

# Instek Frequency Counters

Part No. 01FC8131 and 01FC8270

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GFC-8270H(2.7GHz)

- \* Frequency, Period Measurement
- \* Microprocessor Controlled Intelligent Counter
- \* High Resolution at Both High and Low Frequency
- \* 0.01Hz ~ 2.7GHz Frequency Range
- \* 10mV rms High Sensitivity
- \* 100nHz Resolution for 1Hz
- \* Self Diagnosis Routine
- \* Variable Trigger Level Control
- \* Display Hold Function



GFC-8131H(1.3GHz)

- \* Frequency and Period Measurement
- \* High Resolution at Both High and Low Frequency
- \* 0.01Hz ~ 1.3GHz Frequency Range
- \* 10mV rms High Sensitivity
- \* 100nHz Resolution for 1Hz
- \* Variable Trigger Level Control
- \* Display Hold Function

**SPECIFICATIONS**

<b>DISPLAY</b>	8 digits with Hz, kHz, MHz, GHz, S, mS, S, nS and overflow
<b>GATE TIME</b>	Variable from 10ms to 10s, or 1 period of input whichever is greater
<b>ACCURACY</b>	$\pm$ (Resolution $\pm$ timebase error)

**CHANNEL A**

<b>Range</b>	DC coupled 0.01Hz ~ 120MHz AC coupled 30Hz ~ 120MHz
<b>Sensitivity</b>	10mV rms typical, 50mV rms max
<b>Coupling</b>	AC or DC switchable
<b>Filter</b>	Low pass, switchable in or out for channel A -3dB point of nominally 100kHz
<b>Impedance</b>	1M $\Omega$ /40pF
<b>Attenuator</b>	20dB
<b>Trigger Level</b>	-2.5 VDC to + 2.5 VDC
<b>Adjustment</b>	
<b>Resolution</b>	The maximum resolution is 100nHz for 1Hz and 0.1Hz for 100MHz inputs respectively for frequency measurement and 100nS for 1Hz and $10^{-15}$ S for 100MHz inputs respectively for period measurement At least 7,6,5 digits are displayed for 1 sec, 100mS, 10mS gate time respectively
<b>Period Range</b>	8nS to 100S at least 7 digits displayed for per second of gate time

**CHANNEL B**

<b>Range</b>	50MHz to 2.7GHz
<b>Sensitivity</b>	$\leq$ 50mVrms (10mVrms typical)
<b>Coupling</b>	AC only

**TIME BASE**

<b>Aging rate</b>	1PPM, per Month
<b>Temperature</b>	5PPM 23°C $\pm$ 5°C
<b>Line variation</b>	$\pm$ 0.005PPM for $\pm$ 10% variation
<b>POWER SOURCE</b>	AC 100V/120V/ 220V/240V $\pm$ 10%, 50/60Hz

<b>ACCESSORIES</b>	Power cord x 1, Instruction Manual x 1 GTL-110 x 1, GTL-101 x 1
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<b>DIMENSIONS &amp; WEIGHT</b>	230(W) x 95(H) x 280(D)mm, Approx. 2.2kg
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**SPECIFICATIONS**

<b>DISPLAY</b>	8 digits with Hz, kHz, MHz, GHz, S, mS, S, nS and overflow
<b>GATE TIME</b>	Variable from 10ms to 10s, or 1 period of input depending on whichever is greater
<b>ACCURACY</b>	$\pm$ (Resolution $\pm$ timebase error)

**CHANNEL A**

<b>Range</b>	DC coupled 0.01Hz ~ 120MHz AC coupled 30Hz ~ 120MHz
<b>Sensitivity</b>	10mV rms typical, 50mV rms max
<b>Coupling</b>	AC or DC, switchable
<b>Filter</b>	Low pass, switchable in or out for channel A -3dB point of nominally 100kHz
<b>Impedance</b>	1M $\Omega$ /40pF
<b>Attenuator</b>	20dB
<b>Trigger Level</b>	-2.5 VDC to + 2.5 VDC
<b>Adjustment</b>	
<b>Resolution</b>	The maximum resolution is 100nHz for 1Hz and 0.1Hz for 100MHz inputs respectively for frequency measurement and 10nS for 1Hz and $0.1 \times 10^{-15}$ S for 100MHz inputs respectively for period measurement At least 7,6,5 digits are displayed for 1 sec, 100mS, 10mS gate time respectively
<b>Period Range</b>	8nS to 100S at least 7 digits displayed for per second of gate time

**CHANNEL B**

<b>Range</b>	50MHz to 1.3GHz
<b>Sensitivity</b>	$\leq$ 40mVrms (10mVrms typical)
<b>Coupling</b>	AC only

**TIME BASE**

<b>Aging rate</b>	1PPM, per Month
<b>Temperature</b>	5PPM 23°C $\pm$ 5°C
<b>Line variation</b>	0.005PPM for $\pm$ 10% variation in line voltage
<b>POWER SOURCE</b>	AC 100V/120V/220V/230V $\pm$ 10%, 50/60Hz

<b>ACCESSORIES</b>	Power cord x 1, Instruction Manual x 1 GTL-110 x 1, GTL-101 x 1
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<b>DIMENSIONS &amp; WEIGHT</b>	230(W) x 95(H) x 280(D)mm, Approx. 2.2kg
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