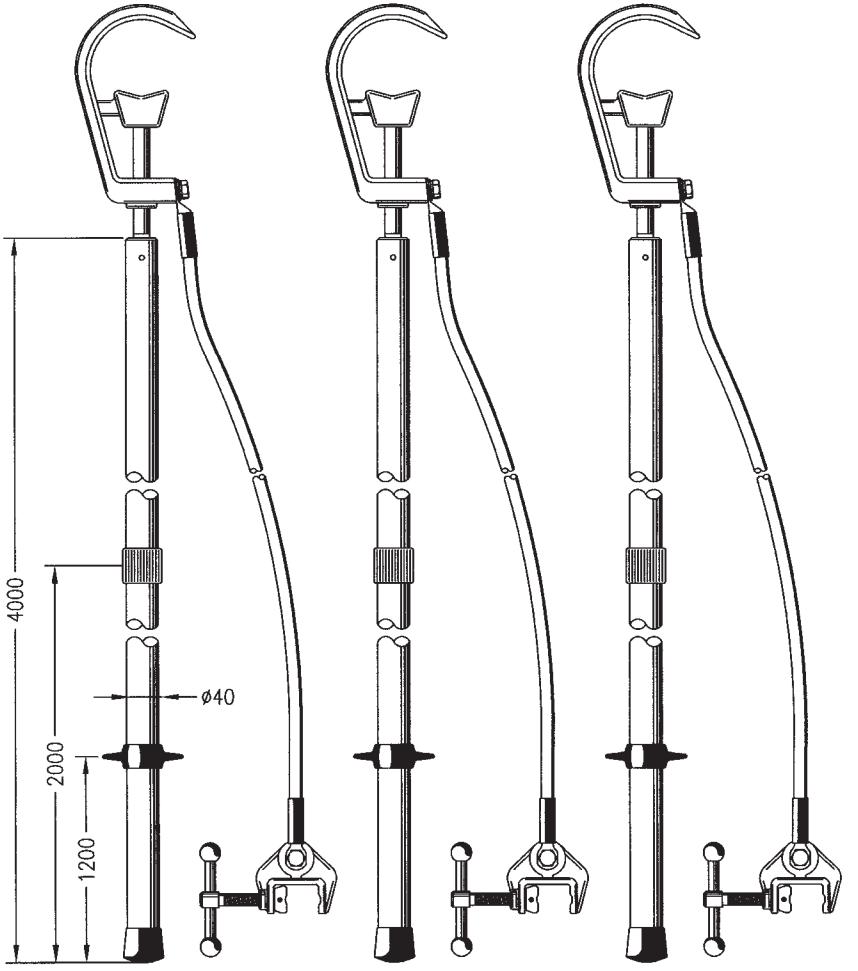
SPECIFICATION

Attachable to:		Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
- tubular conductor	Ø 70 - 100 mm	Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
		Rope's length	4 000 mm	4 000 mm	4 000 mm
		One-piece insulating rod	1 piece	1 piece	1 piece
		Set's weight	12,5 kg	15,5 kg	18,5 kg

SHORT-CIRCUITING SET 245kV

type 151 220

Short-circuiting set for tubular line wire with max. voltage 245 kV.



SPECIFICATION

Attachable to:

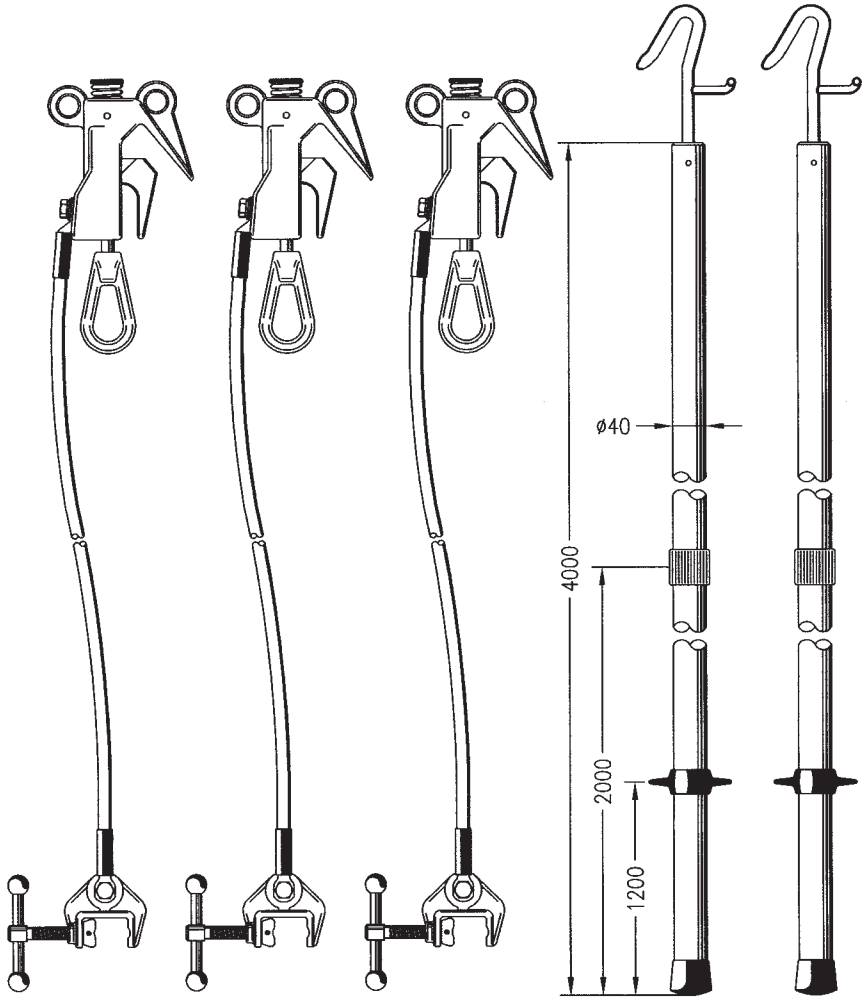
- tubular conductor Ø 70-100 mm

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
Rope's length	4 500 mm	4 500 mm	4 500 mm
Two-piece insulating rod	3 pcs	3 pcs	3 pcs
Set's weight	22 kg	25 kg	28 kg

SHORT-CIRCUITING SET 245kV

type 152 220

Short-circuiting set for overhead line with max. voltage 245 kV.



