



GDHX-9000 Phase Detector



Product description

GDHX-9000 is used for phase detection of power supply on both sides of closed-loop point circuit breaker, in order to avoid short-circuit in power system. It is composed of three parts, a transmitter, a receiver and an adjustable insulated rod. The receiver will indicate test result of in-phase or out of phase. It allows two engineers to proceed the test.

Features

- Power supply: Maintenance-free battery with large capacity and very low consumption (Lasting for one year after a single charge). Suitable for field work.
- Safe design, in accordance with safety standards for mining equipment.
- Far measuring distance, up to 200M. Signals can be received through the wall.
- LCD show data such as phase position, waveform, and frequency synchronously, which guarantees an overall and safe test.
- Extended insulation rod, portable receiver.
- Small size and light weight.

Specifications

- Detectable voltage range: 0.4-500kV(standard is 6-110kV).
- Wireless transmission distance: $\geq 200\text{M}$ of visibility range(customized for more than 300M).
- Accuracy: 0.1°
- Definition: phase angle $\leq 30^\circ$, In-phase; Phase angle $\geq 30^\circ$, Out of phase.
- Working frequency: 45-60Hz.
- Net weight: 5kg.

Insulation index:

- High withstand voltage nylon material for 2pcs transmitters. Insulation level is 80kV/cm.
- Moisture-proof extended insulation rod. The specifications as as below tables.

Table 1 Electrical & Mechanical specifications of insulation rod

Items	Unit	Index
Matin type heat resistance(lengthways)	°C	>200
Shock resistance(lengthways)	MPa/cm	>147
Bending degree(lengthways)	MPa	>343
surface resistivity(after water-immersed)	Ω	>10x10 ¹¹
volume resistivity (normality)	Ω/cm	>10x10 ³¹

Table 2 Withstand voltage test parameters for insulation rod

Voltage (kV)	Length(m)	Withstand voltage (kV)		Time (min)	Result
		Standard value	Test value		
6-10	3.2	44		5	Qualified
35	3.2	80		5	Qualified
66-110	3.2	254		5	Qualified
220kV	5.2	40kV/0.3m (section)		5	Qualifie

Table 3 specifications of phase detector

No.	Test items	Unit	Test parameters							Remark
			3kV	6kV	10kV	35kV	110kV	220kV	500kV	
01	Starting voltage	kV	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	Qualified
02	Transmission distance(range of visibility)	m	> 200M							Qualified
04	Leak current	μA	<30	<30	<30	<30	<30	<30	<30	Qualified
05	Sound level	dB	>75	>75	>>75	>75	>75	>75	>75	Qualified
06	DC voltage	kV	3	6	10	35	110	220	500	Qualified
07	Withstand voltage test	40kV/0.3m(section test)							Qualified	

08	Anti-arc test	kV	3.6	7.2	12	42	130	260	600	Qualified
09	Anti-short circuit test	kV	3.6	7.2	12	42	88	176	400	Qualified
11	Temperature test	°C	-30~+45							Qualified
12	Humidity test	%	95%	95%	95%	95%	95%	95%	95%	Qualified
13	Free fall(3M)	times	10	10	10	10	10	10	10	Qualified
14	Impulse test	times	1000	1000	1000	1000	1000	1000	1000	Qualified
15	In-phase interference	kV	<1.2	<2.4	<4	<14	<44	<88	<200	Qualified
16	Phase reversal interference	kV	>1.8	>3.6	>6	>21	>66	>132	>300	Qualified
17	Work environment		Indoor or outdoor							Qualified

18	Work voltage	V	8.7V	Lithium battery
19	Static current	μ A	< 10	Qualified
20	Dynamic current	mA	< 20	Qualified
21	Dynamic power consumption	W	<0.2	Qualified