

Office of the Dean Research and Development  
Indian Institute of Engineering Science & Technology (IIEST), Shibpur  
Howrah-711 103

Institute fund, Code: 08000000-63-50 PLAN GRANT (50)

Ref.: Tender Advt. No. CGE 0001 dated - 11.12.2019

Centre of Excellence for Green Energy & Sensor Systems  
Indian Institute of Engineering Science & Technology (IIEST), Shibpur  
Howrah-711 103

**Notice Inviting Quotations**

Sealed quotations are invited for the supply of:

**Item 01. AC Mains Charger for Lithium Battery 48V/90Amp.**

**Item 02. CLAMP ON POWER LOGGER 90V to 780V, 500mA to 5kA, 300W to 9 MW.**

As per the following technical specification. The technical specification can be downloaded from the website. The document can be also obtained from the Centre of Excellence for Green Energy & Sensor Systems (**Contact : Prof. H. Saha /Dr. Santanu Maity/Prof. B. K. Ghorai**) between 10.30 a.m. and 5.30 p.m. on all working days. The invitation is valid for 07 working days from the date of publication of this notice.

*Santanu Maity*  
11.12.2019  
Dr. Santanu Maity,  
Assistant Professor  
CEGESS, IIEST, Shibpur  
Howrah-711 103

*B. K. Ghorai* 11/12/2019  
Head  
Centre of Excellence for  
Green Energy and Sensor Systems  
IIEST, SHIBPUR  
(Howrah, W.B.)

## SECTION I: TERMS & CONDITIONS

1. The last date of receipt of quotation is valid **for 07 working days** from the date of publication of this notice. Quotations received later will not be entertained under any circumstances.
2. Potential supplier are to submit the quotations in Sealed Cover to the Centre of Excellence for Green Energy & Sensor Systems in the following address:

**Prof. H. Saha /Dr. Santanu Maity/Prof. B. K. Ghorai**  
**CEGESS**  
**IEST, Shibpur**  
**Howrah-711 103, India.**

3. **Item name & tender code must be mentioned on cover otherwise the quotation will not be accepted.**
4. The price quoted should be inclusive of all Taxes in INR, duties and levies. Inclusion of Tax/Levy at a latter stage will not be accepted. Freight, Insurance charges should be clearly indicated. If GST is chargeable then price quoted should be inclusive of GST in INR. @ **5% ( CGC will be provided by IEST, Shibpur, if applicable).** Price should be CIF, IEST, Shibpur basic.
5. Vendor should have proven track record of supply in IEST, IIT, NIT, IISc.
6. Commercial Papers duly signed & must be attached.
7. Quotation has to be kept valid for acceptance for a period of 6 months without any modifications in its terms and conditions.
8. Documents to be submitted with the Quotations :
  - General Conditions (Section I) and Important Instruction (Clint list) in original duly signed by the Proprietor/ Partner/ Director or any authorized person of the company as a token of acceptance of Terms and Conditions of Tender.
  - Latest Income Tax, Sales Tax, Professional Tax, CST clearance certificates and copy of valid Trade License. (Photo copy duly signed) (Compulsory).
9. IEST, Shibpur, reserves the right to accept / reject all or any of the tenders without assigning any reason whatsoever.
10. Custom Duty Exemption Certificate will be provided by the IEST (If applicable).
11. **No advance payment will be made before the delivery of the item.**

*Santanu Maity*  
11-12-2019  
Dr. Santanu Maity  
Professor

*B. K. Ghorai* 11/12/2019  
Head  
Centre of Excellence for  
Green Energy and Sensor Systems  
IEST, SHIBPUR  
711103 (WB)



## SECTION II: TECHNICAL SPECIFICATIONS :-

Item 01.

### AC Mains Charger for Lithium Battery 48V/90Amp

- 1) Wide Input Range (150-275VAC): For Adverse Grid Conditions.
- 2) POWER Factor Corrected: For High Energy Saving.
- 3) Very High efficiency: For Robust Operation.
- 4) Five Stage Battery Charging: For Max Extended Battery Life
- 5) Fast and Safe Charging Selection: User Requirement (Fast-Charging: 20% extra over nominal Rating)
- 6) Battery Reverse polarity, Over-charge, Short-Circuit, Over-Temperature protection: FOR Basic Protection.
- 7) Charging Parameter Display: Optional (Through Service Port + LCD Display Module)
- 8) Temperature Compensated Charging: Optional (Through Service Port + Temperature Sense Module)
- 9) Li-ion Ready Charger: Upgradable (Through Service Port)
- 10) 5V/1A Mobile Charging Port: For Mobile/Battery Operated gadgets.


