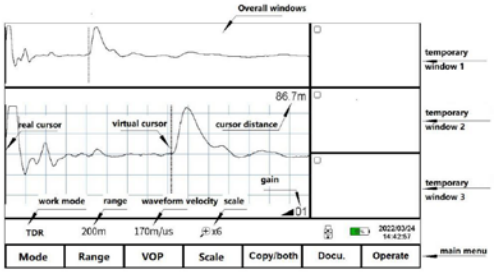
CFL-32/2000pd

Power Cable Fault Location System

- Cable insulation testing with DC voltage up to 32 kV.
- Application scope: rated voltages 380 V...35 kV power cables, including PILC, rubber, PVC, and XLPE cables.
- Digital Time Domain Reflectometer with touch screen control TDR, ICE and MIM method pre-location.
- Surge generator up to 2000 J (4000 J – instant).
- Advanced safety systems.

DESCRIPTION

DTDR-100 Digital Time Domain Reflectometer



- 400MHz sampling rate.
- TDR method.
- MIM method (Multi Impulse).
- ICE method (Second Impulse).
- Touchscreen/button dual modes.
- Wave storage, print.
- Two or three waves comparing.
- Database protocol software.

DTDR-100 Digital Time Domain Reflectometer is a 400 MHz high end TDR with 100 km range, which is designed to measure cable total length, fault distance for low resistance or conductor broken cable faults. Together with HVIG-32 HV Impulse Generator, MIMCU-32 MIM Coupling Unit, DTDR-100 can do HV pre-location for high resistance cable faults. DTDR-100 is an easy operation device used for distance locating. It's easy to operate, support both touch screen/button operation and with friendly interface. DTDR-100 adopts the unique menu operation mode, can use touch screen operation, can also use the mechanical keys, the operation is more flexible, clear, and friendly.

HVIG-32 HV Impulse Generator

- Integrated design with small size and light.
- Strong energy, 4 μF capacitor.
- UK Pelican safety case, professional & portable.
- Built in energy-storage capacitor without HV leak and safe operation.
- HV directly connect with the faulty cable, easy wiring and safe operation.
- Built-in high-power quick charging and short discharge period.
- Multiple safety protection supports Zero position start and release HV power energy after power off.
- Multiple working methods of single, period and DC testing adjustable voltage with LED indication.

Integrated HVIG-32 HV Impulse Generator is used to provide signal source for the fault locating and pinpointing. Together with the DTDR-100 Digital TDR, MIMCU-32 MIM Coupling Unit, it's easy to solve:

1) HV pre-location under ICE, MIM.
2) PP-4 Pin-pointing generator, with acoustic-magnetic method.

MIMCU-32 MIM Coupling Unit

- Function: Provide MIM function for HV pre-location.
- Pulse balancing technology: Easy to distinguish fault reflection split.
- Easy operation.
- Safe design.
- Insulation between measurement & HV circuits.
- Enclosed housing, no exposed HV components.
- Can match with HVIG-32 and DTDR-100.

MIMCU-32 MIM Coupling Unit is designed to match with HVIG-32 HV Impulse Generator and DTDR-100 Digital TDR, to do HV pre-location for power cable high resistance faults, including leaking fault, flash fault, low resistance fault and conductor broken fault.

MIMCU-32 MIM Coupling Unit is used to provide multi-impulse signal coupling path for DTDR-100 Digital TDR. It adopts the latest multiple impulse method to simple the judgment of the cable fault waveform.

MIMCU-32 can transfer the complex voltage surging breakdown waveform into the easy distinguished fault waveform. And the requirement to the technical personnel can be largely reduced.

PP-4 Acoustic-Magnetic Pin-pointer

- Wonderful acoustic quality & noise immunity.
- Intelligent acoustic-magnetic method.
- Automatic mute function to protect your ears.
- Bright, transflective sunshine display.
- Cable routine left-right indication.
- Easiest operation.

PP-4 Acoustic-Magnetic Pin-pointer is an easy operation device used to pinpoint the fault point. It integrated the function of acoustic magnetic synchronization method, the magnetic field strength method to make the pinpointing accuracy.

*CL-15/6 Cable Locator

- Colorful compass guidance.
- 2 Hz ultra-narrow bandwidth.
- Correct and error tracking indication.
- Real-time accurate depth.
- Signal distortion warning.
- High performance transmitting clamp.
- Digital processing circuits.

