TINPENG

GROUND-PENETRATING RADAR

It is suitable for engineering survey, municipal pipelines, roads, bridges, tunnel detection and other fields, used to detect information about metal or non-metal targets within a certain depth underground.

APPLICATIONS

- Engineering survey: used to identify underground anomalies in the engineering area, such as karst, collapse, fracture zones, etc.;
- Municipal pipelines: used to identify the distribution of underground metal or non-metallic pipelines during urban construction;
- Roads and bridges: used to identify unfavorable geological bodies during the site selection process of roads or bridges;
- Tunnel detection: used for advance prediction of tunnels, detection of tunnel construction quality, etc.

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ZHUOZHOU TIANPENG INSTRUMENT MANUFACTURING CO., LTD.
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GROUND-PENETRATING RADAR

FEATURES

- Adopting the integrated design of host and antenna, making it small in size, light in weight and low in power consumption;
- The host and laptop are connected wirelessly, making it easy to operate;
- Real-time data collection and display;
- The software interface is simple, easy to operate and quick to get started;
- Multi-band antennas are optional and have a wide range of applications;
- The analysis software is easy to operate and the results are accurate;
- High detection accuracy and accurate positioning;
- Built-in large-capacity battery with long battery life;
- Ergonomic structural design, simple, durable and easy to operate, suitable for mobile working environments in the field.

TECHNICAL SPECIFICATIONS

Type	Single frequency	Dual frequency
Antenna frequency	100M, 200M, 400M (center frequency optional, customizable)	200MHz＋400MHz, 400MHz＋900MHz, 900MHz＋1.6GHz (center frequency optional, customizable)
Sampling frequency	0.2-100GHz adjustable	
Time window range	1ns～20000ns, continuously adjustable	
Number of sampling points	32~32767 samples/scan, optional	
Scan rate	350 lines/second	
A/D conversion	18bit	
Continuous working time	≥8 hours	
Power consumption	<18 W	
Signal-to-noise ratio	Better than 160dB	
Collection speed	> 60 km/h @ 5 cm horizontal sampling spacing (track spacing)	
Minimum sampling interval	2ps	
Measurement methods	point-by-point measurement, distance-triggered measurement, continuous measurement, and GPS	
Display	Pseudo-color images, stacked waveforms or grayscale images	
Working temperature	-40℃～+70℃	
Working voltage	10-15V DC	
Protection level	IP66	
Wireless data transmission distance	>50 m	
Wired communication	Ethernet, 100Mbps	
Weight	100MHz≤13.5kg; 200MHz≤7.5kg; 400MHz≤3.5kg	200MHz＋400MHz≤8kg; 400MHz＋900MHz≤4kg; 900MHz＋1.6GHz≤1.5kg
Measuring range	100MHz: 0-30m; 200MHz: 0-8m; 400MHz: 0-5m	200MHz＋400MHz: 0-8m; 400MHz＋900MHz: 0-5m; 900MHz＋1.6GHz: 0-2m
Dimensions	100MHz: 84×64×27cm; 200MHz: 59×44×16cm; 400MHz: 46×31×17cm	200MHz＋400MHz: 59×44×16cm; 400MHz＋900MHz: 46×31×17cm; 900MHz＋1.6GHz: 29×25×9cm
Applications	Road void detection, tunnel construction advanced geological prediction, pipeline detection, loose detection, defect detection, tunnel lining detection, landslide and fracture zone detection	Road void detection, pipeline detection, road surface layer detection, tunnel lining detection, reinforced concrete structure detection, etc.

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