

Introduction

The High Voltage Wireless Phase Comparator WPC2000 uses a Transmitter module and a Receiver module to determine the Phase Relationship between two energised conductors at the same nominal voltage and frequency, without the need for connecting cables

Designed to comply with the requirements of IEC 61481 the WPC2000 is intended for use on system voltages from 66kV to 132kV



WPC2000 Kit

Each WPC2000 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
- 2x Universal Star Wheel Adaptors
- Accessories Bag attaches to case lid
- Polymer cleaning kit
- Instruction Manual

A range of additional accessories is shown overleaf depending on the configuration required.

Operation & Features

The WPC2000 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 – 30m in air
- Automatic alarming above threshold voltage as default
- Voltage Range – 66kV / 132kV
- 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



WPC2000 Transmitter showing Line Live, Phase Condition being transmitted to Receiver

WPC2000 - Transmitter

Visual Indication Two RED LED's

Functions

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



WPC2000 Receiver showing Line Live In-Phase Condition with Transmitter

WPC2000 - Receiver

Visual Indication - One RED LED and One GREEN LED

Audible Indication - Buzzer

Functions

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

In-Phase indication

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

Out-of-Phase indication

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

Additional Accessories



Rod Adaptors

Rod Adaptors are available for connecting to various operating poles shown from left to right are Bowthorpe, KP (Karl Pfisterer) and Universal Starwheel types



Contact Electrodes

Three sizes of aluminium hook are available in 40, 60 and 100mm, alternatively a straight 40mm stainless steel stud electrode, or a Y contact electrode can be supplied



Contact Electrode Extensions

To distance the detector away from any source of interference four sizes of electrode extension are available in 100, 250, 650 and 1000mm

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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