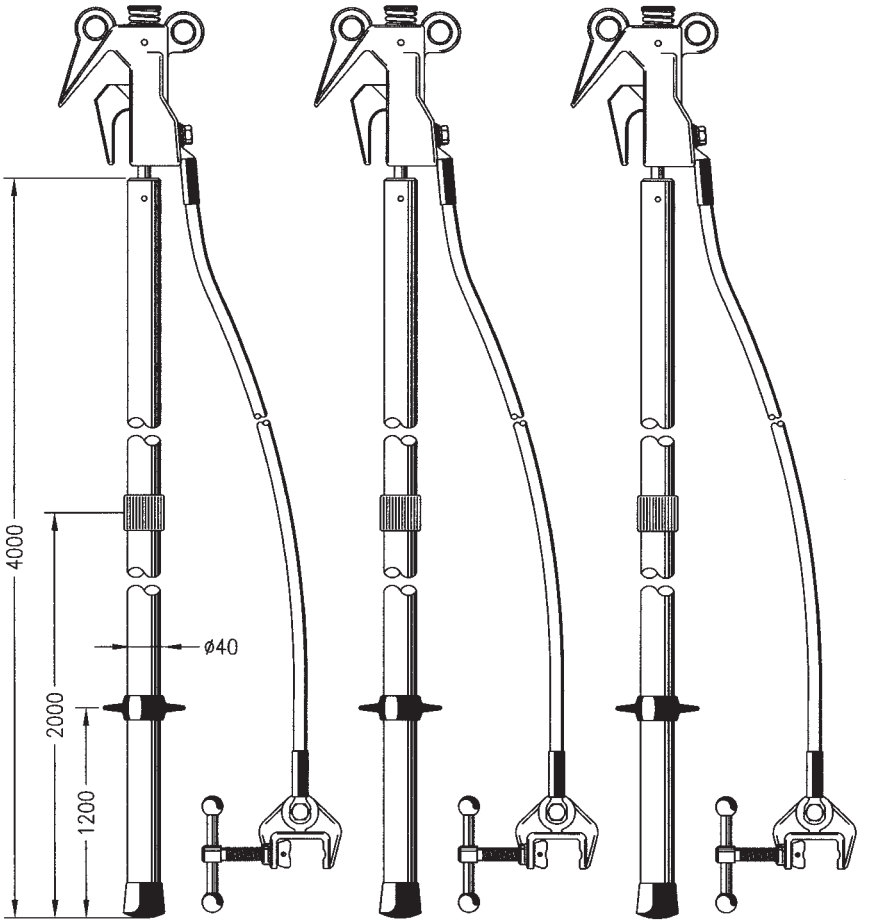
SPECIFICATION

Attachable to:		Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
- circular conductor	Ø 5-45 mm	Rope's cross-section	50 mm ^{2}	70 mm ^{2}	95 mm ^{2}
		Rope's length	4 500 mm	4 500 mm	4 500 mm
		Two-piece insulating rod	2 pcs	2 pcs	2 pcs
		Set's weight	19 kg	22 kg	25 kg

SHORT-CIRCUITING SET 245kV

type 153 220

Short-circuiting set for overhead line with max. voltage 245 kV.



SPECIFICATION

Attachable to:

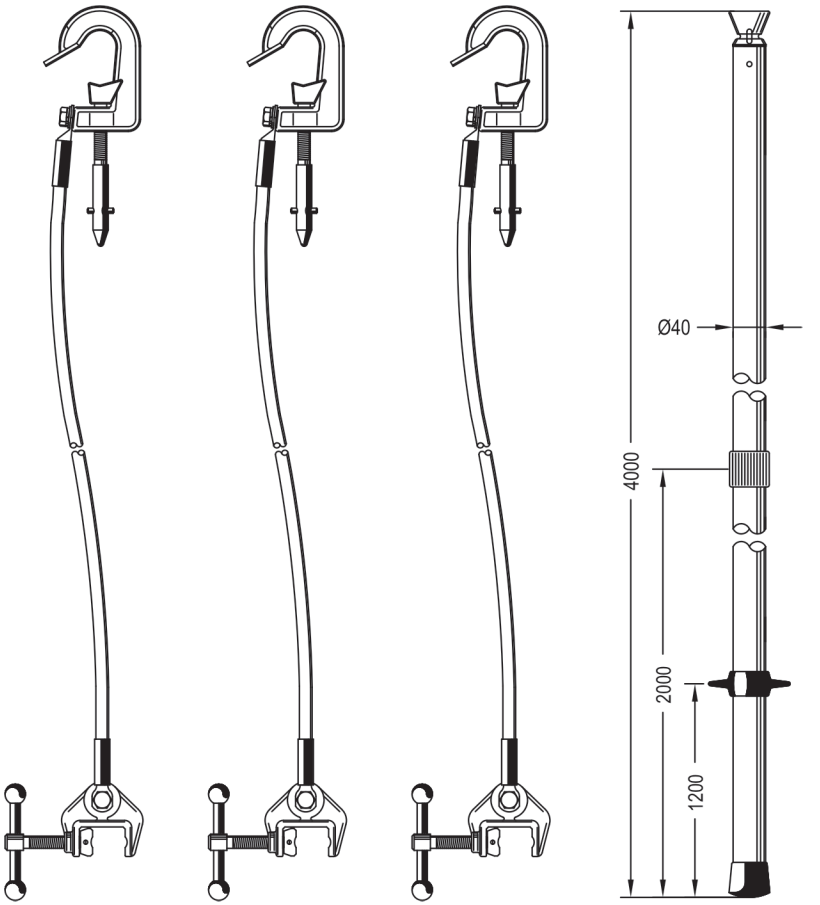
- circular conductor Ø 5-45 mm

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
Rope's length	4 500 mm	4 500 mm	4 500 mm
Two-piece insulating rod	3 pcs	3 pcs	3 pcs
Set's weight	22 kg	25 kg	28 kg

SHORT-CIRCUITING SET 245kV

type 154 220

Short-circuiting set for overhead line with max. voltage 245 kV.



