

DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY,  
SHIBPUR, HOWRAH-711 103.

No. 13/2017/EE-3/21(KM)

Dated: 10/11/2017

*From :* The Head of the Department,  
Electrical Engineering,  
IEST, Shibpur, Howrah-711 103

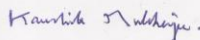
*To :*

Enlisted vendors of the institute and other interested parties.

Dear Sir(s),

Sealed quotations are invited for supply of the following item(s) within **12 days** from the date of publication of this advertisement in the website. The quotation should include the taxes as per rule, delivery charges, entry tax if any, etc. to Indian Institute of Engineering Science and Technology, Shibpur and should mention a firm delivery period. Preferences will be given to the suppliers who can supply ex-stock. **PRICES SHOULD BE QUOTED ON A PER-UNIT BASIS. QUANTITIES MENTIONED IN THE ENQUIRY TENDER ARE NOT FINAL AND MAY BE MODIFIED DEPENDING ON ACTUAL RATE QUOTED AND FUNDS AVAILABLE WITH US.**

*Yours faithfully,*



Signature of the indenter/Officer/  
Concerned Faculty Member



Prof. & Head of EE Dept.  
IEST, Shibpur, Howrah – 711 103

**List of Items:**

**1. Function/Signal Generators (Scientific make SM5071) – 2 no.s**

Technical Specifications:

Frequency Range 0.3Hz to 3MHz

15 MHz Frequency Counter

Digital Frequency Readout (5 digit)

Waveforms: Sine, Square, Triangle, DC-Offset Adjustment

TTL Trigger Output

Internal Sweep & External FM-Modulation

Square Wave Risetime < 70ns

Distortion Factor < 0.5% (upto 100kHz)

Operating Modes: Sine, Square, Triangle, DC Free running, internal sweep or external frequency modulation, with or without DC offset, with mode and frequency display.

Frequency Range: 0.3 Hz to 3 MHz

Frequency Stability: < 0.5% / hr or 0.8% / 24 hr at constant ambient temperature (medium position of frequency control)

Waveform Characteristics

Sine wave Distortion: 0.3 Hz - 100 kHz : max. 0.5 %

0.1Hz – 0.3 MHz: max. 1.5%

0.3 Hz – 3 MHz: max. 1.5%

Square Wave Rise time: typ. <40 ns

Overshoot: < 5%

Triangular non-linearity: <1% (up to 100 kHz)

Trigger Output : Square Wave synchronous to signal output, TTL > 4 Vpp

Frequency Display Accuracy: Up to 3 Hz :  $\pm (1\% + 3 D)$

3 Hz - 3 MHz :  $\pm (5 \times 10 + 1D)$

Output : (short-circuit-proof)

Output Voltage : 10 Vpp into 50 $\Omega$  , max. 20 Vpp open circuit

Attenuation : max. 60 dB 2 steps : 20 dB  $\pm$  0.2 dB each

Variable : 0 to 20 dB

Amplitude Flatness : (sine/triangle)

0.3 Hz - 0.3 MHz : max. 0.2 dB

0.3 MHz - 3 z : max. 0.5 dB

Output Impedance : switchable 50 / 600

DC Offset : Variable offset range : max.  $\pm$  2.5 V into 5

max.  $\pm$  5 V open circuit

Frequency Modulation

FM Input : VCF BNC connector on rear panel

Frequency Change : 1 : 100 approx.

Input Impedance : 50 $\Omega$ k || 25 pF

Input Voltage :  $\pm$ 30 V max.

FM Internal (Sweep) : 20 ms to 4s ;

Sweep Speed : 20 ms to 4s

Sweep Range : approx. 1 : 100

Frequency Counter

Frequency Range :10 Hz to 15 MHz

Accuracy : $\pm(5 \times 10 + 1D)$

Input Sensitivity: 50 mVrms to 100 mVrms

Max. Input Voltage: 150 Vrms

Input Impedance: 1 M $\Omega$  || 50pF

**Warranty required: 2 years minimum**

**Delivery to be completed within 6 weeks maximum**

**Offer validity: 60 days**