CL-15/6 Cable Locator is a high performance underground metallic pipe locating system. It consists a transmitter and a receiver, can be used to do route tracing, pipe exploration and depth measurement of the underground cables and metallic pipes. It can also be used to identify target cable from a bunch of cables, locate the pipe insulation damage and earthed cable fault.

** Optional equipment as agreed with customer*

TECHNICAL SPECIFICATIONS:

DTDR-100 Digital Time Domain Reflectometer

Working mode	TDR (low voltage pulse), ICE (impulse current method), MIM (multiple impulse method)
Signal gain adjustment range	70 dB
Low voltage pulse emission voltage	30 V
Maximum ranging range	0…100 km
Highest resolution	0.1 m
Measurement error	± (0.5% × L + 1 m)
Ranging blind area	2 m
Low pressure pulse width	40 ns…20.5 us
Wave speed setting range	100 m/us…300 m/us
Maximum sampling frequency	400 MHz real-time sampling
Number of wave form saved	100 pcs
Communication interface	USB, Bluetooth (optional)

General

Power supply	7.4 V, 6000 mAh (lithium-ion battery pack)
Battery power supply time	more than 10 hours
Charger	220 V AC, 50 Hz, 2 A, charging time 6 hours
Dimensions	274 × 218 × 81 mm
Weight	host unit 2.6 kg
Working conditions	-25…+45 ℃, 5…90 RH (25 ℃), H <4500m

HVIG-32 HV Impulse Generator

Output surge voltage	0…32 kV, Step variable
Max. power energy	2000 J
Energy-storage capacitor	4 μF

General

Power supply	220 V AC, 50 Hz
Dimensions	400 x 460 x 300 mm
Weight	25 kg
Working conditions	-25…+45 ℃, 5…90 RH (25 ℃), H <4500m

MIMCU-32 MIM Coupling Unit

Input surge voltage	0…32 kV
Input surge current	Below 4000 J (instant) and the mean value should below 2000 J
Tested impulse voltage	300 Vpp
Impulse period	Above 5 s

General

Power supply	220 V AC, 50 Hz
Dimensions	419 x 320 x 341 mm
Weight	10 kg
Working conditions	-25…+45 ℃, 5…90 RH (25 ℃), H <4500m

PP-4 Acoustic-Magnetic Pin-pointer

Acoustic magnetic synchronous pin-pointing

Bandwidth	all-pass: 80…1500 Hz low-pass: 80…400 Hz high-pass: 200…1500 Hz band-pass: 150…600 Hz
Signal gain	≥ 80 dB
Accuracy	0.1 m
Background noise reduction mode	support, no and adaptive noise reduction
Display	800 x 470 dot LCD

General

Power supply	3.7 V, 6700 mAh (built-in Li-ion battery series)
Continuous work time	above 9 hours
Charger	input 220 V AC ± 10 %, 50 Hz; output 8.4 V, 5 V / 2 A
Dimensions	230 x 127 x 55 mm
Weight	1 kg (main unit), 1.4 kg (sensor)
Working conditions	-25…+45 ℃, 5…90 RH (25 ℃), H <4500m

***CL-15/6 Cable Locator**

Transmitter	
Output mode	direct connection, clamp coupling, radiation, booster
Output frequency	640 Hz, 1280 Hz, 8 kHz, 33 kHz, 82 kHz, 197 kHz
Output power	0…15 W, 10 levels adjustable
Impedance matching	fully automatic
Over voltage and over current protection	fully automatic
Display	320 × 240 dot matrix color LCD
IP code	IP 65
Power supply	7.4 V, 6000 mAh (built-in Li-ion battery pack)
Charger	input 100…240 V AC, 50/60 Hz; output 8.4 V, 2 A
Dimensions	280 x 220 x 90 mm
Weight	2.3 kg
Working conditions	-25…+60 ℃, 5…90 RH (25 ℃), H <4500m

Receiver	
Receiver mode	direct connection, clamp coupling, radiation, booster
Detection mode	wide peak, narrow peak, valley value, historical curve, frequency spectrum
Active frequency	640 Hz, 1280 Hz, 8 kHz ,33 kHz, 82 kHz, 197 kHz
Passive frequency	50/60 Hz power frequency, 4…24 kHz radio frequency
Display	320 × 240 dot matrix color LCD, sunlight visible
IP code	IP 65
Power supply	7.4 V, 3000 mAh (built-in Li-ion battery pack)
Charger	input 100…240 V AC, 50/60 Hz; output 8.4 V, 2 A
Dimensions	680 x 120 x 277 mm
Weight	2.0 kg
Working conditions	-25…+60 ℃, 5…90 RH (25 ℃), H <4500m