

MTS-122 Electric Meter Calibrator

MTS-122 is suitable for the measurement departments of research institution, generating station, power grid corporation, railway, large industrial and mining enterprises and national measurement institution at all levels.



Main Function

- ◆ Calibrate indicating meter, digital meter, electric transducer, energy meter and soon;
- ◆ Calibrate AC sampling RTU;
- ◆ Output 2nd~63rd harmonics.

Main Features

- ◆ Modular design, calibrate indicating meter, electrical transducer, RTU and so on;
- ◆ 8 inch color touch screen, interface friendly, easy to operate;
- ◆ Equipped with RS232, Ethernet, and WiFi interface, MTS-122 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 transducer, 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 local calibration at users' side.

Type

- ◆ MTS-122CElectric meter calibrator. Class 0.05;
- ◆ MTS-122BElectric meter calibrator. Class 0.1.

Technical Specification

AC large Voltage output

Range:	(Phase A) 30V, 100V, 300V, 660V, 1000V (Phase B, C) 30V, 100V, 300V, 660V
Adjusting range:	(0~120)%RG, RG refers to range, similarly hereafter; Phase A 1000V: (0~100)%RG
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:	30V and upper ranges; 20VA each phase
Measurement accuracy:	0.05%RG(Class 0.05), 0.1%RG(Class 0.1)

DC Voltage output

Range:	100mV, 300 mV, 1V, 5V, 20V, 100V, 300V, 1000V
Adjusting range:	(0~120)%RG; 1000V: (0~100)%RG
Adjusting resolution:	0.01%RG, 0.1%RG, 1%RG, 10%RG
Stability:	0.01%/2min(Class 0.05), 0.02%/2min(Class 0.1)
Output load:	20V and above ranges ≥10mA; 5V and below ranges ≥50mA
Measurement accuracy:	0.05%RG(Class 0.05), 0.1%RG(Class 0.1)
Ripple amplitude:	no more than 1%

AC small Voltage output

Range:	Phase A: 75mV, 300mV, 750mV, 3V, 7.5V
Adjusting range:	(0~120)%RG, RG refers to range
Adjusting resolution:	0.01%RG, 0.1%RG, 1%RG, or 10%RG
Stability:	0.02%/2min
Distortion:	≤0.2% (Non capacitive load)
Max output load:	≥25mA
Measurement accuracy:	0.1%RG

AC Current output

Range:	(Phase A): 500 μA, 2mA, 10mA, 50mA, 200mA, 500mA, 2A, 5A, 10A, 30A (Phase B, C): 200mA, 500mA, 2A, 5A, 10A, 30A
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:	≤0.2% (Non capacitive load)
Max output load:	20VA (30A range); 50mA and below range: ≥15V
Measurement accuracy:	200mA and above ranges: 0.05%RG (Class 0.05); 0.1%RG (Class 0.1); 50mA and below ranges: 0.1%RG (Class 0.1);

Power output

Power output stability:	0.01%/2min (Class 0.05), 0.02%/2min (Class 0.1)
Active/reactive power measurement accuracy:	0.05%RG

Phase output

adjusting range:	0° ~360°
adjusting resolution:	10°, 1°, 0.1°, or 0.01°
Resolution:	0.01°
Measurement accuracy:	0.05°

Power factor output

adjusting range:	-1 ~ 0 ~ +1
Resolution:	0.0001
Measurement accuracy:	0.0005

Harmonic setting

Harmonic order	2 nd ~63 rd
Harmonic amplitude	0~40%
Harmonic angle	0~359.99
Harmonic set error	2 nd ~31 st : ≤0.1%, 32 nd ~63 rd : ≤0.2%

Other parameters

Power supply	90~265VAC/DC ; AC 220V ± 15% or 110V ± 15%
Power frequency	50Hz~60Hz
Power consumption	50VA~1000VA
Environment condition	20°C~30°C, Humidity ≤85%
Storage environment	-20°C~50°C
Size	600mm(L) × 440mm(W) × 176mm(H)
Weight	28kg

DC Current output

Range:	1mA, 3mA, 10mA, 30mA, 100mA, 300mA, 1A, 5A, 10A, 25A
Adjusting range:	(0~120)%RG
Adjusting resolution:	0.01%RG, 0.1%RG, 1%RG, 10%RG
Stability:	0.01%/2min (Class 0.05), 0.02%/2min (Class 0.1)
Output load:	25A: 25VA, 5~10A: 2V, 1A and lower range ≥30V
Measurement accuracy:	10mA and above ranges: 0.05%RG, 0.1%RG; 1mA, 3mA ranges: 0.1%RG
Ripple amplitude:	no more than 1%

DC input Voltage measurement

Range:	± 10V
Measuring range:	(0~150)%RG
Basic error limit:	0.02%RG
Ripple measuring error:	(5%RD + 0.1%), RD refer to ripple measured value
Resolution:	0.001%RG

DC input Current measurement

Range:	± 20mA
Measuring range:	(0~150)%RG
Basic error limit:	± 0.02%RG
Ripple measuring error:	(5%RD + 0.1%), RD refer to ripple measured value
Resolution:	0.001%RG

Energy error measurement

Active energy basic error limit:	0.05%RD (Voltage 15V~660V, Current 0.05A~36A, PF ≥0.5)
Reactive energy basic error limit:	0.1%RD (Voltage 15V~660V, Current 0.02A~0.05A, PF=1)
	0.1%RD (Voltage 15V~660V, Current 0.05A~36A, PF ≥0.5)
	0.2%RD (Voltage 15V~660V, Current 0.02A~0.05A, PF=1)

Frequency output

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