WW-81S Wireless Torque Test System

DESCRIPTION

WW-81S Wireless torque test system is specially used for the measurement of physical quantities such as torque and shaft power of rotating shafts. Using WiFi communication technology, the test system can collect data in real time and transmit it wirelessly to the computer, complete the calculation and analysis of rotating shaft torque and shaft power in real time, and store and display it in real time.

FEATURES

Small size, light weight, easy to carry;
Wireless WIFI communication, easy installation, no complicated on-site wiring;
Each computer can control 16 single-channel acquisition modules at the same time;
Built-in 120Ω standard resistance, the user can easily complete the bridge connection of the full bridge and half bridge;
Support remote control to switch working/standby state, extend battery life;
Record all channel signals in real-time and uninterrupted for a long time by using the massive storage hard disk of the computer;
Real-time display of torque value, with speed measurement, real-time display of shaft power value;
Quick and easy one-click visual parameter setting, real-time display of channel working status during parameter setting;
Intelligent multi-engineering data storage and management mechanism, which is convenient for large-scale experiments and multi-batch experimental data processing and report generation, and can complete the required processing of multiple measurement data at one time;
Good portability, extensibility and openness, provide development interface and template, users can develop their own engineering application plug-in, seamless loading into the software module for use, but also share with others to use the plug-in;

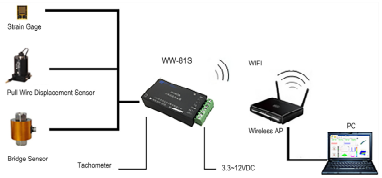
Application Conditions:

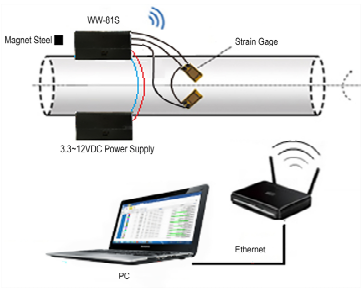
1. For torque measurement of rotating shaft;
2. For the shaft power measurement of the rotating shaft (real-time measurement of the rotating shaft speed, and measured torque to calculate the shaft power);
3. For strain and stress measurement in small Spaces or in situations where wired transmission is inconvenient;
4. Bridge sensors can be connected to measure force, displacement, acceleration and other physical quantities.

SPECIFICATIONS

Number of Input Channel	1 channle + 1 Tacho channels /DAQ unit, 16 DAQ units/computer
Nonlinearity	0.05%
A/D Converter	16 bits
Freq. Response	DC ~ 200Hz
Sampling Rate	4kHz
Communication Mode	WiFi
Communication Distance	6m (Viaus\)
Strain Measurement	
Full-scale Strain Value	±53333με、±26667με、±13333με
Indication Error	<0.5% of F.S.
Bridge Excitation	
Bridge Configuration	Full, Half bridge
Bridge Completion Resistors	60Ω~20000Ω (Half bridge/Full bridge)
Bridge Voltage	3V DC
Speed Measurement:	
Built-in Sensor:	Hall sensor (sensor position is indicated on the surface of the instrument);
External Induction Material:	magnetic steel, the distance from the marked position of the built-in sensor does not exceed 3mm;
Measuring Range:	30 ~ 30000 RPM;
Measurement Accuracy:	better than 0.05%±1 revolution;
Rotation Ratio:	0.01 ~ 100;
Input Signal Range:	TTL, COMS pulse train;
Power Consumption	Approx. 0.5W
Power Supply	3.3~12VDC
Dimensions	60×30×16mm
Weight	Approx. 22g
	Supports the reset of network parameters
	After the instrument is turned on, the remote control can be used to switch the working/standby state, the maximum remote control distance is 3 meters;
Environmental Conditions	
Operating Temperature	- 20°C to 60°C
Operating Humidity	5 ~ 90%RH@50°C
Storage Temperature	- 40°C to 70°C
Storage Humidity	90%RH48h@60°C
Vibration	Frequency cycle range: 5Hz ~ 55Hz ~ 5Hz Drive amplitude (peak): 0.19mm Sweep frequency: ≤1Oct./min Duration of resonant: 20min Vibration direction: x, y, z
Shock	Acceleration: 100g Pulse Duration: 4ms±1ms Pulses: 3times/each face Wave: Half Sine State: Off Working

SYSTEM CONFIGURATION





SOFTWARE

DE-BPS Basic Platform Software
Running on XP/Win7/Win8/Win10 operating system
Parameters setting, Function control, Real-time/post-acquisition analysis, data browsing, cursor readouts, scaling curve, data management and simple processing, report generation, long-term continuous data recording, etc.

APD1 Android Software App (Optional)
Mobile phone control and analysis
Parameter setting, sampling control, data management, etc.
Time domain & amplitude domain analysis
Frequency domain analysis based on FFT

MODULES / ACCESSORIES

WW-81S DAQ Unit
Wireless strain measurement using WiFi
Built-in speed module
The maximum frequency of continuous sampling can reach 4kHz
Wireless transmission distance 6m

External Power Module (Optional)
Supply voltage: 3.3~4.2VDC;
Battery capacity: 4.0Wh (3.7V/1.1Ah);
Charging: 5V/1A (with 220V power adapter);
Size (mm) : 60×30×16;
Endurance: Fully charged, can support a single collector work for 8 hours;
Charging time: about 3 hours;