

Cable Fault Location System T20

Introduction

Cable fault location system T20 is mainly applied to locate the fault of high resistance and flashover on 6-35KV power cables. It can generate a DC high voltage power up to 35KV, and makes discharge breakdown to the cable fault point, then the point is detected through cable fault location device (pre-locator) and the pin-pointer. This system adopts electric elements with high precision and stability, as well as special structure and crafts. Integrated voltage increase, rectification, impulse capacitance, and discharge control into one, this location system are easier wiring and operation, smaller dimension, lighter weight and easier carry.



LP30/2

WL20

PP10

On-site application



Intelligent time difference method

System composition & technical data

Part 1 Fault location power LP30/2



It is mainly applied to fault of high resistance and flashover on 6-35kv power cable. With integrated voltage set up, rectification, impulse capacitance, and electrostatic discharge control, the device discharges every 4 seconds each time, shortening the location time largely. Also the device has the advantages of easier wiring, convenient operation, smaller dimension, lighter weight, easier carry and so on.

Technical data:

DC Output	0-35kV continuously adjustable
Max charging current	30mA
Max discharge energy	1200J
Polarity of output voltage	Negative polarity
Power supply	220V±10%
Capacity	1kVA
Volume	500×305×457(mm)
Net weight	30 kg

Part 2 Cable fault pre-locator (TDR) WL20



Multiple location methods:

- Low voltage impulse method:** Applicable for fault distance measurement for low resistance fault, short circuit fault, and open circuit fault. And apply to cable length, intermediate joints, T-joints, cable termination joints, and can be applied to correct the wave velocity.
- Impulse current method:** Applicable for distance measurement for high resistance fault, and flashover fault. Collecting signal from testing earth-wire through current coupler, it makes the user far away from high voltage, ensuring safety and reliability.
- Second-impulse method:** Applicable for distance measurement for high resistance fault, and flashover fault. Waveform is simple and easy for analysis and high locating precision. (This needs a second impulse coupler)

200MHz real-time sampling:

Highest sampling frequency of the domestic similar devices. To keep the line with the world highest level.

With max location resolution of 0.4m, the device has smaller dead zone, so it is particularly efficient for near-end fault and short cable.

Touch operation & Mechanical button

Touch screen, gesture function bring about flexible operation.

Technical data:

Low voltage impulse launching voltage	30V
Sampling frequency	200MHz
Max ranging scope	100km
Dead zone	2m
Max resolution	0.4m
Power	Polymer Li-ion battery pack, for Min 5 hours continuous usage.
Size	274×218×81(mm)
Weight	3.5kg



Typical wave--Impulse Current Method

To be continued in next page

Part 3 Cable fault pin-pointer PP10



- + Acoustic and magnetic synchronization method pin points fault location on high resistance fault.
- + Electromagnetic method makes precise location of metallic fault on cable, and locates the cable path.
- + Pin point fault position on high voltage cable layer and locate insulation breakdown point.

Technical data:

Precision of sound & magnetic synchronization method	10% of cable depth
Precision of electromagnetic method	10% of cable depth
Precision of path location precision	10% of cable depth
Precision of Step voltage method	10 cm
Power	7.2V/4.4hA Li-battery, 10h usage after fully charged

Part 4(optional)

Multiple Impulse Coupler TCP-10 (Optional)



TCP-10

Multiple impulse coupler TCP-10 works together with WL20 wave reflection method cable fault location set, to test various power cable faults such as leakage fault while high resistance, flashover fault, low earthing resistance, open circuit fault and so on.

TCP-10 provides coupling access of pulse signal for the WL20, and actualizes electric isolation at the same time.

TCP-10 adopts world's most advanced tech -- Multiple pulse method, making the judgment of waveform of the cable fault easier and simpler. The principle is that it makes the complex wave form of high volt impulse flashover transformed into waveform easy to be judged. Thus lowers the tech & experience requirement for operator. And makes it more convenient and precise to judge the waveform, to decide the fault distance, therefore help test faster with much higher success rate.



Wave of Second-impulse method

Function & Characteristics

- + TCP-10 adopts world's most advanced tech -- Multiple pulse method with pulse balance, making reflecting waveform of cable fault more outstanding and easy to be judged.
- + With safe protecting measures from high volt, electric Isolation between testing circuit and the high volt impact power, it ensures the pre-locator safety, free of damage & free of crash while working from impact volt environment.
- + Simple wiring. Can be used with other instruments.
- + With no high volt exposure, safe and reliable.

Technical data:

Testing impulse voltage	300V(P-P)
ermitted input impact voltage	< 35kV
Permitted input impact energy	< 2000J
Power	AC 220V, 50Hz
Volume	560×230×220(mm)
Weight	16kg

Low Voltage Cable Fault Location System T8

Introduction

Although the voltage of LV cable and distribution cable is relatively low, because the cable wire is too much and on site test environment is not very good, the fault location is more difficult than fault of HV cable. Ordinary HV generator outputs over-high voltage, generally it exceeds the withstand voltage of LV cable. So it may cause new fault to the cable. This Cable Fault Location System effectively breaks through this problem. Its maximum output voltage is 15kv. Single pulse energy of the built-in large capacity capacitor can easily reach 500J, protection of low voltage cable and make discharge sound loudly enough.



LP8/10



WL20



PP10

Features

- + Super high quality trolley case made in the US, light weight only 25kg, portable.
- + High level of integration, easy wiring and easy operation. Also can be used in DC voltage withstand test for LV cable.
- + Built-in 10uF large capacitance, single pulse energy can easily reach 500J.
- + Strong ability to burn through makes a short period of time burning through cable fault point.
- + There are many location method with WL20 Cable fault pre-locator
- + Low voltage impulse method: Applicable for fault distance measurement for low resistance fault, short circuit fault, and open circuit fault. And apply to cable length, intermediate joints, T-joints, cable termination joints, and can be applied to correct the wave velocity.
- + Pulse current method: Applicable for distance measurement for high resistance fault, and flashover fault. Collecting signal from testing earth-wire through current coupler, it makes the user far away from high voltage, ensuring safety and reliability.
- + Second-impulse method: Applicable for distance measurement for high resistance fault, and flashover fault. Waveform is simple and easy for analysis and high locating precision.(This needs a second impulse coupler)
- + Using high voltage pulse with stable frequency, working with the pin-pointer PP10, to finish a general high resistance, flashover fault point to precisely locate the cable (path). Use the time difference of sound & magnetic method to pin-point the fault.
- + Applicable for LV cable, main insulation layer lower resistance earthing, low resistance short circuit, high resistance earthing, high resistance short circuit, high resistance leakage, high resistance flash over, and Intermittency.
- + It can be equipped with portable power to solve the problem of no 220V power on site.

On-site application

