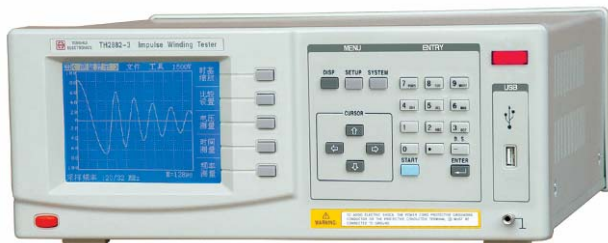


## TH2882 Series Impulse Winding Tester

### Features

- TH2882: single-phase motor/inductance, transformer winding impulse measurement
- TH2882S: three-phase motor/inductance, transformer winding impulse measurement
- Programmable impulse measurement voltage from 300V to 3000V and 500V to 5000V
- 320×240 dot-matrix graphic LCD display
- Chinese and English operation languages
- Humanization operation board, easy to learn to operate
- Low-inductance impulse measurement down to 10μH
- Low-energy measurement without damage to winding
- Fast judge of winding insulation at speed of 5.5times/second
- Max. waveform sampling rate of 40MSPS
- 4 waveform comparison methods
- Direct display of comparison result
- Many programmable trigger modes
- Voltage, time and frequency measurement function
- Key lock and password function
- Pedal control measurement switch
- Handler, RS-232C, GPIB interface (option)
- 800 sets of standard waveforms saved in USB (option)
- Multi-channel scanning control interface SCANNER (option)



TH2882 series



TH2882-3/TH2882-5



TH2882S-3/TH2882S-5

### Brief Introduction

■ Because of the influence of coil wire material, magnetic material, framework and process craft etc., coil product (such as transformer, motor...etc.) can generate debasement of the insulation performance of the coil layer, circle and down-lead. TH2882 series impulse winding tester, adopting high-speed sampling technique to develop, is a new analysis test instrument for insulation performance of coli product.

Memorizing sampling waveform of standard coil winding in the instrument inside, when testing, TH2882 compares standard waveform and tested waveform according to criterion of settings (Area, Differential Area, Corona Discharge, Differential Phase etc. ), then judges if the coil winding is good or bad. This instrument gathers mighty function, precision testing method, flexible operation method and various interfaces to offer test solution for most coil winding manufactories.

The product saves sampling waveform of standard winding in instrument, and compares measured waveform with standard one at the time of measurement. The measured winding will be judged according to set criterion (area, area difference, phase difference, corona).

TH2882S is mainly used to measure three-phase 3-wire or three-phase 4-wire motor with three windings. Measured waveform is compared with standard one in instrument, or different waveforms in different windings are compared without standard waveform.

### Theory of Impulse Test of Coil-winding Introduce

■ The impulse winding tester tests the electrical characteristics of coil winding without damaging the DUT. The prerequisite conditions for quality of a coil can be detected at just a glance. The detection is carried out when the same electric impulse by capacitor discharge is applied to the standard and the DUT. The voltage decay waveform is generated in response to the impulse, related to the inductance of the coil, parasitic capacitance and Q-factor. In this sense, the tester can detect turn & layer short, the differences in the number of turns and the material of the core. If high impulse voltage is applied, the poor insulation will appear as a corona or layer discharge.

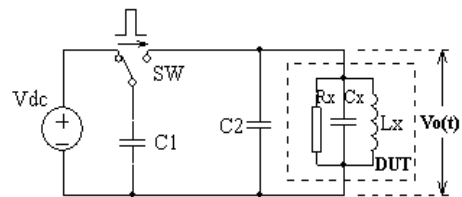
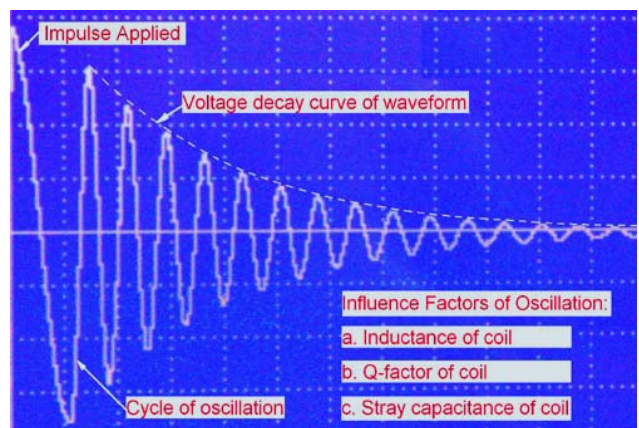


Diagram of winding impulse measurement



Decay curve of winding voltage

## Specifications

Measurement function		
Measurement object	TH2882	Single-phase winding
	TH2882S	Single-phase winding Three-phase 3-wire/Three-phase 4-wire winding
Impulse energy	TH2882/S-3	≤0.09Joules
	TH2882/S-5	≤0.25Joules
Winding inductance range	TH2882-3	≥ 10μH
	TH2882-5	≥ 20μH
	TH2882S-3	≥ 100μH
	TH2882S-5	≥ 200μH
Waveform sampling	Sampling rate	40MSPS, 20MSPS, 10MSPS, 5MSPS, 2.5MSPS, 1.25MSPS, 625kSPS, 312kSPS, 156kSPS
	Resolution	8 digits
	Sampling length	960 divisions
Input impedance		10MΩ (resistive voltage divider)
Measurement speed (times/second)	Single-phase	5.5 ( waveform display OFF) 3.3 (waveform display ON)
	Three-phase	2.0 (waveform display OFF) 1.5 (waveform display ON)
Displayed waveform measurement		Voltage, time, frequency
Measurement repeat accuracy		±1%
Trigger mode		Internal/Manual (pedal control)/External/BUS
Average times		1 - 99
Display		320×240 graphic LCD display, 240×200 waveform display
Display content		Set parameter, standard and measured waveforms, measurement and comparison results
Measurement signal		
Impulse peak voltage	TH2882-3 TH2882S-3	300V-3000V programmable, with step of 50V
	TH2882-5 TH2882S-5	500V-5000V programmable with step of 100V
Impulse voltage accuracy	TH2882/S-3	±5% of set value±5V
	TH2882/S-5	±5% of set value±25V
Comparator		
Comparison mode		Area, area difference, corona discharge, phase difference
Detection output		PASS/FAIL displayed with beeper alarm
Alarm volume		Long high, Long low, Single low, Double low, Off

Others	
Memory	60 sets of standard waveform saved in instrument 800 sets of standard waveforms saved in USB
Interface	HANDLER, RS232C, GPIB (option), SCANNER (option)

## General Specifications

Operating temperature & humidity		0°C – 40°C, ≤90%RH
Power supply	Voltage	198V - 242V AC, 99V - 121V AC
	Frequency	47.5Hz – 63Hz
Power consumption		≤ 40VA
Dimensions (W×H×D)		350mm×135mm×400mm
Weight	TH2882	Approx. 7.5 kg
	TH2882S	Approx. 8.4 kg

## Ordering Information

**TH2882-3 Impulse Winding Tester**  
**TH2882-5 Impulse Winding Tester**  
**TH2882S-3 Impulse Winding Tester**  
**TH2882S-5 Impulse Winding Tester**

## Instrument Accessories

TH2881-001 pedal start switch  
 TH26035 high-voltage test cable  
 TH10203 Handler interface board

## Options:

TH10001 GPIB interface board  
 TH10204 TH2882 Scanner interface board  
 TH26036 USB interface adapter  
 TH26026 USB memory  
 TH11016 GPIB control software  
 TH12021 RS232C control software

**Changzhou Tonghui Electronics Co., Ltd.**