Is the SAFETY of your ELECTRICAL WORKERS ensured?

SURETECH™
MV/VP Phasing Sticks
MV/VP for Voltage and Phase measurements

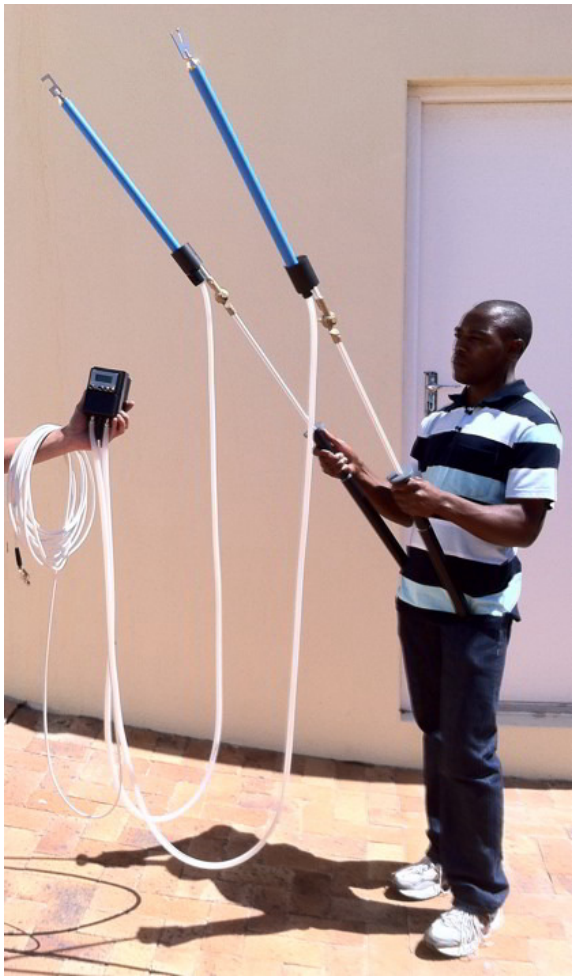
Standards
- ✓ IEC 61481
- ✓ SURETECH MV/VP: 0-36kV, 50Hz, Class D, W

Applications
- ✓ MV outdoor substation phasing and voltage measurements
- ✓ MV cable phasing and voltage measurements
- ✓ MV cable voltage measurements between phases
- ✓ MV cable voltage measurements from phase to earth
- ✓ MV line re-closer voltage measurements
- ✓ MV substation voltage measurements
- ✓ Monitor and measure induced voltages on power circuits

MV/VP Voltage and Phase Sensor
- ✓ All measurements are done at Earth potential, facilitating connection to other ground based instruments
- ✓ Probe and MV insulated cable are factory assembled to ensure no MV leakage into measuring instrument
- ✓ Infra Red Remote controller for SAFE, hands free operation
- ✓ Linear measurement circuits, and DSP sampling system; accurate voltage measurements are made to three digit accuracy
- ✓ Voltage resolution: 100 Volts
- ✓ LCD display, 8 character by 2 line alphanumeric, with backlight (selectable ON/OFF)
- ✓ LED with audible buzzer for High and Low level alarm facilitates phase / voltage windows (optional)
- ✓ 3x Push button interface enables simple configuration and control of instrument
- ✓ Programmable interface to connect instrument to notebook / laptop computer via RS232 for (extra):
  - Instrument is factory calibrated using firmware of the control microprocessor
  - Calibration is settable via RS232 interface
  - Data logging is possible via this channel in when using line to earth measurements
- ✓ Battery powered from 9V PP3 alkaline battery
- ✓ Battery state monitor with flashing LED
- ✓ Battery state voltage readout
- ✓ Power down audible alarms for three different shut-down modes

MV/VP Phasing Stick Handles
- ✓ 2x Handles with integral crown adapter, dual hand operation or single handed
- ✓ Insulated handle length 850mm for use below 50kV
- ✓ Grips include 80mm diameter guard rings

MV/VP Phasing Stick Probes & cables
- ✓ 2x Probes with integrated MV insulated, ultra flexible silicone cable to connect to measuring instrument via BNC connectors
- ✓ Insulated cable length: standard=2.5m, 5m and 10m are also available for very high line measurements
- ✓ Probe resistance 46Mohm each; each probe is continuously rated for 22kV; and are tested to 30kV across probe as well as probe insulation
- ✓ Probes have resistive elements with **SIX CONCENTRIC LAYERS** of insulation: 1. PUresin // 2.Poly-carbonate inner tube // 3.PU resin // 4.PVC outer cover tube // 5.PU resin // 6.PVC outer cover tube
- ✓ Probe length 425mm, uses ultra-reliable HV resistors, which are voltage graded down the length of the probe
- ✓ Probe resistance 46Mohm each; continuously rated for 22kV (36kV line)
- ✓ Probes use finest HV resistors available; when 22kV is applied, HV resistors have only 40% of rated voltage
- ✓ Voltage gradient across probe is 50Volts per mm; linearly distributed across probe.



System components

- Instrument is positioned on or near ground, operated with IR remote controller, for SAFE hands free operation
- Probes: six layer insulated, rated at 22kV per probe (ie. 44kV line voltage with two probes)
- Handles: 1000mm long with 450mm grips, standard crown adapter for use on telescopic link sticks as well
- MV cables: Silicone insulation with ultra flexible signal cable, rated for 36kV line insulation; length 2.5m with BNC connectors to instrument
- Earth cables: 5m silicone insulated with crocodile clip earth

Woven Bags

- Rugged bag with padded hardboard top and bottom, quality zipper
- Velcro strips inside for securing various components
- Dimensions: 1080mm x 280mm x 80mm

Case

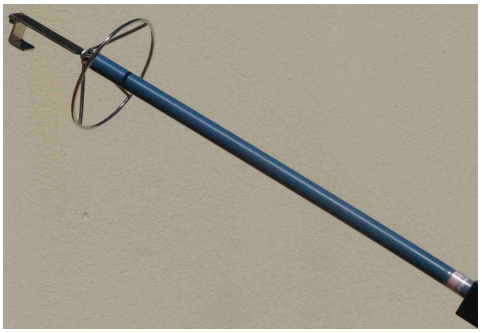
- Aluminium carry case for the ultimate rough handling
- Dimensions: 1000mm x 280mm x 100mm
- Foam dust seal around lid

LCD Readout

- KVL on LCD top line shows kilo Volts on LEFT probe to earth (ie. PHASE Voltage)
- KVR on LCD bottom line shows kilo Volts on RIGHT probe to earth (ie. PHASE Voltage)
- Vdif on LCD top line shows kilo Voltage difference between RIGHT & LEFT probe (ie. LINE Voltage)
- Pdif on LCD bottom line shows Phase Angle difference between RIGHT & LEFT probes [degrees]
- BNC connectors are used to connect MV insulated cable to grounded instrument

Probe tips

- Variety of probe tips
- Probe cone guard is also available (optional extra)



CAUTION: Before operating the* SURETECH™ MV/VP*, read the User Manual carefully

SURE Engineering CC
PO Box 63, Steenberg, Cape Town 7947
South Africa
Reg CK 87/11172/23

website: http://www.suretech.co.za
email: info@suretech.co.za
Tel: +27-21-701-8529 Fax: +27-21-701-9183
Cell: +27-83-555-0149