



# T-P23 Low Voltage Cable Fault Locator



- ***TDR Fault Location*** by testing from a single point of connection with minimum dependence on cable records
- ***Travelling Wave Fault Location*** by simultaneous testing from two points to resolve fault location ambiguities on branched cables
- ***Voltage Gradient Fault Location*** with remote interrogation reduces on-site visits and expedites location of intermittent faults

The ***Kehui T-P23*** is based on the successful ***Kehui T-P22*** of which over 300 are currently in service. Like its predecessor, the ***Kehui T-P23*** has been designed for the location of all types of low voltage cable fault but especially the difficult and troublesome ***transient*** and ***intermittent*** fault. It can be controlled locally from a portable PC through its internal ***Bluetooth*** transceiver or remotely over the ***Internet*** using its integral GSM/GPRS modem.

The ***Kehui T-P23*** is connected simultaneously to all 3 phases of the LV cable to allow the local or remote operator to perform **TDR** testing on any combination of phases. Power for the ***Kehui T-P23*** is taken through the 3 phase test lead.

**The *Kehui T-P23*** includes a 3 channel transient recorder which is used to record the 3 phase voltages of the faulty cable so that the exact nature and behaviour of intermittent faults can be identified. The signals acquired by the transient recorder are also used to detect voltage distortion which triggers the **TDR** system. The last 20 triggered events are stored and consist of 10 cycles of AC voltage data together with 16 pre-trigger and 48 post-trigger **TDR** waveforms. Quasi-synchronous **Travelling Wave Fault Location** can be performed using 2, ***Kehui T-P23*** units. The 3 phase voltage recordings *from any mixture* of 2, or more, ***Kehui T-P23***, ***Kehui T-P22*** or ***Kehui T-V22*** units can be used for **Voltage Gradient Fault Location**.

By providing total control from remote locations the ***Kehui T-P23*** can be connected to a faulty cable by field staff who are not necessarily familiar with the analysis of **TDR** waveforms - the expertise in adjustment and interpretation being provided by a centrally located specialist. This becomes particularly beneficial when the equipment has to be left on-site awaiting the (re)-occurrence of an intermittent fault.

**Physical details:**

**Dimensions** 240mm x 120mm x 60mm

**Weight** 1.0 kg

**Environmental:**

**IP65 ABS Housing**

**IP68 Connectors**

**Standard Accessories:**



3phase test lead



GSM/GPRS antenna

**T-P2X MASTER Remote control and fault location software**

The screenshot shows the T-P2X MASTER software interface. Key features and callouts include:

- Job/Unit selection:** Callout pointing to the 'Job' and 'Unit' dropdown menus in the 'Job Selector' panel.
- Zero cursor set on 'point of connection':** Callout pointing to the vertical dashed line on the TDR trace.
- 'Healthy' TDR trace (trace #1):** Callout pointing to the smooth green trace.
- Arcing TDR trace (trace #42):** Callout pointing to the jagged red trace.
- Manual TDR tests:** Callout pointing to the 'Manual Tests' panel on the right.
- Moving cursor set on 'point of divergence':** Callout pointing to the vertical dashed line on the arcing trace.
- Distance to fault:** Callout pointing to the 'Result' field showing '112 m'.
- 2 cycles from AC recording:** Callout pointing to the start of the AC waveform in the 'Long Anals/Link Box# 13' window.
- Complete 10 cycles of AC recording:** Callout pointing to the end of the AC waveform in the 'Long Anals/Link Box# 13' window.
- Markers for TDR traces 1.....42.....64:** Callout pointing to the 'Event Parameters' table at the bottom.

**Optional Accessory:**



**LV Cable Marker** provides a means of identifying known points along a cable to simplify interpretation of TDR traces and/or to improve the accuracy of distance to fault determination. The unit is line powered and appears on the TDR trace like an intermittent fault but without interrupting supplies to customers.

**For further information please contact:**

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