Item 02.


### CLAMP ON POWER LOGGER 90V to 780V, 500mA to 5kA, 300W to 9 MW

<b>Measurement line &amp; number of circuits</b>	50/60 Hz, Single phase 2 wires (1/2/3 circuits), Single phase 3 wires (1 circuit). Three phases 3 wires (1 circuit), Three phases 4 wires (1 circuit). Current only: 1 to 3 channels
<b>Measurement items</b>	Voltage RMS, current RMS, voltage fundamental wave value, current fundamental wave value, voltage fundamental wave phase angle, current fundamental wave phase angle, frequency (U1), voltage waveform peak (absolute value), current waveform peak (absolute value), active power, reactive power (with lag/lead display), apparent power, power factor (with lag/lead display) or displacement power factor (with lag/lead display), active energy (consumption, regeneration), reactive energy (lag, lead), energy cost display, active power demand quantity (consumption, regeneration), reactive power demand quantity (lag, lead), active power demand value (consumption, regeneration), reactive power demand value (lag, lead), power factor demand, pulse input [PW3360-21 only]: Harmonic voltage level, harmonic current level, harmonic power level, content percentage, phase angle, total harmonic distortion (THD-F or THD-R), up to 40th order
<b>Voltage ranges</b>	600 V AC (Effective measurement range: 90.00 V to 780.00 V)
<b>Current ranges</b>	500.00 mA to 5.0000 kA AC (depends on current sensor in use), 50.000 mA to 5.0000 A AC (Leak clamp on sensor only)
<b>Power ranges</b>	300.00 W to 9.0000 MW (depends on voltage/current combination and measured line type)
<b>Basic accuracy</b>	Voltage : $\pm 0.3\%$ rdg. $\pm 0.1\%$ f.s. Current : $\pm 0.3\%$ rdg. $\pm 0.1\%$ f.s. + clamp sensor accuracy Active power : $\pm 0.3\%$ rdg. $\pm 0.1\%$ f.s. + clamp sensor accuracy (at power factor = 1)
<b>Display update rate</b>	0.5 sec (except when accessing SD card or internal memory, or during LAN/USB communication)
<b>Save destination</b>	SD memory card, or internal memory at real time
<b>Data save interval</b>	1 sec to 30 sec, 1 minute to 60 minutes, 14 selections
<b>Save items</b>	Measurement value save: Average only / Average, Max./Min. value, [PW3360-21 only]: Harmonic

	data save: Average only / average, max./min. value in binary format, Screen copy: BMP form (saved every 5 min. at minimum interval time), Waveform save: Binary waveform data SD/SDHC memory card LAN 100BASE-TX: HTTP server function, remote settings via communication program, data download
<b>Interfaces</b>	USB 2.0: When connected to a PC, the SD Card and internal memory are recognized as removable storage devices, remote settings via communication program, data download Pulse output: proportional to active power consumption when measuring integral power consumption, Isolated open-collector signal
<b>Functions</b>	Connection check, Quick Set navigation guide, clock, pulse input AC Adapter Z1006: (100 to 240 V AC, 50/60 Hz), 40 VA (including AC adapter)
<b>Power supply</b>	Battery Pack 9459: (DC 7.2 V, 3 VA, charging time 6 hr 10 m), 8 hours of continuous use (with back light off)
<b>Dimensions and mass</b>	180 mm (7.09 in) W × 100 mm (3.94 in) H × 48 mm (1.89 in) D, 550 g (19.4 oz) without PW9002 180 mm (7.09 in) W × 100 mm (3.94 in) H × 67.2 mm (2.65 in) D, 830 g (29.3 oz) with PW9002
<b>Accessories</b>	Voltage cord L9438-53 ×1 set, AC adapter Z1006 ×1, USB cable ×1, Instruction manual ×1, Measurement guide ×1, Color clip ×1 set: red, yellow, blue, white/two each, for color-coding clamp sensors, Spiral tubes for grouping clamp sensor cords ×5

*B. Ghosh* 11/14/2019

 **Head**  
Centre of Excellence for  
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IEST, SHIBPUR  
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*Sanatan Maity*  
11.12.2019  
 **Dr. Sanatan Maity**  
Assistant Professor  
CEGESS, IEST, Shibpur  
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