



## MTS-50 Meter Test System

Phase: 3

AC voltage output: 0-792V

AC current output: 0-60A

Accuracy: 0.05%RG (Class 0.05) or 0.1% RG (Class 0.1)

This Meter Test System features state-of-art designing with high accuracy. It is composed of high accurate (class 0.05% or 0.1%) standard reference meter and power source (up to 50A). This system is particularly designed with modular structure for calibration and test of different single phase/3 phase electronic/inductive active and reactive energy meters. It is operated under high functionality with user friendly interface.

### Main Function

- ◆ Calibrate all kind of single/three phase electronic/inductive active and reactive energy meter
- ◆ Automatically or single-step manually test basic error, creeping, starting, standard deviation of single/three phase energy meter, save user-defined calibrating scheme in Auto calibration
- ◆ Support variables influence tests, such as: Voltage, frequency, harmonics, reverse phase sequence, Voltage unbalance, etc
- ◆ Support special tests in energy meter type test, such as: phase triggering, pulse train triggering, etc
- ◆ Support DLT-645 communication protocol, multi-testing of multifunction meter such as: demand indication error, demand cycle error, time slot switching error, energy error of different tariff period, etc.
- ◆ With OCXO, daily error of energy meter can be detected
- ◆ Output 2<sup>nd</sup> ~63<sup>rd</sup> harmonics

### Main features:

- ◆ 8" color touch screen, interface friendly, easy to operate;
- ◆ Equipped with RS232, Ethernet, and WiFi interface, MTS-50 can either support stand-alone operation, PC control or handy wireless terminal control;
- ◆ Communicate with tested meters thru RS-485;
- ◆ Automatically calculate the error of meter, and the related data can be downloaded thru U-disk;
- ◆ Self-protection, alarming and displaying overload location for equipment output overload, Voltage short-circuit, Current open-circuit;
- ◆ Automatically detect, diagnose and alarm for failure.
- ◆ Remotely updating online, easily achieve software updating;
- ◆ Support calibration by user locally

### Order Information:

MTS-50 contains 2 models with different accuracy below:

MTS-50C: Accuracy Class 0.05

MTS-50B: Accuracy Class 0.1

### Technical specification:

#### AC Voltage output:

Range: -100V, 220V, 380V, 660V

Adjusting range: (0~120) %RG, RG refers to range

Adjusting resolution: 0.01%RG, 0.1%RG, 1%RG, or 10% RG

Stability: 0.01%/2min (Class 0.05), 0.02%/2min (Class 0.1)

Distortion: ≤0.2% (Non capacitive load)

Max output load: 20VA each phase

Accuracy: 0.05%RG (Class 0.05), 0.1%RG (Class 0.1)

**Technical  
specification:****AC Current output:**

Range: 0.05A, 0.2A, 1A, 5A, 16.67A, 50A  
 Adjusting range: (0~120) %RG, RG refers to range, similarly hereafter  
 Adjusting resolution: 0.01%RG, 0.1%RG, 1%RG, or 10% RG  
 Stability: 0.01%/2min (Class 0.05), 0.02%/2min (Class 0.1)  
 Distortion:  $\leq 0.2\%$  (Non capacitive load)  
 Max output load: 50VA (50A range)  
 Accuracy: 0.05%RG (Class 0.05); 0.1%RG (Class 0.1)

**Power output**

Power output stability: 0.01%/2min (Class 0.05), 0.02%/2min (Class 0.1)

**Phase output**

Output adjusting range:  $0^{\circ} \sim 360^{\circ}$   
 Output adjusting resolution:  $10^{\circ}$ ,  $1^{\circ}$ ,  $0.1^{\circ}$ , or  $0.01^{\circ}$   
 Resolution:  $0.01^{\circ}$   
 Measurement accuracy:  $0.05^{\circ}$

**Technical  
Specification****Power factor output:**

Adjusting range: -1 ~ 0 ~ +1  
 Measuring resolution: 0.0001  
 Measurement accuracy: 0.0005

**Frequency output**

Adjusting range: 40Hz ~70Hz  
 Output adjusting resolution: 1Hz, 0.1Hz, 0.01Hz, or 0.001Hz  
 Resolution: 0.001Hz  
 Accuracy: 0.002 Hz

**Harmonic setting**

Harmonic order:  $2^{\text{nd}} \sim 63^{\text{rd}}$   
 Harmonic amplitude: 0~40%  
 Harmonic angle:  $0^{\circ} \sim 359.99^{\circ}$   
 Harmonic set error: 2~31times:  $\leq \pm 0.1\%$ , 32~63 times:  $\leq \pm 0.2\%$

**Energy error measurement:**

Active energy basic error limit:  
 $\pm 0.05\%RD$  (Voltage 15V~660V, Current 0.02A~60A,  $PF \geq 0.5$ )  
 $\pm 0.1\%RD$  (Voltage 15V~660V, Current 0.01A~0.02A,  $PF=1$ )  
 Reactive energy basic error limit:  
 $\pm 0.1\%RD$  (Voltage 15V~660V, Current 0.02A~60A,  $PF \geq 0.5$ )  
 $\pm 0.2\%RD$  (Voltage 15V~660V, Current 0.01A~0.02A,  $PF=1$ )

**Energy pulse input**

Input pulse: 3 channels active, 3 channels reactive

**Other parameters:**

Power supply: 90-265VAC/DC  
 Power frequency: 50Hz~60Hz  
 Power consumption: 50VA~1000VA  
 Environment condition:  $20^{\circ}\text{C} \sim 30^{\circ}\text{C}$ , Humidity:  $RH \leq 85\%$   
 Storage environment:  $-20^{\circ}\text{C} \sim 50^{\circ}\text{C}$   
 Size: 600(L)\*440(W)\* 176mm(H)  
 Weight: 25kg