

**PROCUREMENT PROCEDURE OF CPRI (NON WORKS)**

Revision : 03  
 Dt of Rev : 25.07.2017  
 Page No. : 1 of 2  
 Section : Formats  
 Topic : e-Tender Technical Specification Document

Issue No : 2  
 Issue Dt : 30.06.2003  
 Issued by : P A  
 Documents : PPM  
 FORMAT NO.:CPRI/PUR/eTBID/GTP

**CPRI**

**CENTRAL POWER RESEARCH INSTITUTE, BHOPAL, Web: www.cpri.in, www.tenderwizard.com/CPRI, Telefax: 0755-2586283**

**Section II -Technical Specification**

**Tender Enquiry No: STDS/12-01/2019-20/PUR/STL/A-1998/**

**Description of the Equipment/Goods/Services : Three Phase Digital Power Analyzer**

**Note :The Offers should be submitted only in this format otherwise the offer will be liable for rejection**

**Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.**

**2) All blue fields are mandatorily to be filled in.**

**3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.**

**Name of the Vendor**

**Quotation Number and Date**

Sl.No.	Parameters	CPRI Specification/Requirements	Quantity	To be completed by the Bidder	
				Guaranteed Technical Particulars (GTP)	Deviation/Remarks Specify if any
1	Three Phase Digital Power Analyzer with measuring leads and all accessories	1. Power Analyser(s),	One No		
		2. Measuring Leads:	3 Sets		
		3. Fork Terminal adapter	3 Sets		
		4. Cable carrying bag,	1 Sets		
		5. Power supply cord	1 Sets		
		6. All other optional accessories.	1 Sets		
2	Scope	The scope of supply covers testing and commissioning of power analyzer with measuring leads and accessories for measuring No load losses & current and Load losses of single and three phase distribution and power transformers at STDS, CPRI, Bhopal			

3	Application	Power analyser shall be used for measuring No load losses & current and Load losses of single and three phase distribution and power transformers, it shall also include the other measurements e.g. voltage, current, power factor, <b>Frequency, voltage and current harmonics</b> and other measurements etc. as per IS and IEC specification and standards			
4	Operating Temperature	10° C (Min.), 40° C (Max.) and 30° C (Ave.)			
5	Humidity	20-80% RH (Non Condensing)			
6	Altitude	523 meters above MSL			
7	Installation	Indoor			
8	Input supply	230V ± 10%, Single Phase, 50Hz			
9	General	Instrument shall be rugged, having water proof casing and light in weight, so that the measurement can be used in rough environment. It shall have large display which can show all the data at a glance. Protective devices shall be provided to protect the meter from any type of faults inside or outside the equipment under test.			
10	No. of input channels	Voltage :	3 No's		
		Current :	3 No's		
11	Configuration	1 phase 2 wire, 1 phase 3 wire, 3 phase 3 wire, 3 phase 4 wire etc.			
12	Voltage measurement	Voltage Range : 15 to 1000 Vrms (direct input)			
		Accuracy :± 0.1% of reading ±0.1% of range or better at 50Hz			
13	Current measurement	Current Range : 0.5 to 65A rms (direct input)			
		Accuracy : 0.1% of reading+0.1% of range or better at 50Hz			
14	Power measurements	kW, kVA, kVAR Accuracy : 0.2% or better			
15	Accuracy of power measurement at power factors	± 0.5% of reading or better. <b>Power factor:0.05 lag to unity</b>			
16	Input type	Floating			
17	Frequency range	DC and 0.1 Hz to 100 KHz			
		Accuracy : 0.1% or better			
18	Input terminal type	Insulated, plug in			

19	Duty cycle	Continuous			
20	Continuous over loading capacity	Voltage – 1100V rms			
		Current – 70 A rms			
21	Input over loading indication	LED			
22	Over voltage protection	2.5kV peak			
23	ADC resolution	16 bits			
24	Range selection	Manual, Auto			
25	Power quality	THD, Flicker, Crest factor, Phase angles			
26	Harmonics	Current and voltage up to 50 <sup>th</sup> harmonics			
27	Display refresh rate	100mS, 250mS, 500ms, 1S			
28	Interface	USB/Ethernet			
29	Functions	W, VA, VAR, pf, Phase angle, FF, Hz, $V_{\text{Rectified mean}}$ , Harmonic content, THD, Total power, Vaverage etc.			
30	Display type	TFT LCD Graphical display			
31	Data Storage	Facility to store the measured data such as voltage, current & power in the inbuilt internal memory.			
32	Software	Necessary software package for Numerical Visualization, Accessing and analyzing the stored data, FFT analysis of harmonics, Transfer of data to spread sheets for further analysis			
33	Measured values	In addition the following are to be available. rms effective value, rectified mean values; peak values, crest factor, form factor, fundamental content, distortion factor. Voltage (rms and average) and current. Active Power (W); Reactive Power (var); Apparent Power (VA); <b>voltage and current harmonics</b> , $\cos \Phi$ , phase angular; Integral function for active power, reactive power, apparent power, mean voltage and mean current.			
34	User Manual	Two hard copy and one soft copy			
35	Demonstration at CPRI	Demo of equipment should be done at CPRI during evaluation at the Bidder's cost. If required the bidder shall arrange demo at the place where similar equipment has been supplied at their cost during evaluation.			

36	Training	Training on the equipment use shall be provided to the CPRI officers at <b>CPRI, STDS BHOPAL.</b>			
37	Warranty	1 year (on site)			
38	Service backup	At least 5 years from the date of supply			
39	Calibration	Calibration Certificate from any lab with valid accreditation as per ISI/IEC: 17025, 2005 or latest traceable to National & International Standard for the meters supplied should be provided. The Calibration should be carried for all ranges.			
40	Experience Certificate	List of customers & feedback from any one customers of similar type of meters.			

PN: 1) Bidder shall indicate complete details/information how the CPRI GTP are complied with against each and every specification parameters & mere statement of '**complied**' do not suffice the requirement.

2) A detailed technical/catalogue/literature/phamplet and any other technical details shall be submitted in hard copy in a sealed cover superscribing enquiry number and due date so as to reach the below mentioned address within due date and time.

3) The Indian representative of the foreign/overseas firms shall submit the Letter of Authorization issued by their principals.

4) The bidder shall submit the quotation / offer in the above prescribed format of Section IA, IB and II only. Informations any other forms shall be rejected.

Address : Joint Director (Purchase), Purchase Authority,  
Central Power Research Institute, Govindpura, Bhopal-462023  
Telefax: 0755-2586283, email:khairwar@cpri.in, web : www.cpri.in