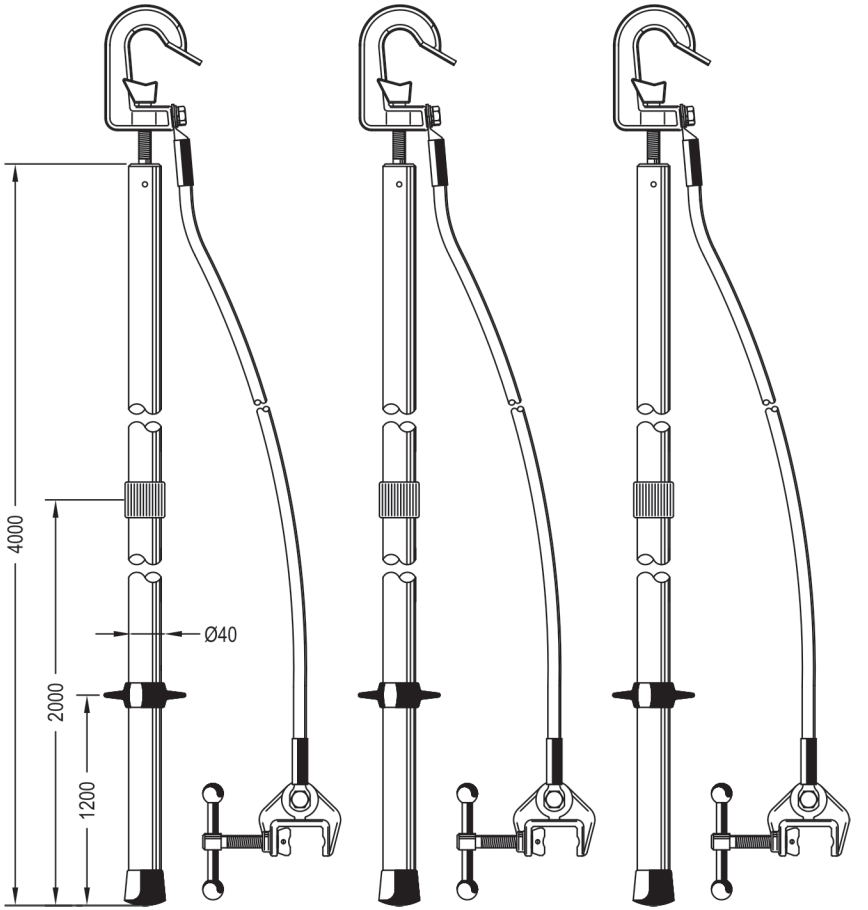
SPECIFICATION

Attachable to:		Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
- circular conductor	Ø 10-45 mm	Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
- short-circuit point	type 163110	Rope's length	4 500 mm	4 500 mm	4 500 mm
		Two-piece insulating rod	1 piece	1 piece	1 piece
		Set's weight	17 kg	20 kg	23 kg

SHORT-CIRCUITING SET 245kV

type 155 220

Short-circuiting set for overhead line with max. voltage 245 kV.



SPECIFICATION

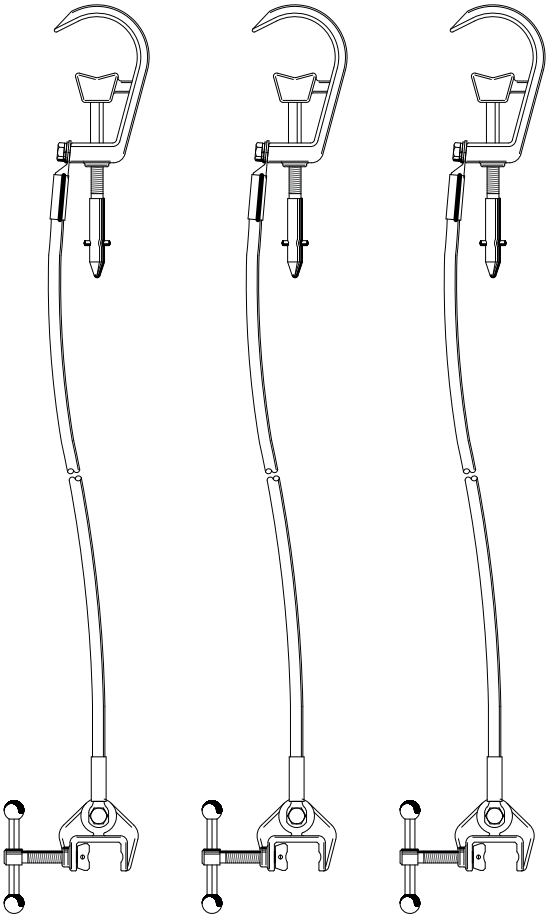
Attachable to:	
- circular conductor	Ø 10-45 mm
- short-circuit point	type 163110

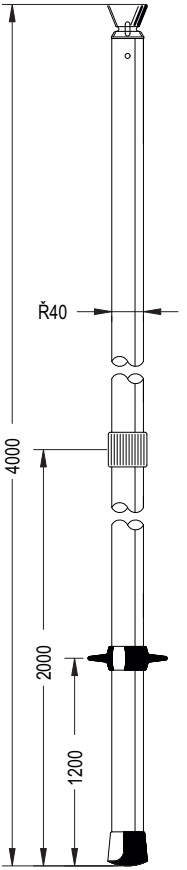
Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2	95 mm^2
Rope's length	4 500 mm	4 500 mm	4 500 mm
Two-piece insulating rod	3 pcs	3 pcs	3 pcs
Set's weight	22 kg	25 kg	28 kg

SHORT-CIRCUITING SET 245kV

type 156 220

Short-circuiting set for tubular line wire with max. voltage 245 kV.





SPECIFICATION

Attachable to:

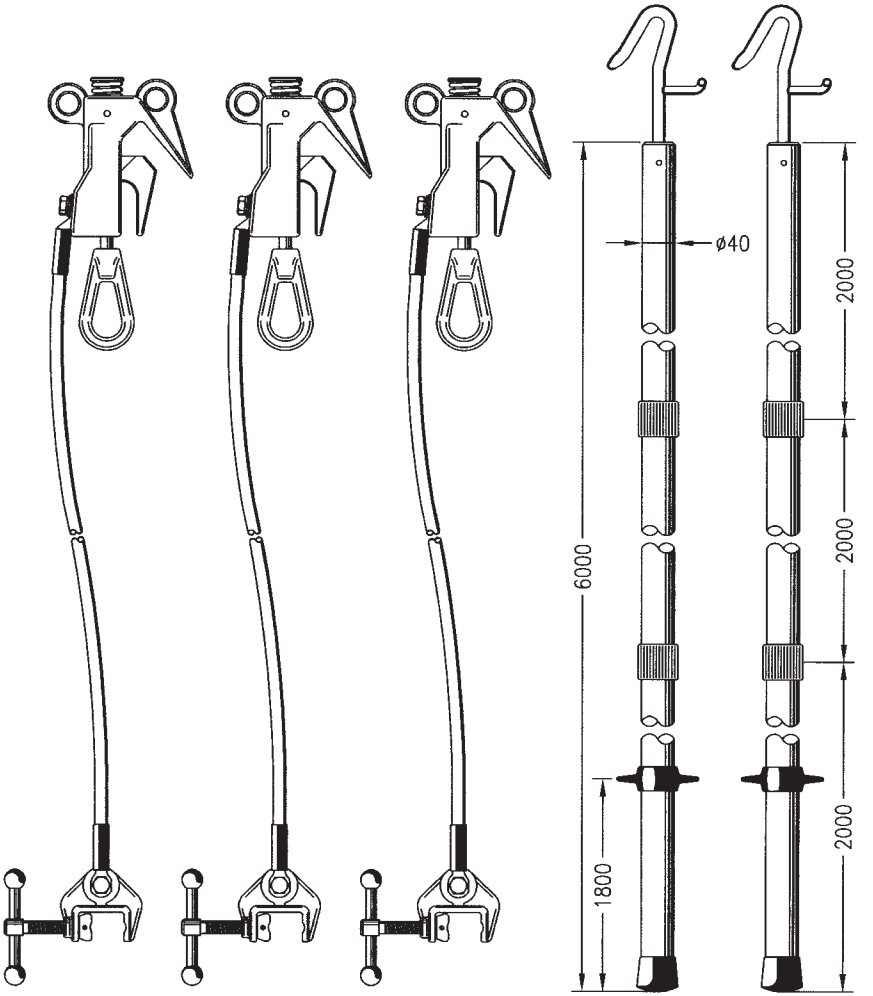
- tubular conductor Ø 70-100 mm

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s	19 kA/1s 26,5 kA/0,5s
Rope's cross-section	50 mm ^{2}	70 mm ^{2}	95 mm ^{2}
Rope's length	4 (6) m	4 (6) m	4 (6) m
Two-piece insulating rod	1 piece	1 piece	1 piece
Set's weight [kg]	13,5 (16,5)	16,5 (21)	19,5 (25,5)

SHORT-CIRCUITING SET 420kV

type 152 400

Short-circuiting set for overhead line with max. voltage 420 kV.



