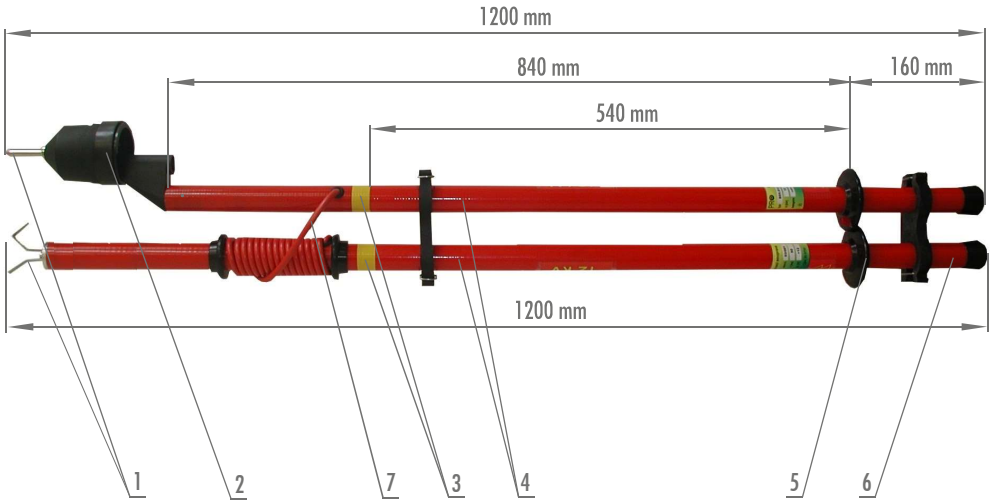
PHASING COMPARATOR HV - 7.2 kV

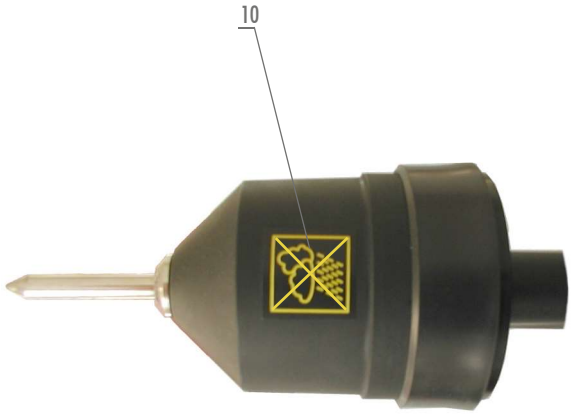
for indoor use

TYPE 855.007

General Information

Phasing comparator is used for detecting the identical phases in two polyphase systems at the same rating voltage and frequency. Phasing comparator is not allowed to be used as voltage detector. It is equipped with visual and audible signalling. Insulating pole is made of glass- fibre laminate which is suitable due to its high electrical and mechanical resistance and stability. It fulfills the requirements on the protective equipment for outdoor use. Phasing comparator is determined for indoor use, as well as for outdoor use under normal climatic conditions, **not in rain or risen humidity**. The handle is equipped with a protective rubber ring (hand guard).Phasing comparators comply with to standard ČSN EN 61481, IEC 61481.





1 - contact electrode
2 - indicator
3 - limit mark
4 - insulating element
5 - hand guard
6 - handle
7 - connecting HV cable
8 - red LED
9 - TEST button
10 - label for indoor use

Technical Data

Rated voltage [kV] network/equipment	Type
6 / 7.2	855.007
Class	A

Pole material		glass-fibre laminate for outdoor use
Length of pole	with indicator	1200 mm
	with contact electrode	1200 mm
Length of handle		160 mm
Pole diameter		31 mm
Length of connecting cable		2200 mm
Weight of equipment		1.5 kg

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Changes excepted!
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for indoor use

TYPE 85.007.0

1.0 Signalling

Both red highly illuminating LED diodes and an alterning sound of the buzzer indicate the discordance of phases.

