

# Transformer, Motor and Winding Test Instruments

## B. TH2883 Series Impulse Winding Tester



### TH2883 Series

#### Features

- The first provider of impulse winding tester from low voltage of 30V to high voltage of 10kV, single channel to multichannel in this industry (Max.:8 channels)
- First winding tester compatible with LXI standard
- Impulse voltage of 30V~10kV
- Minimum inductance value of winding that can be tested: 1uH
- 65k color 7" TFT wide display screen
- Up to 200Mpsps waveform sampling rate
- Maximum measuring speed: 6meas/sec
- Storage depth of 6k Bytes
- High bandwidth analog acquisition circuit
- High-fidelity corona extraction algorithm (patent technology)
- Four waveform comparison methods
- Automatic storage of instrument parameters
- Measurements on voltage, time and frequency
- Amplification, stretch and movement of the waveform for accurate display
- Multi-sample average, average processing of 32 standard waveforms
- Destructive testing for your correct choose of voltage
- Use demagnetized impulse to ensure the conformity of tested waveforms
- Login of different user right for easy management
- 20 groups of instrument files can be stored and automatically loaded
- Screen information can be stored in USB disk (COPY key)
- System firmware can be automatically upgraded through USB-disk
- Selectable Chinese and English operation interfaces
- Four selectable display interface effects
- Foot control interface for easy measurements
- Handler interface to realize on-line operation
- RS232C, USB Device and LAN interface to realize remote control

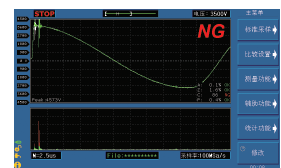
#### Brief Introduction

■ TH2883 series products are newly developed impulse winding testers by Tonghui. This product line makes Tonghui as the first provider of impulse winding tester from low voltage of 30V to high voltage of 10kV, single channel to multichannel (Max.:8 channels) in this industry. The instrument adopts popular 32 bit CPU and high density SMD technology, 65k color 7-inch TFT wide display screen, bringing ease for your eyes and convenience to your operation. The minimum impulse voltage of 30V, maximum impulse voltage output of 10kV, winding test of 1uH inductance value, sampling rate of 200Mpsps, memory depth of 6k bytes makes your test accurately. The usage of standard sample average, application of demagnetized impulse, high bandwidth analog acquisition circuit, technology of high-fidelity corona extraction as well as the opening of non-destructive test reflect the design philosophy "customer-oriented, share the future technology with you" of Tonghui.

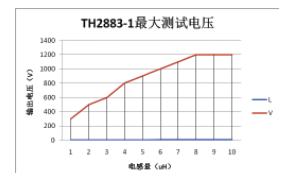
According to the output voltage, TH2883 series is consist of 3 models:TH2883-1, TH2883-5 and TH2883-10. With minimum impulse voltage of 30V and maximum impulse voltage of 1200V, TH2883-1 low inductance impulse winding tester can test windings of 1uH low inductance value. The instrument is the ideal test product for inductance coils used by switching power supply. With impulse voltage of 100V~5000V, TH2883-5 is a standard product for testing all kinds of coils. With maximum impulse output voltage of 10kV, TH2883-10 is appropriate for interturn test of higher insulation and voltage resistance. Standard-equipped USB Host, RS232C, USB Device and LAN interface of TH2883 series product are convenient for your fast storage of graphs and remote control.

#### Corona extraction function

With high-fidelity corona extraction algorithm (patent technology) and high bandwidth analog acquisition circuit,TH2883 series products can fully recover the corona waveform of high-frequency and makes you know more about the insulating property of products.



The maximum output test voltage of TH2883-1 is related to the load inductance value, as shown in the follow:



# Transformer, Motor and Winding Test Instruments

## B. TH2883 Series Impulse Winding Tester

### Specifications

| Model                                    | TH2883-1                                                                                                                                                                                                                               | TH2883-5                | TH2883-10                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------|
| Impulse voltage                          | 30V-1200V<br>5V steps                                                                                                                                                                                                                  | 100V-5000V<br>10V steps | 500V-10kV<br>20V steps                               |
| Voltage accuracy                         | ±(5% set value +5V)                                                                                                                                                                                                                    | ±(5% set value +15V)    | ±(5% set value +25V)                                 |
| Readback accuracy                        | ±(5% actual value +5V)                                                                                                                                                                                                                 | ±(5% actual value +15V) | ±(5% actual value +25V)                              |
| Channels                                 | 1                                                                                                                                                                                                                                      |                         |                                                      |
| Inductance test range                    | ≥1uH                                                                                                                                                                                                                                   | ≥10uH                   | ≥20uH                                                |
| Impulse energy                           | Max.: 0.02 Joule                                                                                                                                                                                                                       | Max.: 0.25 Joule        | Max.: 0.5 Joule                                      |
| Test speed                               | 6 times/second                                                                                                                                                                                                                         | 6 times/second          | 3 times/second (when 10kV impulse voltage is output) |
| Pulses applied                           | Max.: 32                                                                                                                                                                                                                               |                         |                                                      |
| Input Impedance                          | 5MΩ                                                                                                                                                                                                                                    |                         |                                                      |
| Display                                  | 800x480 dots, 65k color TFT; Waveform Display Range: 600x256                                                                                                                                                                           |                         |                                                      |
| Waveform Acquisition                     | Sampling rate: Max. 200Msps, 8 levels adjustable<br>Resolution: 8 Bits<br>Memory Depth: 6k Bytes<br>Average: 1 to 32                                                                                                                   |                         |                                                      |
| Comparison Methods                       | Comparison with Standard Waveform:<br><ul style="list-style-type: none"> <li>• Area Size Comparison</li> <li>• Differential Area Comparison</li> <li>• Corona Discharge Comparison</li> <li>• Differential Phase Comparison</li> </ul> |                         |                                                      |
| Waveform Measurement                     | Voltage/Frequency/Time                                                                                                                                                                                                                 |                         |                                                      |
| Trigger Mode                             | Manual/External/Bus/Internal                                                                                                                                                                                                           |                         |                                                      |
| Detection Output                         | OK/NG display/LED/ Alarm                                                                                                                                                                                                               |                         |                                                      |
| Measurement Statistics                   | Statistics for measurement results                                                                                                                                                                                                     |                         |                                                      |
| Memory                                   | 20 groups of standard waveform data and instrument setup can be stored in internal non-volatile memory.<br>USB flash memory can be used as external memory.                                                                            |                         |                                                      |
| Interface                                | Handler, RS232C, USB Device, USB Host, LAN                                                                                                                                                                                             |                         |                                                      |
| Power supply                             |                                                                                                                                                                                                                                        |                         |                                                      |
| Power supply                             | 220V ±10% 50Hz/60Hz ±5%                                                                                                                                                                                                                |                         |                                                      |
| Power consumption                        | ≤200VA                                                                                                                                                                                                                                 |                         |                                                      |
| General conditions                       |                                                                                                                                                                                                                                        |                         |                                                      |
| Working environment                      | Temperature                                                                                                                                                                                                                            | 0℃ - 40℃                |                                                      |
|                                          | Humidity                                                                                                                                                                                                                               | ≤75% R.H.               |                                                      |
| Safety and electromagnetic compatibility | IEC61010-1:2001, IEC61326-2-1:2005                                                                                                                                                                                                     |                         |                                                      |