SPECIFICATION

Attachable to:

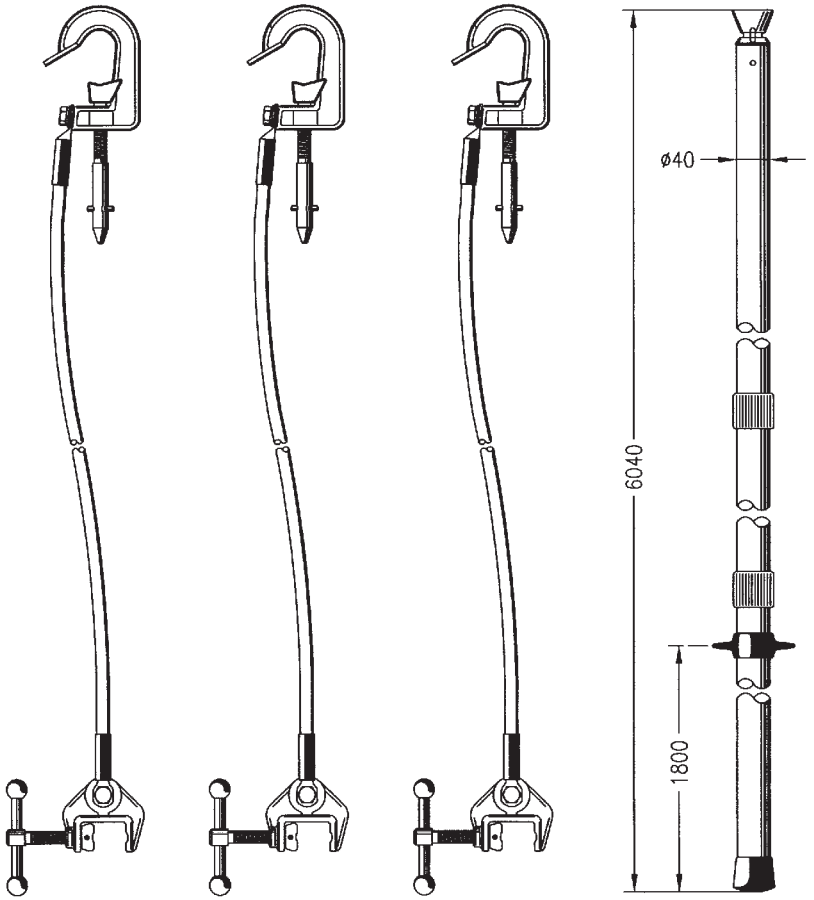
- circular conductor Ø 5-45 mm

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s
Rope's cross-section	50 mm ^{2}	70 mm ^{2}
Rope's length	9 000 mm	9 000 mm
Three-piece insulating rod	2 pcs	2 pcs
Set's weight	30 kg	35 kg

SHORT-CIRCUITING SET 420kV

type 154 400

Short-circuiting set for overhead line with max. voltage 420 kV.



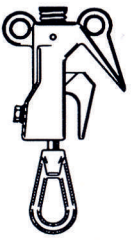
SPECIFICATION

Attachable to:

- circular conductor Ø10-45 mm
- short-circuit point type 163110

Short-circuit resistance	10 kA/1s 13,9 kA/0,5s	15 kA/1s 19,5 kA/0,5s
Rope's cross-section	50 mm^2	70 mm^2
Rope's length	9 000 mm	9 000 mm
Three-piece insulating rod	1 piece	1 piece
Set's weight	24,5 kg	29,5 kg

TYPES OF CONDUCTOR CLAMPS

	Diam. and profile of connect. wire	Short-circuit resistance	Material	Weight [kg]	Type
	ø2–15mm	5kA/1s	Al alloy	0,1	151001–0200
	ball-shaped point ø20 T-point ø15 ø5–20mm ≠5–20mm	18 kA/ 1s 20 kA/ 1s 20 kA/ 1s 20 kA/ 1s	Cu alloy finishing - Sn	0,65	151035–0200
	ø5–45mm	23kA/1s	Al alloy	1,0	152110–0100
	ø10–45mm	30kA/1s	Al alloy	0,7	154110–0100
	ø70–100mm	23kA/1s	Al alloy	1,0	156110–0100

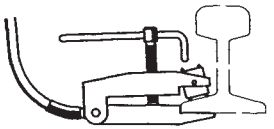
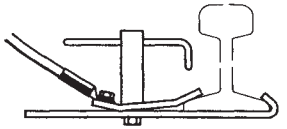
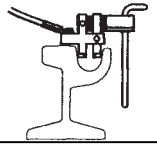
TYPES OF GROUNDING CLAMPS

	Diam. and profile of connect. wire	Short-circuit resistance	Material	Weight [kg]	Type
	Ø 5 - 20 mm ≠ 5 - 30 mm	30 kA/ 1s	Cu alloy finishing - Sn	0,65	151035 - 0100
	ball-shaped point Ø *20* T-point Ø *15* Ø 5 - 20 mm ≠ 5 - 20 mm	18 kA/ 1s 20 kA/ 1s 20 kA/ 1s 20 kA/ 1s	Cu alloy finishing - Sn	0,65	151035 - 0250
 ∗	≠ 5 - 20 mm	15 kA/ 1s	Cu alloy finishing - Sn	0,7	151035 - 0300

∗ note

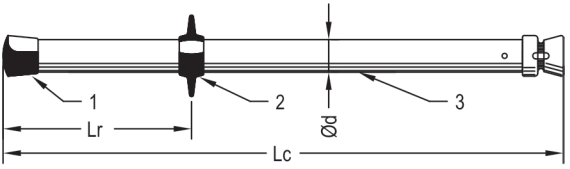
Grounding clamp is designed to be connected to coated (eventually rusted) constructions.
By turning of case-hardened jaw the non-conducting spot is pierced, which creates conductive connection.