2.0 Operability test

The check whether the comparator is operable, press the **TEST** button properly until the red LEDs start blinking and the buzzer sounds.
If the capacity of the feeding cells (two independent alkaline batteries) drops below the set value the red LED does not go on and there is no acoustic signal. In this case it is necessary to replace the baterries. If one of batteries is out of order, the detector is still operable.
Attention: The test by means of the button "TEST" doesn't substitute the operation test all phasing comparator. This test doesn't examine high voltage (HV) connection both poles of equipment (see point 3.0 d)

3.0 In-operation testing procedure

a) Visual check - the comparator must be in condition, it must not be mechanically damaged, especially HV cable

b) Function test - before the use check the proper function of comparator by pressing the **TEST** button. The comparator is operable if the both red LEDs are blinking and the buzzer gives a alternate sound signal until the **TEST** button is pressed. When the **TEST** button is released, both red LEDs must stop light and the buzzer must stop giving a sound. Now the comparator is ready for use

c) Handling with poles and HV cable - both during the test of all phasing operation and the indication process. Both poles of the comparator must be held below the hand guard by the handle while both contact electrodes are attached to the checked part. The part of poles below the yellow mark (insulating part - between the handle and the yellow mark) must not get into the space under voltage. It is needed to unwind the connection VN cable - only such lenght so that the contact electrodes of comparator reach of tested places. **The remaining part of VN cable must not to hang down freely.** The cable must be wound on the pole without the indication head between tworubber rings in the upper part of pole without head.

d) Test of all phasing comparator - because the operability test (see point 2.0) doesn't substitute the operation test all set including HV cable, the correct test must be performed on the electrical unit under alive. Touch the contact electrode (without indication head) to the ground construction and the electrode with head to inspected facilities under alive. The phasing comparator must signal the disacordance of phases by blinking of both red LEDs and alternig sound of the buzzer. Then it is possible to perform the test of the inspected facilities

e) Indication process - touch both contact electrodes to the inspected phases. *The disacordance of phases - the indication head signals, the phases are identical - the indication head doesn't signal*

f) Final operability - the comparator operability must be retested after each detection in accordance with point 2.0 - Operability test. Only if the operability test is successful it is possible to say whether the tested phases are identical or not

4.0 Replacement of feeding cells

The feeding is secured by two alkaline batteries type E23A (VA23GA, MS21, MN21) with tthe tension 12V built-in in the indication head. The neccessity of their replacement is checked by the testing button (point 2.0 see above).

1) Release the check nut of the contact electrode
2) Unscrew the contact electrode
3) Unscrew the plastic cover of the indication head

The batteries are fast held in the holder. Use a small screwdriver or a pocketknife for the replacement. Get under the batterie the screwdriver (knife) and gently press out of holder. Put on the holder the new batterie according to the polarity and gently press into the holder.

5.0 Operating conditions

The comparators are intended for use in ordinary indoor and outdoor conditions during the dry atmosphere. **They must not be used in the rain, fog and snowfall**. The handle is equipped with a protective rubber ring (hand guard).The nominal voltage of the detector is always marked on the detector's pole.

The comparator should only be used on electrical facilities with nominal voltage for which it is designed.
The instructions for use should be incorporated into the local operating and safety regulations.
The phasing comparator may only be used by qualified personnel.

6.0 Testing

The comparator is type-tested according to valid standards by the authorised labratory. Each comparator is separately tested piece by piece before expedition and labeled too. The label includes the test date (quarter/year) and the number of the authorised laboratory. The comparator must be tested regularly by the authorised labratory.

7.0 Packing

The comparator is expedited foil wrapped. The set can be delivered in the water-resistant cloth wrapping after the agreement with the producer. There is enclosed the function description and the directions for use, the Certificate about quality and completeness of product and product test.

8.0 Storage and Cleaning

The detector must be kept in condition. The storage place must by dry and dust-free. The equipment must be protected against the mechanical damage. The humidity should be 70% as a maximum and the temperature 40°C as a maximum.
For common cleaning use damp cloth, for more resistance dirt use technical alcohol. Do not use any organic solvents or any substances which may have a decolorizing effect.

9.0 Guarantee

The guarantee period is 24 months long and starts on the day the product is delivered to the customer. It applies to any defects probably caused by the manufacture. The guarantee does not cover any defects resulting from improper use, unprofessional handling, or unsuitable storing.

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