ELEKTROPOMŮCKY PARDUBICE

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MV and HV VOLTAGE TESTERS type 102… (3,6 – 420 kV)

User manual

1. General description

Testers of this type are designed for detecting presence of high voltage at 50 Hz frequency on the electrical appliances. Presence of voltage on the contact point is invariably signalized with both optical and sound signals. The sound signal is being consisted of piezo-ceramic siren with an acute fluctuating tonality, whereas the optical one with the two alternately flickering bright red LED diodes, respectively.

1.1. Check out correct tester's function

Checking out correct tester's function, including an appropriate charging status of power supplying cells of batteries, is effected by testing press-button. Once it is activated, the tester shall give out both optical and sound signals. The tester has en electrical circuit in-built for permanent checking status of power supplying cells. When in their voltage decrease under adjusted limit, the above circuit will automatically lock both optical and sound signaling so preventing the tester from giving out any signal when the testing press-button is activated. Such a status requires replacement of power supplying cells.

2. Testing procedure

a) Once removed from the casing, the tester is to be exposed to a detailed visual checking out on whether it is clean, dry and free from any mechanical damage. If need be, wipe out traces of moisture or dew from the tester's cover, these might be due to bringing it from the cool to warm room.
b) Check out tester's nominal voltage (this being invariably tagged on the insulating stick's part) against the mains' nominal voltage value.
c) The insulating sticks of HV testers are composed from the two or eventually three units to be assembled and fixed with tightening up the screw connection before the tester is used for measuring the electrical appliances.
d) Prior to use, verify tester's functionality with testing press-button. Once it is pressed, the tester should give out both sound and optical signals. In drop of signaling, power-supplying cells should be replaced.
e) Apply the tester onto the measured electrical equipment (each phase is tested separately). When manipulating, hold your tester invariably by its handle, which is the portion limited by protective rubber ring and stopper (HV) and by rubber handle

(MV). Detecting presence or absence of high voltage in distribution facilities must only be carried on uncovered life parts by direct metal contact. It shall be prohibited to test presence or absence of voltage if the requirement of direct electrical connection with a tested device will not be met.

f) Duration of a contact with live parts under voltage must not exceed 2 minutes or 1 minute in rain, fog or snow
g) Re-check tester‘s correct functioning by testing press-button after you have used the device.
h) When using testers category L in indoor or outdoor substations is necessary to realize the potential influence of interfering voltage on change of the gradient in the electric field and thus at a certain location affect the proper of tester's indication. In this case, the manufacturer recommends to draw attention to this place in the local operating regulations and for testing to determine a place where these influences do not occur.
i) The red mark on the stick indicates the extreme limit up to which the stick’s end with the head may be inserted between, or may touch, live parts.

3. Operating conditions

– Climatic conventional category from –25 to +55°C
–The testers are designed for indoor and outdoor use under normal climatic conditions. This means that they must not be used in rain, fog or snow.

4. Power supply unit

The tester is equipped with in-built power supply unit consisting of four 1.5 V power supply cells (batteries). The power supply cells status is detected by means of a testing press-button (see point d). The power supply cells are replaced as follows: screw off the contact point and remove the indicating head top cover.
Power cells lifetime is under normal use about 2 years, after this period, the manufacturer recommends power cells to be replaced. In case, the tester is long term inoperative, power cells must be removed. Where the operator is not able to provide timely replacement of the power cells as to prevent battery leakage, the manufacturer recommends replacing alkaline power cells by lithium.

5. Maintenance instructions

The operator is obliged to submit the tester to periodical tests at prescribed time intervals 36 months. Meanwhile, he will regularly check the tester's external mechanical condition and method of storage between these periodical tests. The testers must be kept clean, dry, non-deformed, mechanically intact, and complete. In case of electrolyte leakage from power cells, tester must be removed from use. Without subsequent repair by the manufacturer usage is prohibited.

6. Testing procedure

These testers are subjected to type tests according to CSN 359700 and IEC 1243-1 in the state-accredited testing laboratory, EGÚ Běchovice. Before dispatching, each product is subjected to unitary test.

