

LOW STRAIN PILE INTEGRITY TESTER

Integral Testing

Application

- Low strain pile integrity testing by reflected wave method

Applicable Standards

- Standard test method for low strain impact integrity testing of deep foundations ASTM D5882-07
- Technical code for detection of building foundation pile JGJ 106-2014
- Dynamic testing technology regulations on highway engineering foundation pile JTG/T F81-01-2004
- Nondestructive detection code for railway engineering foundation pile TB 10218-2008
- Technical code for defection of building foundation JGJ 340-2015

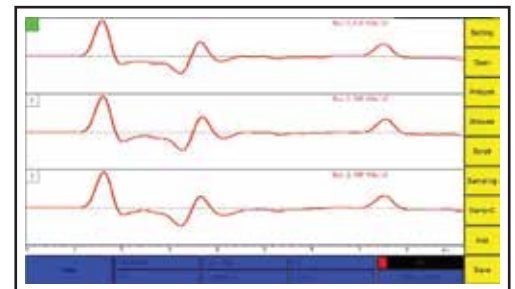
Principle

The test is based on wave propagation theory. The name "low strain pile integrity test" stems from the fact that when a light impact is applied to a pile it produces a low strain. The impact generates a stress wave that travels down the pile. When the downward stress wave encounters a change in cross section or in concrete quality, it generates reflected wave that is later observed at the pile top. By analyzing the propagation time, amplitude and phase of that reflected wave, it has the evaluation of pile integrity ultimately.

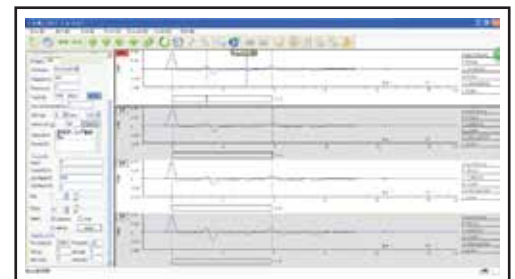


Technical Specifications :

Model Number	NL 4047 X / 001
Alternate Model	RSM-PRT(N)
Display Method	6.4 inch True-Color LCD Screen (Resolution : 640 x 480 (adjustable backlight))
Storage Capacity	16G Electronic Hard Disk
Signal Acquisition Method	Wired
Master Control System	Low Powered Embedded System, Basic Frequency ≥ 1 GHz, Memory : 512 M
Sampling Interval	5 ~ 1000 μ s
Floating Point Magnification	1 ~ 256
Recording Length	1k
A/D Conversion Accuracy	24-bit instantaneous floating point
System Noise Voltage	< 20 μ V
Dynamic Range	≥ 100 dB
Data Report Method	USB
Frequency Bandwidth	2 ~ 12000 Hz
Sensor Bandwidth	0.5 ~ 9000 Hz
Power Supply Mode	Removeable lithium battery; desktop charger is supported Service life ≥ 10 h
Operation Mode	Touch Screen
Number of Channels	1
Sensor	Piezoelectric Accelerometer & Speedometer
Trigger Level	Seven-level selectable
Operating Temperature	-20 ~ +55°C
Shell	High-strength engineering plastics
Dimensions	220 x 160 x 56 mm
Weight	1.3 kg (including lithium battery)



Sampling Interface



Analysis Interface