

Low Distortion Generator

TG 100



◆ Features

- Frequency range – 1Hz to 1MHz
- Accuracy of frequency setting - $\pm 0.05\%$ after auto calibration
- Sine wave generator with high spectral purity and quartz – exact frequency setting similar to a frequency synthesizer
- Rectangular output for the triggering of digital components
- Synchronization output – rectangular signal (CMOS/TTL level)
- Auto – calibration
- RS-232C interface
- Radio interference suppression – EN 55011 Class B
- Safety class – I according to EN61010 Part 1

DAGATRONICS CORPORATION

263-1, DUCKIDONG, ILSAN, KOYANG, KYUNGKIDO, KOREA

TEL: +82-31-916-8005 FAX: +82-31-916-8080

E-mail: dagatron@dagatron.com Homepage: www.dagatron.com

◆ Technical Specification of TG100 Low Distortion Generator

General Specifications of signal Outputs

Frequency range	1Hz to 1MHz
Frequency setting	4digits
Setting accuracy of frequency	±0.5% at nominal temperature ±0.05% at nominal temperature and auto calibration
Duration of auto calibration of the frequency	approx. 100ms for frequencies $f > 100\text{Hz}$ approx. 0.1 s to 15 s for frequencies $f < 100\text{Hz}$
Temperature coefficient of frequency	$< \pm 5 \cdot 10^{-8}$
Time coefficient of frequency	$< \pm 1 \cdot 10^{-3} / 5 \text{ min}$ after 30min warm-up time
Output signal	sine, rectangle (disconnectible)
Warm – up time	30min

Sinusoidal - Output

Harmonic distortion of the output signal	$\leq 0.02 \%$ for $10 \text{ Hz} \leq f \leq 10 \text{ kHz}$ $\leq 0.05 \%$ for $10 \text{ kHz} \leq f \leq 50 \text{ kHz}$ $< 0.5 \%$ for $50 \text{ kHz} \leq f \leq 100 \text{ kHz}$ $< 1 \%$ for $100 \text{ kHz} \leq f \leq 200 \text{ kHz}$ $< 3 \%$ for $200 \text{ kHz} \leq f \leq 1 \text{ MHz}$
Output impedance:	$600 \Omega \pm 1.5 \%$, asymmetric
Output voltage	3.16 V/600 Ω
Accuracy of output voltage at 1 kHz	± 0.5 dB at 1KHz
Temperature coefficient of output voltage	$\pm 5 \cdot 10^{-3}/\text{K}$
in response to frequency	± 0.5 dB for $20 \text{ Hz} \leq f \leq 20 \text{ kHz}$
Output voltage divider	0dB to – 70dB in steps of 0.1dB, tolerance ±0.7dB

Rectangular - Output

Output voltage	5V ±10% in idle speed, mark-to-space ratio abt. 1:1, CMOS compatible
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General Technical Data

Nominal temperature	+ 23 °C ± 1 °C
Operating temperature	+ 5 ... + 40 °C
Relative humidity	20 ... 80
Atmospheric pressure	70 ... 106 kPa
Operating position	horizontal or inclined by ± 15 °c
Operating voltage	sinusoidal alternating voltage 115/230 V (+ 10 %/- 15 %), internal switchable 47 ... 60 Hz (± 5 %)
Power consumption	max. 15 VA (max. 15 W)
Fuses	T 63 L/250 V (230 V~) T 125 L/250 V (115 V~)
Safety class	1, according to EN 61010 Part 1 (VDE 0411 Part 1), 2/94
Radio interference suppression	EN 55011 Class B Vfg 1046/1984, VDE0871 Category B
Dimensions (L × H × D)	225 mm × 85 mm × 200 mm
Weight of	
TG 100	approx. 1.9kg
incl. packing and accessories	approx. 2.9kg

Accessories supplied with the package

Mains cable, operating instruction, spare fuses.

System Interface

The TG 100 can be fully remote controlled via RS-232C interface with 1,200 to 9,600Bd.

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