

Amendment No. 2

TENDER NOTICE No. UGVCL/SP/III/809/ R&D Cell Instruments

Bidders are hereby requested to note that following modification are made for purchase of R&D Cell Instruments.

Name of item : Digital Power Analyzer

our requirement is for AC Clamp CT probe only

Existing Technical Specification	Modified Technical Specification
<p>2. Digital Power Analyzer (C) Other Accessories :- Current Clamp-on Probe X 3 Nos. Set each of (5 A, 50 A, 1000 A) Measurement bandwidth: 30 Hz to 5 kHz Basic accuracy: $\pm 0.3\%$ of reading Maximum allowable input: AC 1000 Arms 1400 A peak (AC) Current output type: 1 mA/A Necessary connecting cables should be provided along with the set.</p>	<p>2. Digital Power Analyzer (C) Other Accessories :- Current Clamp-on Probe X 3 Nos. Set each of (2 A, 50 A, 1000 A)</p> <p>➤ <u>Specification for 2 A CT :-</u> Measurement range : 0-2 Arms AC (20 APk) Output Voltage : 0-0mVrms AC (25mV/A) Accuracy : <u>Amplitude :</u> $\pm 1.5\% \text{rdg} \pm 0.04 \text{mV}$ (20Hz-45Hz) $\pm 0.5\% \text{rdg} \pm 0.01 \text{mV}$ (45Hz-66Hz) $\pm 0.8\% \text{rdg} \pm 0.02 \text{mV}$ (66Hz-1kHz) $\pm 2\% \text{rdg} \pm 0.04 \text{mV}$ (1kHz-5kHz) <u>Phase Angle :</u> $\pm 2^\circ$ (45Hz-3.5kHz)</p> <p>➤ <u>Specification for 50 A CT :-</u> Measurement range : 0-50 Arms AC Output Voltage : 0-0.5 Vrms AC (10mV/A) Accuracy : <u>Amplitude :</u> $\pm 1.0\% \text{rdg} \pm 0.3 \text{mV}$ (20Hz-45Hz) $\pm 0.5\% \text{rdg} \pm 0.1 \text{mV}$ (45Hz-66Hz) $\pm 0.8\% \text{rdg} \pm 0.2 \text{mV}$ (66Hz-1kHz) $\pm 1.0\% \text{rdg} \pm 0.3 \text{mV}$ (1kHz-5kHz) <u>Phase Angle :</u> $\pm 1.0^\circ$ (45Hz-1kHz)</p> <p>➤ <u>Specification for 1000 A CT :-</u> Measurement bandwidth: 30 Hz to 5 kHz Basic accuracy: $\pm 0.3\%$ of reading Maximum allowable input: AC 1000 Arms 1400 A peak (AC) Current output type: 1 mA/A</p>

Date:

Seal & Signature of Tenderer

	Necessary connecting cables should be provided along with the set.
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Our requirement is for AC Clamp CT of 5 A, 50 A and 1000 A

“**Input Element:** 6

Band width: DC, 0.1 Hz to 1 MHz (5 A direct Current input, External Current Sensor input)DC, 0.1 Hz to 200 kHz (up to 50 A direct Current input) “.

Name of item: Digital Oscilloscope

Existing Technical Specification	Modified Technical Specification
<p>6. Digital Oscilloscope B. Specifications:- Required Measurement Module: Analog Voltage:- Sample rate:100 kS/s (Voltage) Bandwidth: 00 kHz (Voltage) Resolution:16-Bit (Voltage) Accuracy:± 0.25% (Voltage) Measurement frequency of 0.01 Hz to500 kHz, Measured parameters (frequency,rpm, period, duty, power supply frequency,distance, speed) Sample rate: 1 MS/s Accuracy:± 0.1 % Resolution:625 ps Required Parameters:</p> <ul style="list-style-type: none"> • sampling rate 1 MS/s • Frequency bandwidth 300 KHz • DC accuracy ±(0.25% of 10 div) • Display at least 10 inch TFT color LCD monitor • Display resolution 1024 × 768 pixels (XGA) Measurement frequency of 0.01 Hz to 500 kHz, Measured parameters (frequency,rpm, period, duty, power supply frequency, distance, speed) 	<p>6. Digital Oscilloscope B. Specifications:-</p> <ul style="list-style-type: none"> • Display at least 10 inch TFT color LCD monitor • Display resolution 1024 × 768 pixels (XGA) <p>Required Measurement Module:</p> <ul style="list-style-type: none"> • <u>Analog Voltage Measurement Module :-</u> Sample rate: 100 kS/s Bandwidth:40 kHz Resolution: 16-Bit Accuracy: ± 0.25% Max. Allowable Input voltage (DC+AC Peak):850 V Total channel required: 4 No.s • <u>High Sensitivity Current Measurement Module :-</u> Sample rate: 1 MS/s Bandwidth:300 kHz Resolution: 16-Bit Accuracy: ± 0.25% Max. Allowable Input voltage (DC+AC Peak):600 V Total channel required: 4 No.s Other: High sensitivity range (1 mV/div), low noise (± 100 μV) and high noise immunity and should be compatible with CT clamp provided • <u>Frequency MeasurementModule :-</u> Sample rate: 1 MS/s Bandwidth:625 ps Resolution: 16-Bit Accuracy: ± 0.1 % Max. Allowable Input voltage

	<p>(DC+AC Peak):420 V Total channel required: 2No.s Other:Measurement frequency of 0.01 Hz to500 kHz, Measured parameters (frequency,rpm, period, duty, power supply frequency, distance, speed)</p>
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3. Name of item: Handy instrument for power quality measurement

Existing Technical Specification	Modified Technical Specification
<p>1. Handy Instrument for Power Quality Measurement :- C. Other Accessories :- Following two type of Clamp on Probes: ⌘ 50 A X 3 Clamps (0.5 to 50 A,40 Hz to 3.5 kHz) Accuracy : ± 0.5% reading ± 0.1 mV on 50 Hz- 60 Hz range P.A. Error: Less than ±2.0° ⌘500 A X 3 Clamps (0.5 to 50 A, 40 Hz to 3.5 kHz) Accuracy : ± 0.5% reading ± 0.1 mV on 50 Hz- 60 Hz range P.A. Error: Less than ± 2.0° ⌘Necessary clamp on probe for leakage current measurement ⌘Necessary Voltage probes should also be provided along with the above probe.</p>	<p>1.Handy Instrument for Power Quality Measurement :- Following two type of Clamp on Probes: ⌘ 50 A X 3 Clamps (0.5 to 50 A,40 Hz to 3.5 kHz) Accuracy : ± 0.5% reading ± 0.1 mV on 50 Hz- 60 Hz range P.A. Error: Less than ±2.0° ⌘500 A X 3 Clamps (0.5 to 500 A, 40 Hz to 3.5 kHz) Accuracy : ± 0.5% reading ± 0.1 mV on 50 Hz- 60 Hz range P.A. Error: Less than ± 2.0° ⌘2 A X 1 Clamp (up to 2 A AC) Accuracy : ± 1.0% reading ± 0.05 mV on 50 Hz- 60 Hz range ⌘Necessary Voltage probes should also be provided along with the above probe.</p>

Other terms & condition of tender remains same.

Documents are available on website <https://ugvcl.nprocure.com>
 (For view, download & on line submission)

Chief Engineer (P & P)
UGVCL: RO: Mehsana