TYPES OF RAIL CLAMPS

	Short-circuit resistance	Material	Weight [kg]	Type
	10 kA/ 1s 800 A/ 10 min	Fe / Zn	2	151025 - 0100
	12 kA/ 1s 800 A/ 10 min	Fe / Zn	2	152025 - 0250
	12 kA/ 1s 800 A/ 10 min	Fe / Zn	1,5	152025 - 0150

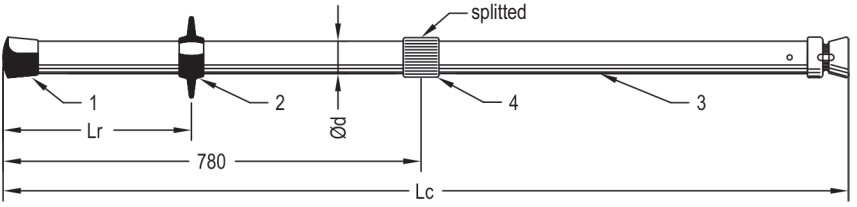
TYPES OF SHORTING RODS
FOR SHORT-CIRCUITING SETS HV up to 38,5kV

ONE-PIECE INSULATING ROD WITH SHELL CUP



TYPE	Ød[mm]	Lc[mm]	Lr[mm]	weight[kg]
151035-500	Ø32	1040	350	0,45
151035-510	Ø32	1540	600	0,65

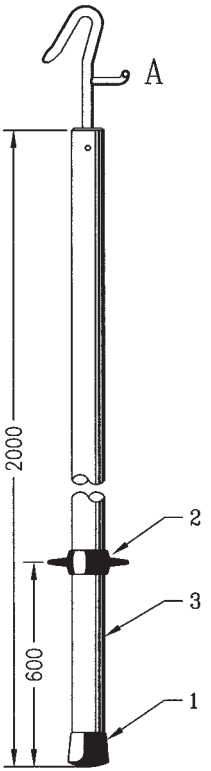
TWO-PIECE INSULATING ROD WITH SHELL CUP



TYPE	Ød[mm]	Lc[mm]	Lr[mm]	weight[kg]
152035-500	Ø32	1600	600	0,9

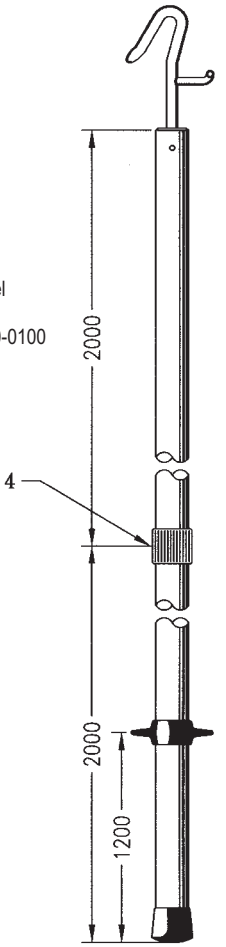
1) Rubber plug
2) Rubber protecting collar Ø100mm
3) Glass-fiber tube
   color: yellow
4) Insulating rod's connection with cap nut

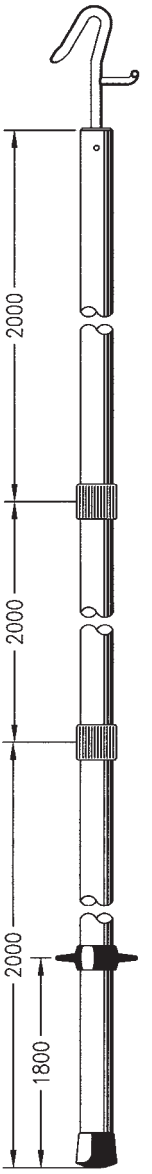
TYPES OF INSULATING RODS FOR SHORT-CIRCUITING SETS EHV



ENDING A -
stand-by connected steel hook for operating of conductor clamp 152110-0100

ENDING C -
shell cup for operating of clamps
154110-0100
156110-0100



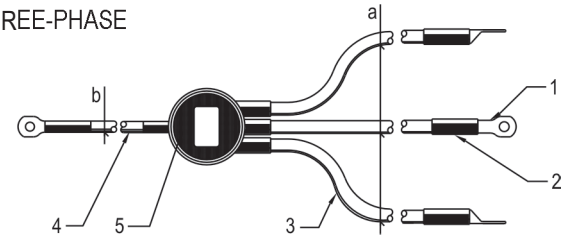


1) Rubber plug
2) Rubber protecting collar Ø100mm
3) Glass-fiber tube Ø40mm
color: yellow
4) Insulating rod's connection with cap nut

Type	Ending	Design	Max. voltage [kV]	Tot. length [mm]	Weight [kg]
152110-500	A	one-piece	123	2000	1,4
152220-500		two-piece	245	4000	3,1
152400-500		three-piece	420	6000	4,8
154110-500	C	one-piece	123	2000	1,4
154220-500		two-piece	245	4000	3,1
154400-500		three-piece	420	6000	4,8

TYPES OF GROUNDING AND SHORTING ROPES

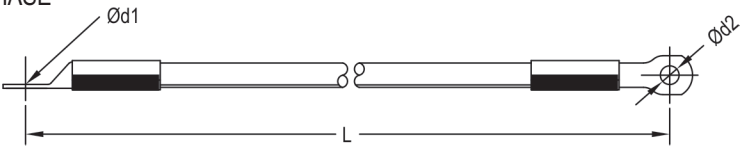
THREE-PHASE



1) Cable lug
2) Shrinking insulation
3) Shorting rope
4) Grounding rope
5) Junction clamp

Type	Length [mm]		Cross-section [mm^2]		Short-circuit resist.
	a	b	a	b	kA/1s
172035-0001	3x2000	1500	25	25	6
172035-0002	3x2000	1500	35	25	8
172035-0003	3x2000	1500	50	25	10
172035-0004	3x800	1500	50	50	10
172035-0005	3x800	1500	50	25	10
172035-0006	3x800	1500	70	35	15

