



## GDHX-9700 Phase Detector



### General Information

GDHX-9700 Phase Detector produced by HVHIPOT is mainly used in the three-phase phase detection from in power system and in switchgears. At the same time, it is also applicable to phase detection and phase sequence detection of power lines and substations, including high voltage detection. This product USES double shielding and brand-new digital circuit, has the extremely strong anti-interference, completely conforms to (EMC) standard request, ADAPTS to various electromagnetic field interference conditions.

This product adopts GPS synchronous measurement technology and wireless transmission technology, with reliable high voltage security isolation, simple operation, stable performance. It is widely used for phase detection and phase

sequence detection of high voltage equipments such as high voltage power lines, substations and power plants. In the power system, phase detection is often needed before grid-connection closes and the new substation is put into operation.

After high voltage phase signals of test wire are processed, they can be directly transmitted and received by the hand-held unit. After comparison of results, phase angle difference and vector map are displayed in real time. The phase angle difference can be measured at a very long distance. The unit can continue to work for 30 minutes without satellite-clock. It is safe, reliable, fast and accurate. It is applicable to different voltage levels (10V~500kV). When checking the structure of the power grid, the relative phase of different wires can be accurately identified for the three phase connection lines, and there is no electrical connection between the two measuring components, which makes the application of the measuring device very flexible and safe.

## Features

- It can accurately judge the material of 10KV dry type transformer.
- Voltage range: 10V~500KV, applicable for various voltage grades.
- Accuracy: from a short distance: error  $\leq \pm 3^\circ$ ; from a long distance: error  $\leq \pm 3^\circ$ .
- Sampling rate: 10 times/second.
- Data & time setting and data review.
- Backlight setting: normally on, normally off, user-defined within 0~999s.
- Auto shut-down: never, user-defined within 0~999 minutes.
- Determination of same phase:  $\leq 20^\circ$  (user-defined if phase threshold is within 0-90°, default 20°)

- Determination of different phase:  $>20^\circ$  (user-defined if phase threshold is within  $0-90^\circ$ , default  $20^\circ$ )
- On-site calibration function: on-site calibration can be carried out on the tested wire to ensure the accuracy of phase angle.
- Multiple mode design, better applicability, more secure, more convenient.
- Unique human-machine interface, simple operation.
- FCC antenna design, stronger signal, easier to penetrate walls, doors and barriers.
- Double shielding, strong anti-interference, in full compliance with EMC standards.
- Charts and data display, easier to read, with date and time display function.
- Qualitative measurement: display by acoustooptic signal.
- Quantitative measurement: real-time display of phase angle difference, error  $\leq 5^\circ$ .
- Phase sequence check: positive phase sequence, negative phase sequence ( $120^\circ$ ,  $240^\circ$ ).
- Under GPS satellite timing service, the detection distance between detector X and Y is  $\geq 500\text{km}$ .
- Data storage capacity of 2000 groups. It can query and access to historical data.
- The length of standard insulation rod is 4m, and the applicable voltage grade of insulation rod is  $\leq 220\text{KV}$

## Specification

Voltage range	10V~500kV
Power supply	For hand-held unit: large capacity lithium battery
	AA size alkaline battery(1.5V) 3pcs
Wireless transmission	Visual distance 150m
Same phase	Phase displacement $\leq 20^\circ$ (user-defined if phase threshold is within 0-90°)
Different phase	Phase displacement $> 20^\circ$ (user-defined if phase threshold is within 0-90°)
Display accuracy	Quantitative measurement $\leq 5^\circ$
Resolution of phase angle	1°
Phase sequence measurement	Phase sequence is determined through clockwise 120°/ counter-clockwise 240°
Satellite timing range	2~30 minutes
Display	Positive type LCD screen, clear in the sunlight.
Working temperature	-35~+50°C
Storage temperature	-40~+55°C

Relative humidity	≤95%RH, condensing
Hand-held unit	0.31 kg
Detector X	0.16 kg
Detector Y	0.16 kg