7. Packing

The testers are supplied in casing. The User‘s Manual and the warranty list are enclosed as a part of each product.

8. Storage

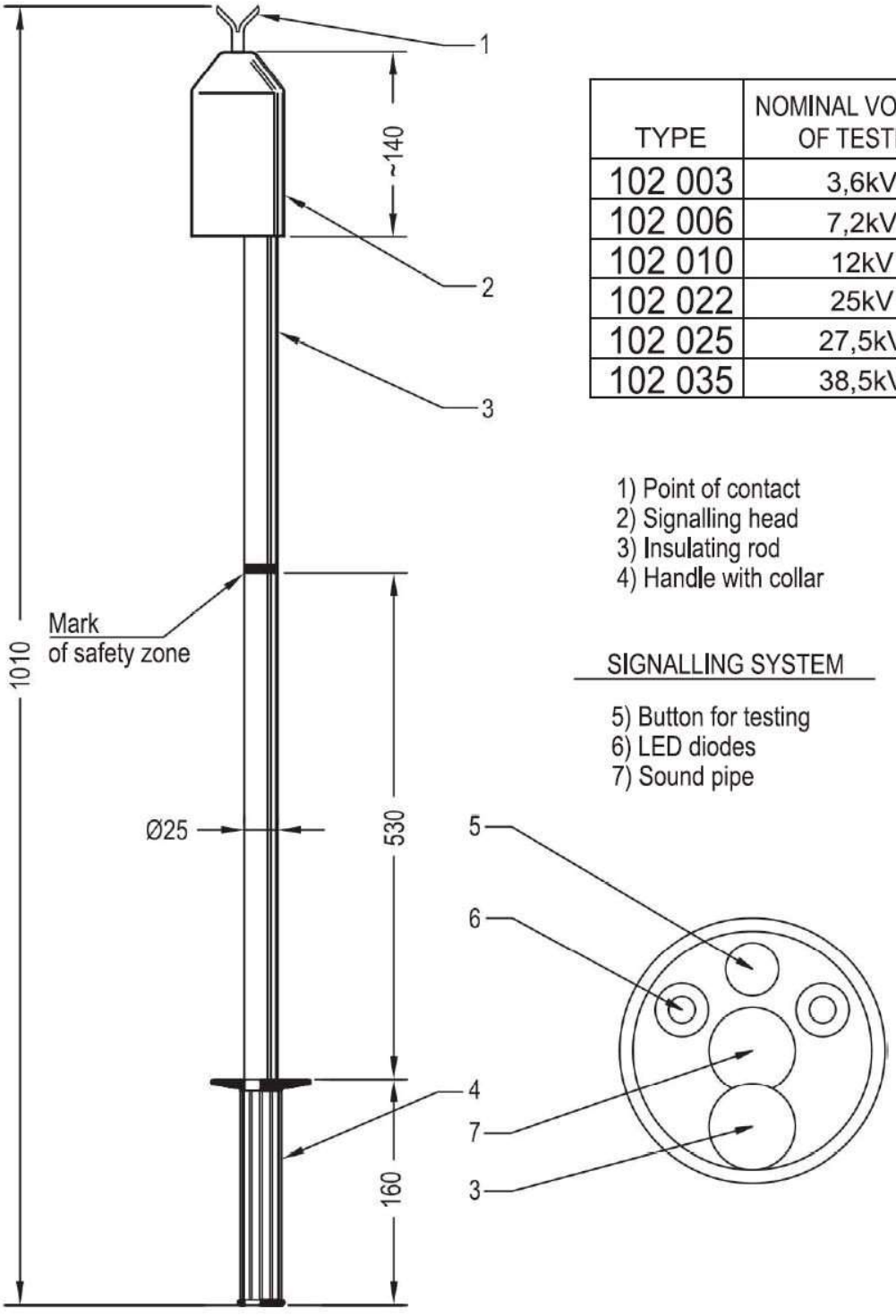
The testers must be stored in clean, dry and dustless rooms where they can not be mechanically damaged and exposed to hot sun and ionizing radiation.

9. Warranty

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

MV TESTERS WITH COMBINED SIGNALLING

type 102 ...



