

DTR-500 Optical Fibre Cable and Power Cable Integrated Detector

Basic Functions

- Optical Fibre Cable and Power Cable Path Detector can quickly and effectively confirm the direction and depth of underground optical fibre cable and power cable.
- Could confirm the direction of optical fibre cable and power cable, using signal strength indicator, left and right arrow indicator, compass direction indicator. It has the facility of current direction indication and could prevent the interference of crossing cable.
- It could directly display optical fibre cable and power cable depth with digits in 0-15 meters. The accuracy in 3 meters is about 5%, and the accuracy in 8 meters is about 10%.
- Automatic sounding: when the instrument is placed vertically above the pipeline, the actual depth of the target pipeline would be displayed automatically.
- Signal identification: accurately identify optical fibre cables and power cables from the three dimensions of signal amplitude, signal direction and signal phase.
- Current direction indication: with unique technology, it could display the current direction and phase of the tracking signal, effectively improving the accuracy of searching path.



1. Technical Parameters of Transmitter:

This machine is a multi-frequency with high-power transmitter, with constant power output and automatic matching of external load, which could ensure the machine works in the best status. With an ohmmeter, it could detect the external voltage and test the continuous circuit resistance to help judge the fault properties.

1) Available frequency: It could output 31-frequency sinusoidal AC signals. They are 98Hz, 128Hz, 256Hz, 480Hz, 491Hz, 512Hz, 577Hz, 815Hz, 982Hz, 1.02kHz, 1.17 kHz, 1.45 kHz, 1.52 kHz, 4.1 kHz, 8.01 kHz, 8kHz, 8.44 kHz, 9.5 kHz, 9.82 kHz, 29.4 kHz, 33 kHz, 38 kHz, 65.5 kHz, 78.1 kHz, 80.43 kHz, 82.3kHz, 83.1kHz, 89kHz, 133kHz, 200 kHz.

2) Fault detection and pipeline identification signals: FFLOW and FFHIGH, current direction signals: SS Low and SS High.

3) Owns the function of phase identification using SS intelligent signal.

4) Owns the function ohmmeter, which could detect external resistance and warn of external dangerous voltage.

5) Three signal emission modes: direct connection method, coupling method and induction method.

6) Automatic load adjustment.

7) Contents displayed: frequency setting, battery status, digitally displayed output current and circuit resistance, output mode, voltage alarm, phase identified by SS intelligent signal, external power, and external voltage warning.

8) The output power can be adjusted, and there are four gears: low gear, middle gear, high gear and full gear.

9) The maximum output current is not less than 1A and the maximum output power is not less than 10W.

10) Large-capacity lithium battery power, which could work for 8 hours at full load.



2. Technical parameters of Receiver:

The receiver owns 3.5-inch and 24-bit-colour liquid crystal with true colour to display numbers of signal strength, amplitude light bar, compass pointing, arrow indicator of left and right, current direction indicating, which are used to indicate signal strength, optical fibre cable and power cable positioning, fault detection, optical fibre cable and power cable positioning identification, depth measurement.

- 1) Five display modes: wide peak value, valley value, narrow peak value, wide peak value arrow, peak and valley value.
- 2) Possesses broadband reception technology, which could provide customised services according to customer requirements (within 100hz-200khz). Available frequency: 10 kinds, 50Hz, 60hz, LF, 577Hz, 8KHz, 33khz, 82KHz, 133KHz, current direction signal SS Low, SS High.
- 3) The range of the depth by digital direct reading: 0 ~ 15 meters. The accuracy within 3 meters is $\pm 5\%$, and the accuracy within 8 meters is $\pm 10\%$.
- 4) Contents displayed: signal intensity, signal amplitude light bar, arrow indicator of left and right, compass direction indicator, current direction indicator, current phase displaying, real-time depth indicator, phase identified by SS intelligent signal, and signal gain.
- 5) Possesses GC compass guiding indicator function.
- 6) Owns the function of phase identification using SS intelligent signal.
- 7) Optional external A-frame for accurate fault positioning of optical fibre cable and power cable.
- 8) The external coupling clamps could be used to accurately identify the optical fibre cable and power cables.
- 9) Signal identification: accurately identify optical fibre cables and optical power cables from the three dimensions of signal amplitude, signal direction and signal phase.
- 10) Current direction indication: with unique technology, it could display the current direction and phase of the tracking signal, effectively improving the accuracy of finding the path.
- 11) Sound indication of signal strength with adjustable volume.
- 12) 3.5-inch and 24-bit-colour liquid crystal with true colour display. Backlight brightness could be adjusted to adapt to various environments.
- 13) Large-capacity lithium battery power, which could continuously work for 8 hours.

