THURLBY THANDAR INSTRUMENTS

TG310

3MHz function generator

- *0.003Hz to 3MHz frequency range*
- *Very high waveform quality at all frequencies & levels*
- *2mV to 20V pk-pk from 50 Ω or 600 Ω*
- *Auxiliary TTL/CMOS output*
- *Variable symmetry with constant frequency*
- *Variable DC offset with zero detent*
- *1000:1 frequency change by vernier or sweep voltage*

TG310 - 3MHz function generator

A basic generator of high performance

The TG310 is a basic 3MHz function generator which offers very high waveform quality at all frequencies and levels. Frequency is set using a calibrated vernier knob.

The feature set includes variable symmetry and variable dc offset with centre detent.

Output impedances of 50Ω and 600Ω are supported via separate output sockets.

Main Features

- *0.003Hz to 3MHz frequency range*
- *High waveform quality at all frequencies & levels*
- *20mV to 20V pk-pk from 50 Ω or 600 Ω*
- *Auxiliary TTL/CMOS output*
- *Variable symmetry with constant frequency*
- *Variable DC offset with zero detent*
- *1000:1 frequency change by vernier or sweep voltage*

Part of an extensive range

TTi offers a wide choice of function generators both analogue and digital, from this basic 3MHz model up to a highly sophisticated 50MHz unit.

Users requiring an analogue function generator with digital readout and a wider feature set should request information on the TG300 series of 3MHz generators.

Technical Specifications

FREQUENCY

Frequency Range:	0.003Hz to 3MHz in 7 overlapping decade ranges with fine adjustment by a vernier.
Vernier Range:	1000:1 on each range.
Vernier Accuracy:	Typically ±5% of full scale.

OPERATING MODES

Specifications apply for the top decade of each frequency range and maximum output into 50Ω termination.

SINE

Distortion:	<0.5% on 3, 30 and 300Hz ranges; <1% on 3k, 30k and 300k ranges; all harmonics >25dB below fundamental on 3M range.
Amplitude Flatness:	±0.2dB to 200kHz; ±2dB to 3MHz.

TRIANGLE

Linearity:	Better than 99% to 200kHz

SQUARE WAVE

Rise/Fall Times:	<100ns
Mark - Space Ratio:	1:1 ± 1% to 100kHz

DC

Range:	±10V unterminated

SYMMETRY

Symmetry Range:	Variable typically 1:9 to 9:1 (on top decade of each range), frequency divided by 10.

OUTPUTS

MAIN - 50 Ohm

Amplitide	2mV to 20V peak-peak open circuit (1mV to 10V peak-peak into 50Ω) in four switch selectable ranges with 20dB vernier control within each range.
Attenuator Ranges:	0dB, -20dB, -40dB, -60dB
DC Offset Range:	±10V from 50Ω. DC offset plus signal peak limited to ±10V (±5V into 50Ω). DC offset plus waveform attenuated proportionally by the attenuator.
MAIN - 600 Ohm	Alternative output socket offering the same facilities as the 50Ω socket.
AUX OUT	0 to 5V TTL/CMOS logic levels capable of driving 2 standard TTL loads. Frequency, symmetry and phase as main outputs

SWEEP (EXTERNAL)

Input Impedance:	10kΩ
Input Sensitivity:	0 to 3V for 1000:1 sweep
Max. Input Voltage:	±10V
Sweep Linearity:	Better than 1%
Max. Slew Rate:	0.1V/us

GENERAL

CASING

Moulded ABS case with tilt stand.

POWER REQUIREMENTS

Input Voltage:	220 to 240 volts AC nominal 50/60Hz or 110 to 120 volts AC nominal 50/60Hz by rear panel adjustment. Installation category II.
Power Consumption:	25VA max.

TEMPERATURE & ENVIRONMENTAL

Operating Temp Range:	+5°C to +40°C, 20% to 80% RH.
Storage Temp. Range:	-10°C to +65°C
Environmental:	Indoor use at altitudes up to 2000m. Pollution degree 2.
SIZE	260(W) x 88(H) x 235(D)mm (10.2 x 3.4 x 9.2"), excluding tilt stand and feet.
WEIGHT	1.9kg (4.2lb)
SAFETY	Complies with EN61010-1.
EMC	Complies with EN61326.

Thurlby Thandar Instruments Ltd. operates a policy of continuous development and reserves the right to alter specifications without prior notice.

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