SINGLE-PHASE



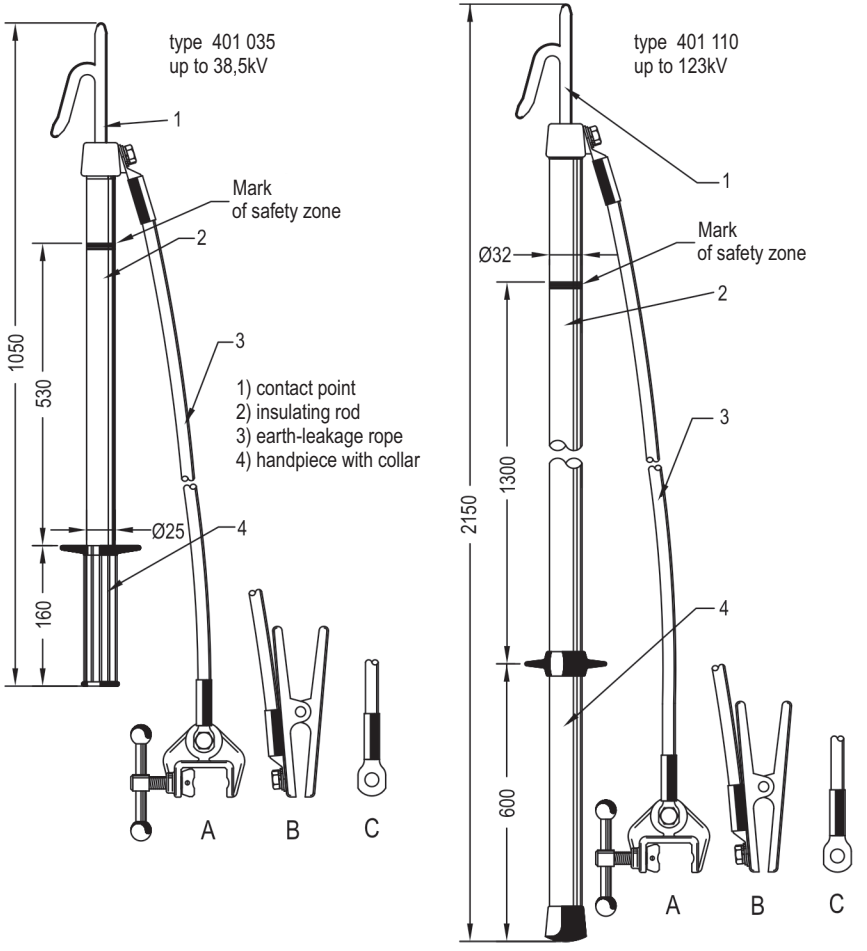
Type	Rope's cross-section [mm^2]	Dimensions			Dhort-circuit resistance kA/1s
		L[mm]	Ød1[mm]	Ød2[mm]	
171035-0001	16	2000	10,5	10,5	3
171035-0002		4000			
171035-0011	25	2000	10,5	10,5	6
171035-0013		4000			
171035-0021	35	2000	10,5	10,5	8
171035-0023		4000			
171035-0031	50	2000	10,5	10,5	10
171035-0033		4000	10,5	13	
171035-0034		4500			
171035-0036		9000			
171035-0041	70	2000	10,5	13	15
171035-0043		4000			
171035-0044		4500			
171035-0046		9000			
171035-0051	95	2000	10,5	13	19
171035-0053		4000			
171035-0054		4500			
171035-0056		9000			

Lengths of ropes or holes' diameters in cable lugs can be modified uppon agreement.

DISCHRGING TOOL

type 401 035
type 401 110

It is used for discharging of residual charges in electric circuit, (transmitters HDO, electrostatic precipitators, etc.) while they are disconnected from power supply.



SPECIFICATION

Attachable to:		Design	A	B	C
A - screw clamp	Ø5-20 mm				
	≠5-30 mm	Rope's cross-section	25 mm^2	25 mm^2	25 mm^2
B - spring clamp	≠2-25 mm	Rope's length	3 000 mm	3 000 mm	3 000 mm
C - cable lug	stand-by connection to bolt M10	Set's weight			
		type 401 035	2,8 kg	1,6 kg	1,3 kg
- produced in accordance with	PNE 359700 ČSN 359703	type 401 123	3,3 kg	2,1 kg	1,8 kg

SWITCHING RODS up to 38,5 kV

General description:

Switching rods are designed to be used for manipulation with islotaors, transfer switches, and earth switches working under voltage less than 38.5kV in electric stations.

The insulating rod of this product is made of laminated composition material with excellent electrical insulating parameters complying with the requirements for materials to be used for outdoor devices according to PNE 359700. The material for rods, which are designed in yellow-color tint, features high mechanical resistance and stability. The head with switching off point, by which the rod is ended, is made of very stout insulating material. The red mark on the rod indicates the extreme limit up to which the rod's end with the head may be inserted between, or may touch, live parts. The part at which the rod must be gripped while working under voltage is restricted by the lower rod's end with a plug and a protective collar.

This device is designed for indoor use in an environment with regular and cold climatic conditions according to CSN 330300, or for outdoor use in dry conditions that correspond with regular conditions. It means that this device may not be used in rain, fog, or snow.

RESCUE HOOK 38,5 kV

General description:

The rescue hook is designed to disengage persons struck with electric current from the area where they are being endangered by electric current. The hook is made of a highly strong, electrical insulating, composition material.
This device is designed for indoor use in an environment with regular and cold climatic conditions according to CSN 330300, or for outdoor use in dry conditions that correspond with regular conditions. It means that this device may not be used in rain, fog, or snow.

The gripping part of the insulating rod of this hook is clearly determined with the lower rod's end with a plug and a protective collar.

FUSE TONGS 38,5 kV

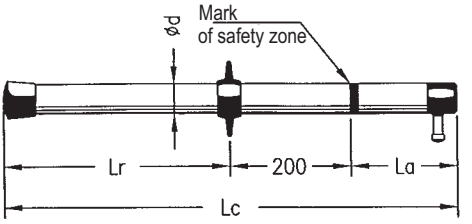
General description:

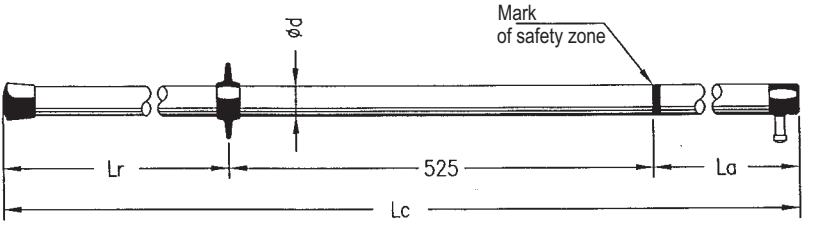
This device is designed to be used while replacing HV fuses under voltage up to 38,5 kV in electric stations. The heads and handpieces of fuse tongs are made of solid, electrical insulating material with high mechanical resistance.

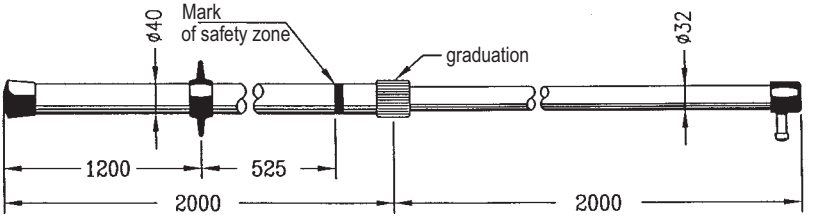
This device is designed for indoor use in an environment with regular and cold climatic conditions according to CSN 330300, or for outdoor use in dry conditions that correspond with regular conditions. It means that this device may not be used in rain, fog, or snow.

