

Introduction

The High Voltage Wireless Phase Comparator WPC1000 uses a Transmitter module and a Receiver module to determine the Phase Relationship between two energized conductors at the same nominal voltage and frequency, without the need for connecting cables

Designed to comply with the requirements of IEC 61481 for use on system voltages up to 36kV



WPC1000 Operation

Each WPC1000 standard kit comprises the following components housed within a purpose designed ABS heavy duty carry case;

- WPC Transmitter (TX – Yellow)
- WPC Receiver (RX - Blue)
- 2x 40mm Hook Contact Electrodes
- 2x Bowthorpe Rod adaptors / or
- 2x Universal Star Wheel Adaptors
- Accessories Bag attaches to case lid
- Polymer cleaning kit
- Instruction Manual

A Switchgear Kit is available to enable Phase Comparison in Switchgear, (shown overleaf)


Operation & Features

The WPC1000 Transmitter (TX) and Receiver (RX) are battery operated electronic contact devices that give clear visible indication of the status of the line under test, and are able to determine the phase relationship between two points at the same nominal voltage and frequency, by means of super bright LED's and a high intensity buzzer. This ensures clear indication even in conditions of bright sunlight and high background noise.

Features

- Transmitter – coloured Yellow
- Receiver - coloured Blue
- Easy to use and Lightweight each (0.6kg)
- Fast response time
- High Impact ABS body
- Indoor/Outdoor use all weathers
- -25°C to +55°C operating temp range
- Shock & drop resistant
- Various rod adaptors available to suit different operating rods
- Wide range of accessories
- Easy access for battery replacement
- Battery type one per module
9v PP3 IEC6LF22
- Self Proving facility
Each module has a built in self check facility and the Receivers Buzzer will sound when a signal is received from the Transmitter. This is achieved by holding both Proving Buttons at the same time
- Operating Frequency – 433.9mHz
- Range – 50m in air
- Automatic alarming above threshold voltage as default
- Voltage Range – 11kV / 33kV
- Positive Indication of phase relationship

Each module must be used in conjunction with suitable insulating operating rods, to ensure a safe working distance from the HV source

High Voltage Instruments Ltd	WPC1000 – Wireless Phase Comparator
 <p data-bbox="296 546 687 595">WPC1000 Transmitter showing Line Live, Phase Condition being transmitted to Receiver</p>	<p data-bbox="810 277 1038 300">WPC1000 - Transmitter</p> <p data-bbox="810 304 1118 356">Visual Indication Two RED LED's Functions</p> <p data-bbox="810 360 1422 528">Voltage checking when the unit touches the live conductor, if the voltage on the conductor is above the voltage threshold setting of the Transmitter, it automatically starts the voltage checking sequence, after 5 secs if the line is live, both RED LED's will light solid and the Line Phase Angle is transmitted to the Receiver</p>
 <p data-bbox="336 1001 647 1050">WPC1000 Receiver showing Line Live In-Phase Condition with Transmitter</p>	<p data-bbox="810 618 1007 640">WPC1000 - Receiver</p> <p data-bbox="810 645 1310 692">Visual Indication - One RED LED and One GREEN LED Audible Indication - Buzzer</p> <p data-bbox="810 696 906 719">Functions</p> <p data-bbox="810 723 1401 864">Voltage Checking when the unit touches the live conductor, if the voltage on the conductor is above the voltage threshold setting of the Receiver. it automatically starts the voltage checking sequence, after 5 secs if the line is live, the RED LED will light solid</p> <p data-bbox="810 869 999 891">In-Phase indication</p> <p data-bbox="810 896 1418 1005">When the phase angle shift between the Transmitter and Receiver is nominally $\leq \pm 10^\circ$, the IN PHASE condition is indicated by RED LED lighting solid, GREEN LED lighting solid and the Buzzer sounding continuously</p> <p data-bbox="810 1010 1038 1032">Out-of-Phase indication</p> <p data-bbox="810 1037 1378 1120">When the phase angle shift between the Transmitter and Receiver is nominally $> \pm 20^\circ$, the OUT OF PHASE condition is indicated by solid RED LED lighting only</p>

WPC1000 Switchgear Kit

<p data-bbox="199 1196 1334 1249">An accessory kit is available that will allow the WPC1000 Wireless Phase Comparator to be used for High Voltage Phase Comparison within Switchgear.</p> <p data-bbox="199 1252 1414 1305">By using this kit it eliminates the need for any trailing wires within the switchgear cubicles. and allows Phasing to be carried out over a larger distance within a room</p>	
 <p data-bbox="389 1368 596 1391">WPC1000 Switchgear Kit</p>	<p data-bbox="810 1384 1027 1406">Switchgear Testing Kit</p> <p data-bbox="810 1411 1227 1523">This Kit consists of 2x Capacitive Coupled 60°Bent End Adaptor 2x Operating Handle Carry Bag</p>

High Voltage Instruments Ltd policy is one of continuous development and hence we reserve the right to change specification / design without prior notice



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