



Department of Electrical Engineering  
Indian Institute of Technology Madras  
Chennai – 600 036, India

Prof. Krishna Vasudevan  
Electrical Engineering Department

Ref: No. EE/KV /Power Quality Meter /2016

DATE: 18.01.2017

Due date : 31.01.2017

Dear Sir,

1. Quotations are invited in duplicate for the various items shown below/overleaf/enclosed list.
2. The quotations are to be in two parts as Technical Offer and as Commercial offer: The two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in separate envelopes must be enclosed in the one bigger envelope duly sealed and super scribed with reference number and due date and must be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. Fax and Email quotation are not acceptable.
4. Quotations should be valid for 60 days from the due date and period of delivery required , warranty terms etc. should also be clearly indicated. A minimum of one year warranty is required from the date of commissioning.
5. Imported supplies should be quoted for CIF Madras.
6. Local firms to quote for free delivery to this Institute. If quoted for Ex-Godown delivery charges be indicated separately.
7. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples / machine/ equipment if called for should be submitted / demonstrated at free of charges, and collected back at the supplier's expenses. Compliancy certificate is to be provided indicating conformity to the technical specifications
8. Sales Tax/General Taxes/ED if applicable and such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to Non-Government Educational Institutions run with no profit motive for which a concession is given. Sales Tax Certificate will be issued at the time of final settlement of the bill.
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
12. The Guarantee period of the item may be indicated clearly.
13. In case of LC. Payment, 90% of the payment will be made after completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the equipment.
14. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
15. **Acceptance and Rejection:-** I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Yours faithfully,

Prof. Krishna Vasudevan

Items required: Power Quality Meter as per specifications enclosed.

Qty - 4 Nos.

Phone Nos.: (044) 2257 4428/ /5419 FAX: (044) 2257 4402, E-mail: Krishna@ee. iitm.ac.in





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**Technical Specifications for Power Quality Meters :**

- 1) Sampling frequency should be greater than or equal to 512 samples/cycle.
- 2) It should be powered from 230V AC supply
- 3) Measurement Input specification
  - a) It should be capable of accepting three phase inputs for measurements.
  - b) Voltage measurement: 0-500 V AC in all 3 phases.
  - c) Current measurement: Along with sensing equipment should measure minimum current of 500 A. Also quote other possible current ranges along with its price.
- 4) Measurements:
  - a) RMS Voltage of all the three phases ( $\frac{1}{2}$  cycle RMS measurement), Peak voltage
  - b) Instantaneous voltage and current
  - c) RMS current, Peak current
  - d) Frequency
  - e) Active power, Reactive power, Power factor, Displacement power factor
  - f) Harmonics, Voltage THD, current THD
  - g) Sag/swell, Flicker, Unbalance
  - h) Transient Voltage – minimum 6000V peak
- 5) Recording and trending:
  - a) It should have data storage facility of minimum 8GB and desirable to have expandable storage.
  - b) All measurements listed above should be recorded.
  - c) It should store trends of voltages, current of three phases as well as sag and swell.
- 6) Communication:
  - a) It should have Ethernet connectivity and to be remote monitor able via Ethernet.
  - b) It should automatically send email if any power quality event occurs.
  - c) Built in web server
  - d) FTP server
  - e) It should have facility for offline data analysis. If it requires any software it should be free.
- 7) Duration of record: Quote possible duration of record along with its storing resolution (time interval).

All the supporting software and drivers with necessary connecting probes must be supplied along with the unit.

The price bid must contain:

Item a) price of the base equipment inclusive of standard accessories.

Item b) optional accessories