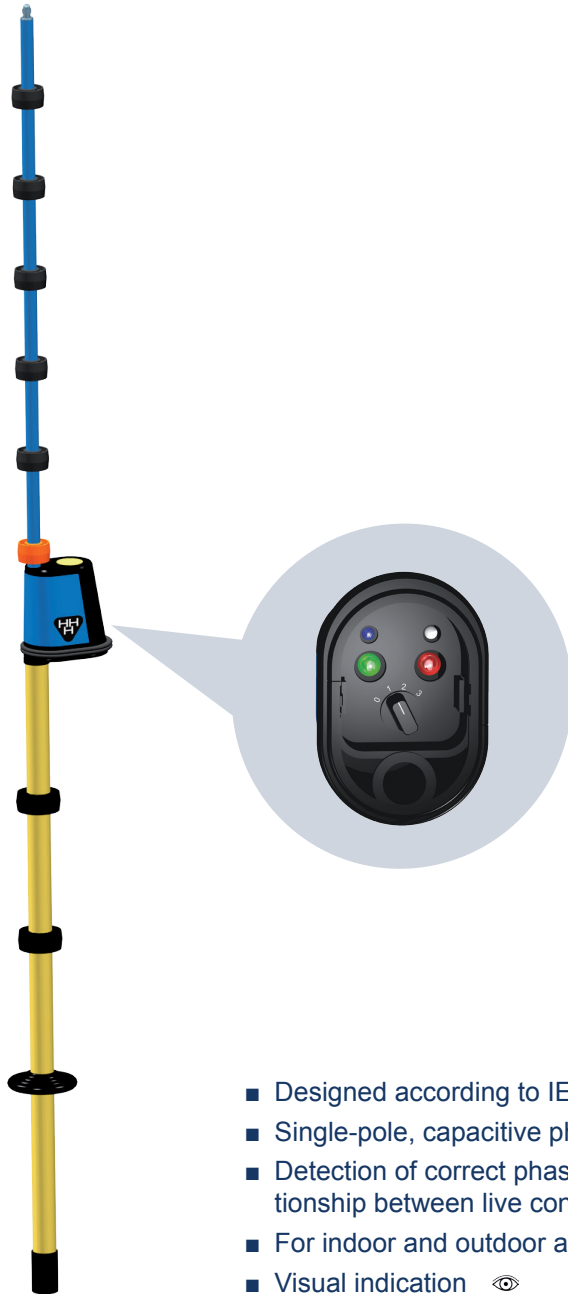


# Compare 2.0

Single-pole, capacitive phase comparator



- Designed according to IEC 61481 (VDE 0682-431)
- Single-pole, capacitive phase comparator
- Detection of correct phase relationship and incorrect phase relationship between live conductors
- For indoor and outdoor applications 🏠 ☔
- Visual indication 👁️



**HORSTMANN**  
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The phase comparator Compare 2.0 is a single-pole, capacitive phase comparator for voltages from 5–36 kV according to IEC 61481 (VDE 0682-431). The device detects “correct phase relationship” or “incorrect phase relationship” conditions between two live conductors of a medium voltage distribution network.

Four bright LEDs in the colours white, blue, green and red indicate various operational conditions. The turning knob is used to either turn the device on/off and select between three voltage ranges. The device is supplied by two long-term lithium batteries which do not have to be replaced between two maintenance tests. The phase comparator is subject to maintenance tests at intervals not exceeding 6 years according to the German DGUV-Vorschrift 3. Confirming to IEC 61481 Class B, “incorrect phase relationship” appears at a phase angle between 60° and 300°.

## Phase indicating measurement

When the phase comparator is switched on, a built-in self test determines that the comparator is working correctly. The phase comparison is realised by contacting the conductors one after the other. The second conductor has to be contacted within 10 seconds. A microcontroller determines the phase relationship of the two voltages. The green LED (“correct phase relationship”) and the red LED (“incorrect phase relationship”) indicate the measurement result.

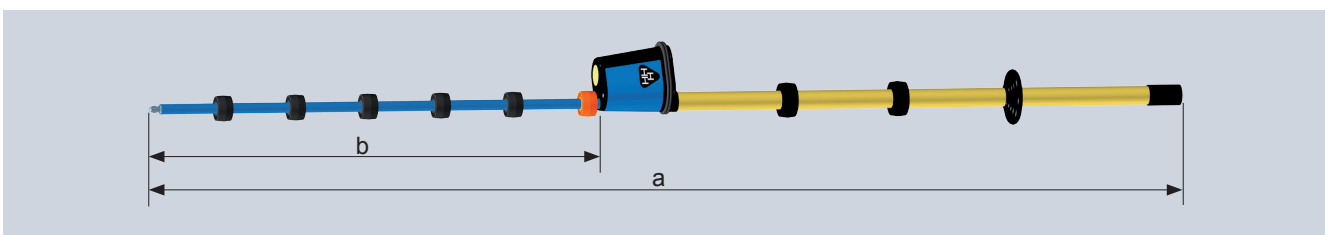
Using the turning knob 3 voltage ranges can be selected:

- 1: 5–10 kV
- 2: 10–20 kV
- 3: 20–36 kV

In medium voltage networks with decentralised renewable energy feed-ins, measurement interruptions may occur. In such cases repeat the phase comparison. It is impossible to get a wrong indication.

LED	Explanation
○	Permanent light indicates “ready for use” after built-in self test
●	Permanent light indicates “voltage detected”
☀	Flashing light indicates “memory ready” (time for memory)
●	Permanent light indicates “correct phase relationship”
☀	Flashing light indicates “incorrect phase relationship”

Technical Data	Compare 2.0
Indication	Visual: 1 white LED/1 blue LED / 1 green LED/ 1 red LED
Nominal frequency	50 Hz
Class	B (Incorrect phase relationship 60° to 300°)
Temperature range	-25 to +70 °C, climatic categories N and W



Nominal Voltage [kV]	Total Length a [mm]	Insertion Depth b [mm]	Order No.
5–36	1,420	635	51-0104-001