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

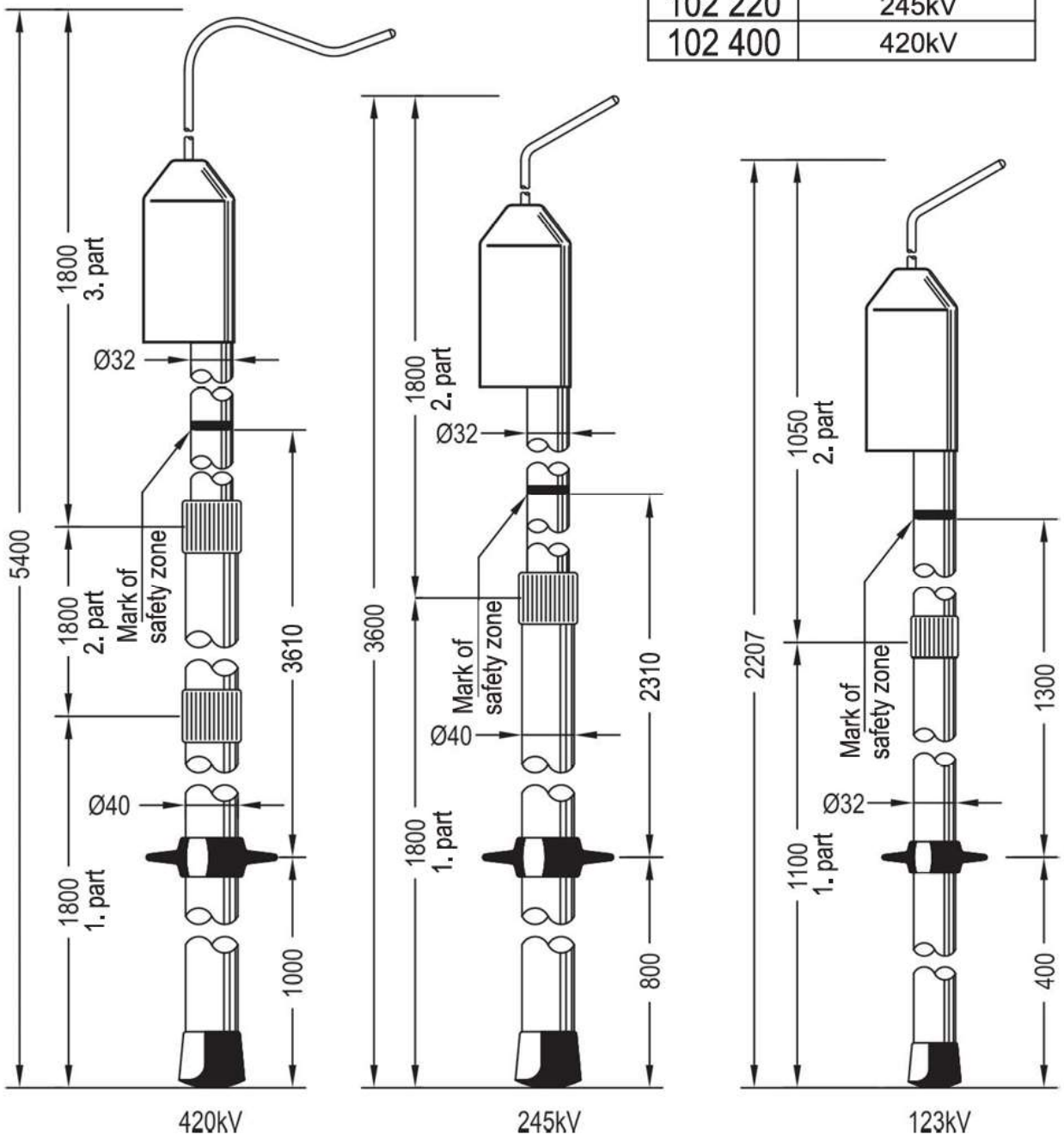
SPECIFICATION

- 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

EHV TESTERS
WITH COMBINED SIGNALLING

type 102 ...

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