Ultrasound Solutions

DC.SITE.DAT.002

Datasheet SDT SinuTEST MK2

Description:

The SinuTEST is a precision sinusoidal voltage generator specifically used for the calibration of SDT instruments. This reference instrument is controlled through a PC software, enabling fully automated electronic calibrations. SinuTEST units are exclusively available for authorized service centers and must be periodically calibrated by SDT International.

Specifications:

General		
Function		Voltage signal generator
Operable with		SDT Tool Management software
Availability		Authorized service centers
Compatible with		-SDT 200, SDT270, LUBExpert -Checker range -SDT 340
Analog outputs		2x (Red and Black)
Status indicator		2x LED
dB scale definition		20log(V/V_0) where V_0 = 1 µV
Reference signal $\mathbf{V_{ref}}$	dB	100 (100 mV)
Attenuator **a**	dB	2/4/8/16/32 + combinations
Frequency range **f**	kHz	1 to 50
Type of generated signal		Pure sine wave $V(t) = \sqrt{2} \cdot 10^{-a/20} \cdot \boldsymbol{V_{ref}} \cdot \sin(2\pi \boldsymbol{f} t)$
Environmental		
Operating temperature range	°C	15 to 30 °C
Relative humidity	%	< 80
IP rating		IP 30
Mechanical		
Housing material		Black Anodized Aluminum
Dimensions	mm	140,5 x 89 x 39,5
Mass	g	TBD
Ports		USB type C 2x Lemo 7 pins DC Power Jack
Power supply		
DC input		5 V
AC/DC converter		Provided in the Kit

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Recommendations:

To ensure safe and effective use of the SinuTEST, please follow the safety recommendations below:

- The calibration process of SDT instruments must be conducted by qualified personnel at the authorized service center. Always use the accessories provided by SDT
- Always verify the due date of the calibration certificate for SinuTEST. The SDT Tool Management and SDT Extranet systems do not permit calibrations beyond this date.
- For certificate renewal, send your instruments back to us before the expiry date of the calibration certificate to ensure continuous service.
- Ensure that the SinuTEST is connected to the SDT instruments that need calibration
- Ensure that the SinuTEST is connected to your PC, which should be running SDT Tool Management software connected to the internet.
- Use the instrument according to the operational guidelines and schematic provided in the SDT Tool Management software to avoid malfunctions and ensure optimal performance
- Do not exceed the specified supply voltage to avoid the risk of damage. Make sure that the AC/AC converter is set to 5 V DC
- Do not use the SinuTEST in explosive atmospheres.
- Avoid exposing the instrument to dust and water jet protection. Do not immerse it and do not use it in conditions where it could be damaged.
- Keep the instrument within the specified operating temperature range to avoid damaging the internal components.

Calibration process and traceability to international standards:

To ensure the highest accuracy and compliance with international standards, our calibration strategy is implemented through two layers:

Layer 1 - Direct Link (SDT International - Quality Certified Instruments)

Core Calibration Process: The SDT SinuTEST, our main voltage generator, is central to our calibration process. As detailed in its calibration certificate, the SinuTEST undergoes rigorous in-house calibration for voltage measurements. This in-house calibration utilizes quality certified instruments as reference sources that are annually calibrated by ISO 17025 accredited laboratories, ensuring traceability and precision.

Layer 2 - Indirect Link (SDT International – Authorized Service Center)

Calibration service: The SinuTEST, calibrated in Layer 1, serves as a voltage reference source for further calibration of your SDT devices.

Under the validity dates of the calibration certificate, the service is performed by SDT International or any authorized service center equipped with a SinuTEST. The calibration procedure is 100% automated, traceable and integrated into our dedicated system. This process cannot be executed without a calibrated SinuTEST.

1	CMA 14/05/2024	SinuTEST MK2 (redesign + hardware changes)/MK1 discontinued	MCD
Ver.	**Editor**	**Nature of modification**	**Verified**