SWITCHING RODS

Switching rods are designed to be used for manipulation with isolators, transfer switches, and earth switches working under voltage in electric stations.







SPECIFICATION

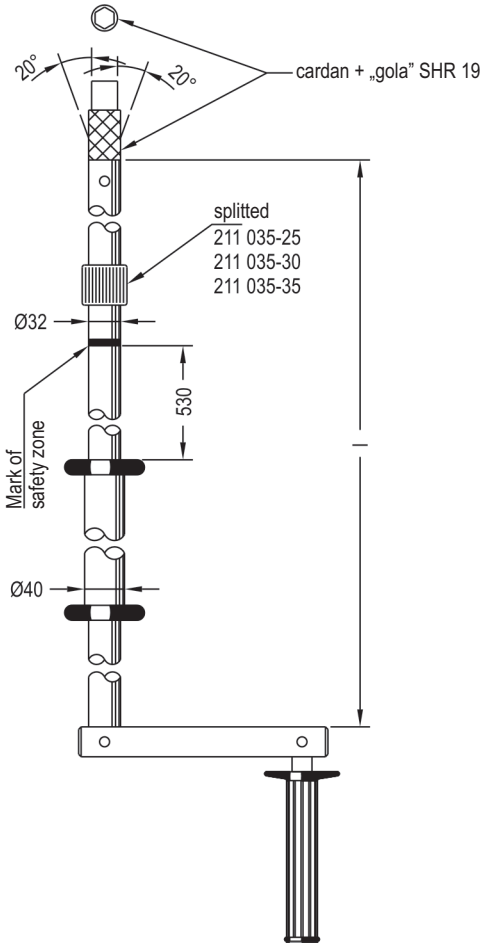
TYPE	NOMINAL VOLTAGE [kV]	DIMENSIONS [mm]				WEIGHT [kg]	TEST VOLTAGE [kV]
		Lc	Lr	La	Ød		
201 001	1	500	200	100	32	0,35	2,3
201 012	12	1040	350	115	32	0,5	23
201 035	38,5	2040	600	915	32	1,0	60
202 035		1040	350	115	32	0,5	
203 035		1540	500	575	32	0,65	
204 035		4000	1200	2275	32/40	2,15	

Mechanical strength is 500N for the duration of 1 min. The product satisfy PNE 359700, ČSN 359701.

HANDLING ROD

type 211 035-...

It is used in electric stations for disconnectors control in emergency.



SPECIFICATION

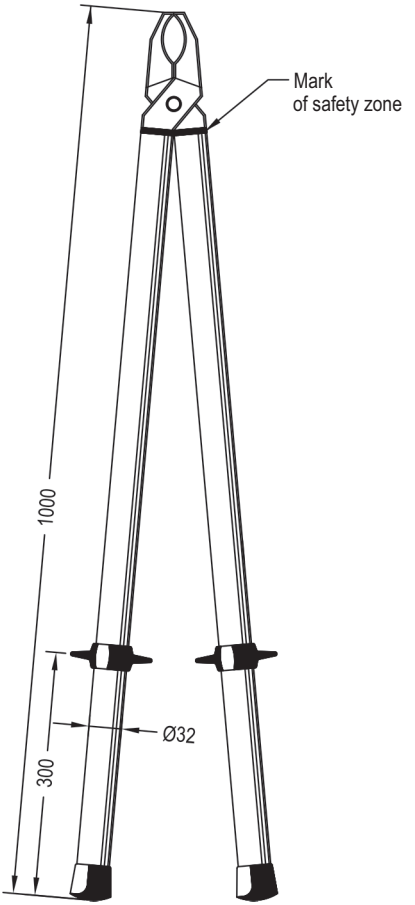
TYPE	NOMINAL VOLTAGE [kV]	LENGTH l [mm]		TEST VOLTAGE [kV]	WEIGHT [kg]
211 035-10	38,5	1000		60	1,8
211 035-15		1500			2,0
211 035-20		2000			2,2
211 035-25		2500	splitted		2,4
211 035-30		3000			2,6
211 035-35		3500			2,8

Mechanical strength is 500N for the duration of 1 min. The product satisfy PNE 359700, ČSN 359701.

FUSE TONGS 38,5kV

type 301 035

The device is designed to be used while replacing HV fuses under voltage in electric stations.



SPECIFICATION

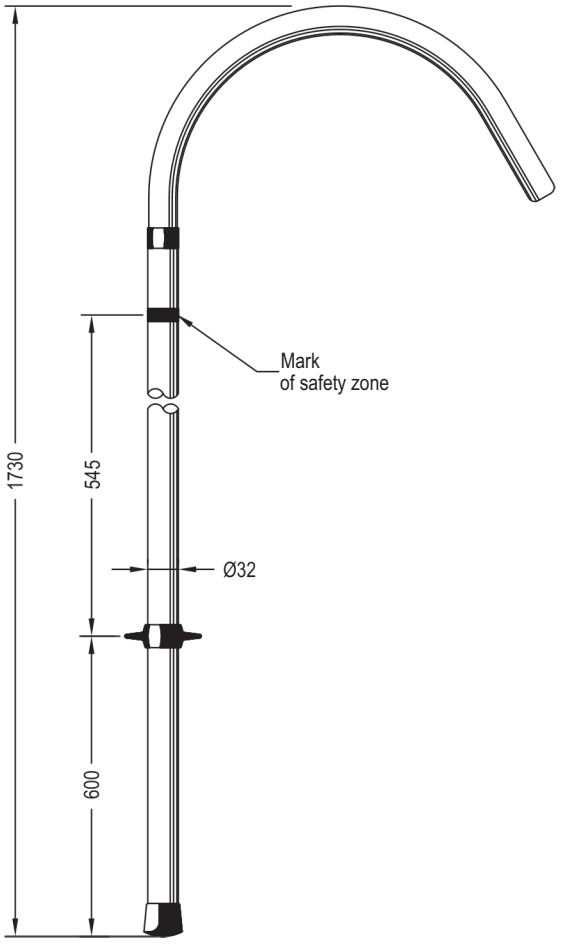
Designed for fuses Ø 28-80 mm

Maximal voltage	38,5 kV
Test voltage	60 kV
Weight	1,3 kg
Product satisfy	PNE 359700, ČSN 359701

RESCUE HOOK

type 251 035

This device, made of electro-insulating material, is designed to rescue persons struck with electric current.



