


TECHNICAL SPECIFICATION FOR  
FUNCTION GENERATOR

Ref. : GT/TEST/SPEC/FUNG

Rev. : 01

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	<b>BHARAT HEAVY ELECTRICALS LIMITED</b> <b>HEAVY POWER EQUIPMENT PLANT</b> <b>RAMACHANDRAPURAM,</b> <b>HYDERABAD - 502 032</b>	Enquiry No. :			
		Due Date :			
		Supplier Qtn. No.:			
		Date :			
<b>TENDER DOCUMENTS TO BE FILLED BY THE SUPPLIER FOR SUPPLY OF FUNCTION GENERATOR</b>					
<p>The "Offered" Column and where applicable, the "Deviations" &amp; "Remarks" Column of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.</p>					
<b>ADDRESS OF THE SUPPLIER :</b>					
<b>TELEPHONE NOS.:</b>					
<b>FAX NOS.:</b>					
<b>E-MAIL ADDRESS :</b>					
Sl. No.	Description for BHEL Requirement	To be Specified / Confirmed by Vendor	Offered	Deviations	Remarks
<b>1.0</b>	<b>Title:</b> The function generator to create a stable,accurate output on all waveforms, down to 1 μHz frequency resolution by using direct digital-synthesis techniques.	Vendor to confirm			
<b>2.0</b>	<b>Scope:</b> Supply of Function generator with all necessary accessories like cables, power adapters and software	Vendor to confirm			
<b>3.0</b>	<b>Technical requirements:</b>				
3.1	The function generator required to create a stable,accurate output on all waveforms by using direct digital-synthesis techniques.	Vendor to confirm			
3.2	AM, FM, PM, PWM and FSK capabilities and create, edit, and download complex waveforms using the arbitrary waveform editor .	Vendor to confirm			
3.3	USB / LAN / GPIB interface for full programmability with software supplied to program function generator	Vendor to confirm			

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4.0	<b>Technical requirements:</b>				
4.1	Input Channels - Two (2)	Vendor to confirm			
4.2	Channel features - Dual Channel capability with Frequency and amplitude coupling, differential or combined outputs	Vendor to confirm			
4.3	Standard Waveforms- Sine, Square, ramp, Pulse, Triangle	Vendor to confirm			
4.4	Arbitrary waveforms- Cardiac, exponential fall, exponential rise, Gaussian pulse	Vendor to confirm			
4.5	Operating Mode - Continuous, Modulate, Frequency Sweep, Burst, Output Gate	Vendor to confirm			
4.6	Modulation types - AM, FM, PM, FSK, PWM	Vendor to confirm			
4.7	Amplitude Resolution - 14 bits or higher	Vendor to confirm			
4.8	Sampling Rate - 14 bit or higher at 250 MSa/s	Vendor to confirm			
4.9	Frequency Range and Resolution for sine & square - 1 μHz to 30 MHz, 1 uHz resolution	Vendor to confirm			
4.10	Display- Large Colour display	Vendor to confirm			
4.11	Output impedance - 50 ohms	Vendor to confirm			
4.12	Output Amplitude- 10Vpp into 50 ohms	Vendor to confirm			
4.13	Overload and Short circuit protection	Vendor to confirm			
4.14	Communication Interface - USB or LAN or GPIB	Vendor to confirm			
4.15	Relevant software shall be supplied for programming and creation of complex waveforms. Software shall be compatible with Windows XP operating system or later	Vendor to confirm			
4.16	Output connector - BNC connector	Vendor to confirm			
4.17	External trigger - BNC connector	Vendor to confirm			
5.0	<b>General Requirements</b>				
5.1	Power supply - 230 V AC, 50 Hz	Vendor to confirm			
5.2	Operating temperature- 0°C to 55°C	Vendor to confirm			
5.3	Short-circuit protected to ground at all times	Vendor to confirm			
6.0	<b>Documentation:</b>				
6.1	Dimensional details /drawings and catalogues shall be furnished for approval before manufacturing and 2 sets of O&M manuals along with final drawings and software for programming shall be furnished along with equipment.	Vendor to confirm			

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7.0	<b>Packing and forwarding:</b>				
7.1	Dispatch shall be done in closed packing boxes consistent with requirements of safe transit. It shall be the suppliers responsibility to determine that the package done is adequate to preserve integration of the unit after being met the satisfactory visual check and such that the complete unit shall arrive at its destination in an undamaged condition (No mechanical damages, distortions dust and rain water entry etc.) and the unit is ready for its intended use.	Vendor to confirm			
7.2	Packing slips containing full information about the contents of the packing case should accompany the consignment.	Vendor to confirm			
8.0	<b>Pre-Qualifying criteria</b>				
8.1	Vendor shall be OEM or authorised agent of similar equipments.	Vendor to confirm			
8.2	Vendor should have supplied atleast one similar equipment in the last five years.	Vendor to confirm			
8.3	Vendor shall submit along with the offer the list of customers where similar equipment have been supplied mentioning broad specification & Model No. etc.	Vendor to provide details			