



GDDO-20T Calibrator for AC Sampling and Transmitters



General Information

GDDO-20T Calibrator for AC Sampling and Transmitters takes DSP technology and 16 digit high speed A/D converter as core technology in AC sampler.

It has the features of high precision, good reliability, convenient to use.

Reference standard

- GB/T13729-92: *General Specification for Remote Terminal Unit*
- DL/T630-1997: *Technical Requirement for RTU with AC Electrical Quantities Input, Discrete Sampling*
- JJG126-95: *Verification Regulation of Measuring Transducers for Converting AC Electrical Quantities into DC Electrical Quantities*

- Q/GDW1899-2013: *Verification Regulation Calibration Specification of AC Sampling Electrical Measuring Equipment*
- JJG124-2005: *Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters*
- JJG 596-1999
- JJG 307-2006

Features

- It can check the basic errors of various power frequency meters (voltmeter, ammeter, power meter, frequency meter, power factor meter, phase meter) and the changes caused by the influence of voltage, current, waveform, power factor under manual or semi-auto mode.
- It can check the basic error of AC sampling device and electrical measurement transmitter (voltage transmitter, current transmitter, power transmitter, frequency transmitter, power factor transmitter, electrical energy transmitter) as well as the changes caused by influence of voltage, current, waveform and power factor under auto or semi-auto mode.
- The distortion wave with 2nd~31th harmonics can be generated in the power supply, and the number, order, amplitude and the phase of harmonics on the fundamental wave can be programmed.
- The working frequency band of power amplifier is 40Hz ~1kHz, with good linearity. The current amplifier is a constant current source and the voltage amplifier is a constant voltage source. Because of its light weight, the device is more suitable for field calibration.
- The RS-232 interface is provided. Through the upper computer software (optional), the device can be controlled by the computer for automatic or manual inspection, and results are processed and managed.

- It is equipped with large capacity non-volatile memory, which can store 300 pcs of initial data of the tested instrument for reference and uploading.
- The electricity meter can be calibrated through load point or optional point detection.

Specification

AC voltage range	50V, 100V, 200V, 400V, 600V; Max. output capacity: 20VA
AC current range	0.5A, 1A, 2.5A, 5A, 10A, 20A; Max. output capacity: 20VA
Adjustment range of AC voltage and current	0~130% FS, fineness adjustment: 5×10^{-5}
Accuracy of power frequency AC voltage and current	0.05% FS
Active power	50~400V, accuracy: 0.05%FS
Reactive power	50~400V, accuracy: 0.1%FS
Phase accuracy of current to same phase voltage	0.050
Frequency	adjustment range: 45~65Hz, fineness adjustment: 0.001Hz, accuracy of setting value: 0.01Hz

Phase	adjustment range: 0~359.99°, fineness adjustment 0.01°
Power factor	adjustment range: 0~±1, fineness adjustment: 0.0001, accuracy of setting value: 0.0005
Waveform distortion of AC voltage and current output	≤0.3%
Stability of AC voltage, current and power output	≤0.01% FS /60s
Harmonic	2nd~31th, amplitude: 0~40%, phase fineness of each harmonic: 0.010·N(N refers to harmonic order)
DC voltage range	75mV, 75V, 150V, 300V, 500V, 1000V, Max. output capacity: 20W
DC current range	0.5A, 1A, 2.5A, 5A, 10A, 20A, Max. output capacity: 20W
Adjustment range of DC voltage and DC current	0~120%FS (For 1000V: 0~105% FS), fineness adjustment: 5×10^{-5}
Accuracy of DC voltage and DC current output	≤0.01% FS /60s (Peak-peak)
Setting value accuracy of DC voltage	0.05%FS

Setting value accuracy of DC current	0.1%FS
Accuracy of DC output (at 75mV, load $\geq 5\Omega$)	0.1%FS
DC measurement accuracy(for transmitter output and measurement)	0.02%FS (Voltage: 0~ ± 24 V, current: 0~ ± 24 mA)
Comprehensive error of electricity meter measurement (50~400V)	0.05%(Pulse output: three phase rated value=6Hz)
Power supply	single phase 220V $\pm 10\%$, 50Hz $\pm 5\%$
Use conditions	20°C ± 10 °C, $\leq 85\%$ RH
Size	460*460*175mm
Weight	20kg (Upgraded version 24kg)