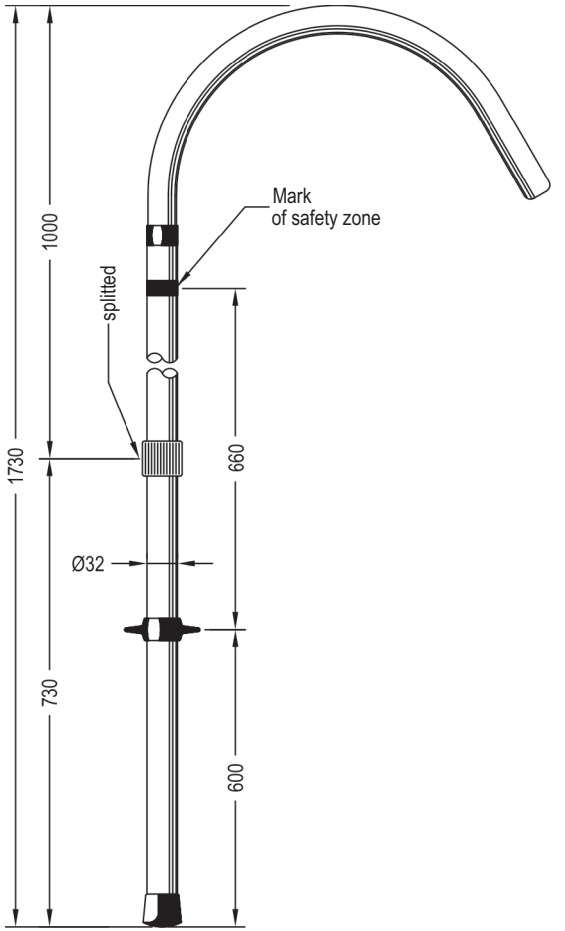
SPECIFICATION

Maximum voltage	38,5 kV
Test voltage	60 kV
Mechanical strength	500 N for the duration od 1min.
Weight	1 kg
Product satisfy	PNE 359700, ČSN 359701

RESCUE HOOK

type 252 035

This device, made of electro-insulating material, is designed to rescue persons struck with electric current. A two-piece model is designed for using in workshop vans.



SPECIFICATION

Maximum voltage	38,5 kV
Test voltage	60 kV
Mechanical strength	500 N for the duration od 1min.
Weight	1 kg
Product satisfy	PNE 359700, ČSN 359701

The company's processes are certified according to ISO 9001 standards

PRO CERT

CERTIFIKAČNÍ ORGÁN PRO CERTIFIKACI
SYSTÉMŮ MANAGEMENTU
č. S 3212, akreditovaný Českým institutem pro akreditaci, o.p.s.

PRO-CERT s.r.o.
Tehovská 1290/64, 100 00 Praha 10

vydává pod registračním číslem 156-02/2012

CERTIFIKÁT

který je dokladem, že společnost

Elektropomůcky Pardubice s.r.o.
Sídlo: Raisova 232, 530 02 Pardubice
IČ: 64793168

v oboru

Výroba ochranných a pracovních pomůcek pro energetiku

zavedla a udržuje systém managementu
splňující požadavky normy

ČSN EN ISO 9001:2009

Certifikát udělen dne: 3. 7. 2012
Platnost certifikátu do: 2. 7. 2015

V Praze dne 10. 7. 2012

IAF

S 3212

Ing. Zdeněk Kunzl
certifikační manažer

The company's processes are certified according to ISO 14001 standards

PRO CERT

CERTIFIKAČNÍ ORGÁN PRO CERTIFIKACI
SYSTÉMŮ MANAGEMENTU
č. S 3212, akreditovaný Českým institutem pro akreditaci, o.p.s.

PRO-CERT s.r.o.
Tehovská 1290/64, 100 00 Praha 10

vydává pod registračním číslem 156-03/2012

CERTIFIKÁT

který je dokladem, že společnost

Elektropomůcky Pardubice s.r.o.
Sídlo: Raisova 232, 530 02 Pardubice
IČ: 64793168

v oboru

Výroba ochranných a pracovních pomůcek pro energetiku

zavedla a udržuje systém managementu
splňující požadavky normy

ČSN EN ISO 14001:2005

Certifikát udělen dne: 3. 7. 2012
Platnost certifikátu do: 2. 7. 2015

V Praze dne 10. 7. 2012

IAF

S 3212

Ing. Zdeněk Kunzl
certifikační manažer

ENGINEERING-BUSINESS INFORMATION

The design meets PNE 359700; ČSN EN 61243-1; ČSN EN 61481; ČSN EN 61230; ČSN 359701; PNE 359705.

Testing:
The products are subjected to type tests according to PNE 359700; IEC 1243-1 and PNE 359705 in the state-accredited testing laboratory, EGU Běchovice - Praha. Before dispatching each product is subjected to a piece test according to PNE 359 700 and PNE 359705.

Packing:
The testers and short-circuiting sets of type 151001, 152035, 151025, 152001, 153001, 154001 and 156001 are delivered in cases. Other products are delivered only in transparent package. Each product is equipped with operating instructions and warrantee list.

Storing:
The product must be stored in dry places ensuring device against mechanical damage.

Warranty:
The products are provided with a 24-month warranty running from the date of sale for a maximum time of 36 months from manufacturing date. Defects caused by unprofessional manipulation and/or inappropriate storage conditions are not covered by this warranty.

Notice:
While ordering the short-circuiting sets with selectable short-circuit resistance it is necessary to indicate the demanded short-circuit resistance in your order.

Additionally we offer further protective and work safety aids for power stations according to PNE 381981:

such as: - Dielectric gloves
- Dielectric gum-boots
- Dielectric rubber carpet
- Low voltage (LV) tester
- Face shield
- Stretcher
- First-aid box
- Safety plates (informative plates)
- etc.

All products can be adapted to your requirements if it is feasible.

REGULAR CHECK-UP AND TESTING OF PROTECTIVE AND WORK SAFETY DEVICES ACCORDING TO PNE 359700

Zkušebna E-18

We provide periodic check-up of protective and work safety aids up to 123 kV, 50 Hz.

- ❑ voltage testers
- ❑ phase comparator sets
- ❑ handling rods
- ❑ rescue hooks
- ❑ displace hooks
- ❑ fuse tongs LV

The regular check-up is carried out in period of 24 months.
The check-up is booked and attested with protocol of periodic test.

Elektropomůcky Pardubice s.r.o. is a certified member of „Association of high voltage testing laboratories" with registration number E-18.

ASOCIACE ZKUŠEBEN VYSOKÉHO NAPĚTÍ
ASSOCIATION OF HIGH-VOLTAGE LABORATORIES

Č.j. 137/2112 Praha 19.4.2012

OSVĚDČENÍ

Zkušebna E 18
ELEKTROPOMŮCKY PARDUBICE s.r.o.

je způsobilá ke zkušební činnosti:

1. Zkoušky ochranných a pracovních pomůcek

v rozsahu, uvedeném v příloze.

Toto osvědčení bylo vydáno na základě posouzení zkušebny na místě komisí, určenou výborem AZVN. Navazuje na osvědčení č.j. 76/2007 a platí za podmínek uvedených v příloze do

30.4.2017

ASOCIACE ZKUŠEBEN VYSOKÉHO NAPĚTÍ

Ing. Václav Aschenbrenner
předseda

Příloha : Rozsah zkušební činnosti