



वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
Council of Scientific & Industrial Research
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं
National Aerospace Laboratories

INVITATION FOR TENDERS

Tender No. NAL/PUR/ELK/319/22-Y

Dated: 07/02/2023

CSIR - National Aerospace Laboratories (NAL), Bengaluru, Republic of India, is one of the premier research laboratories under aegis of Council of Scientific and Industrial Research (CSIR), an autonomous body under the Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organisation. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl. No.	Description of Item(s)	Unit	Quantity
1	Supply of Feeder/Transformer protection Relay of Make: Schneider Electric and Model: Easergy-universal relay P3U306AAA1BCAA (REL52022) compatible for Modbus TCP/IP Ethernet communications. The detailed specifications are as per the " Annexure " enclosed. Important: 1). The supply of mentioned goods shall be executed only by the Schneider's OEM or by their Authorized Service Business Partners only. 2). Proof of valid Schneider's OEM letter / Authorized Service Business Partner letter to be enclosed / uploaded along with your offer, failing which offers will be liable for rejection.	Nos	6
2	Installation, Testing & commissioning of new relays in the existing panels. Note: This scope includes all complete: 1) Retrofitting the relays in the Existing 11 kV panels with necessary required modifications like making cut outs, fixing of relays, inter connecting control wirings with colour coded wires of suitable current rating and wiring terminations with ferrules in the existing panels. 2) Relays settings 3) Test the relay using secondary injection kit as per the user requirements as a Witness tests. Important: 1). This work involves of disconnecting of old Relay units and SITC of with new one. 2). This Job shall be carried out only by Schneider's OEM or by their Authorized Service Business Partners only. 3). Proof of valid Schneider's OEM letter / Authorized Service Business Partner letter to be enclosed/uploaded along with your offer, failing which offers will be liable for rejection.	Nos	6

Single / Double Bid Only	Single	Tender Type	Open
Bid Security (EMD) (in INR)	Bid Security Declaration should be enclosed with quotation	Bid submission end date	02-Mar-2023 10.00 Hrs
Performance Security	Nil	Bid opening date	03-Mar-2023 11.00 Hrs



CSIR-National Aerospace Laboratories, Bengaluru-560 017, INDIA

01. Tender Documents may be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders' who have not registered in e- procurement can register free of cost before participating through the website <https://www.etenders.gov.in>. Bidders are advised to go through instructions provided at 'Instructions for Online Bid Submission'.
 02. Tenderers can access tender documents on the website (for searching in the NIC site <https://www.etenders.gov.in>, kindly go to Tender Search option, select tender type and select 'Council of Scientific and Industrial Research', in organisation tab and select NAL-Bengaluru-CSIR in department type. Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://www.etenders.gov.in> as per the schedule given in the next page.
 03.
 - a. Global Tender Enquiry: Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but **not** both. However, the offer of the Indian Agent should also accompany the authorisation letter from their principal. To maintain sanctity of tendering system, one Indian Agent **cannot** represent two different Foreign principals in one tender
 - b. Open Tender enquiry: Only Local suppliers with prescribed local content as detailed in DIPPT Order No. P-45021/2/2017-PP (BE-II) dated 16th Sep, 2020 and subsequent orders issued by Ministry of Finance (GoI) from time to time, are eligible for bidding. Bidders must enclose the certificate declaring the local content of supplies as per our standard form.
- Note: Kindly refer to the first page (NIT) for tender type (i.e. Open Tender Enquiry / Global Tender Enquiry) and submit your bid accordingly.
04. Unsolicited / conditional / unsigned Quotations/Quotations received after the due date and time shall be summarily rejected. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
 05. The bids' failing to comply with the following clauses will be summarily rejected.
 - a. The Bidders' proposing to supply finished products directly/indirectly from vendors' of countries sharing the land border with India should submit a copy of registration done with DPIIT.
 - b. If the products supplied are not from vendors of countries sharing land border with India, the Bidders' have to enclose a declaration to that effect.
 06. As per Govt. of India procurement policies,
 - a. The purchaser intends to give purchase preference to local supplies (Preference to Make in India) in case the cost of procurement is up to Rs. 50.00 lakhs.
 - b. The procuring entity intends to give purchase preference to products/goods manufactured by micro, small and medium enterprises.
 07. Bidders' are requested to refer to the instructions regarding Procurement Policies for "Make in India", issued by Ministry of Commerce and Industry, Department of Industrial Policy and Promotion dated. 28-May-2018, and 4-Jun-2020 and guidelines as and when issued.



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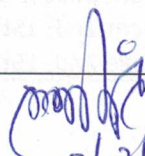
08. Kindly, note CSIR-NAL **GST No. 29AAATC2716R1ZB**. And the bidders' are requested to furnish their GST No. in their invoice failing which we will *not* be able to make timely payment.
09. Printed conditions, if any, submitted along with your quotation shall not be binding on us.
10. The prospective bidders' are requested to refer to the Standard Terms and Conditions available on NAL Internet (www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids'.
11. The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.

Thanking you,

Yours faithfully

Stores & Purchase Officer
For and on behalf of CSIR-NAL


Sl.No	Specifications	Details
1	Relay Make & Model	Schneider Electric, Easergy P3U30 Universal relay. Model: P3U306AAA1BCAA(REL52022)
2	Protection and control functions	<p>The relay shall include the following protection and control features:</p> <ol style="list-style-type: none"> 1. Phase overcurrent 2. Directional phase overcurrent 3. Earth fault overcurrent 4. Directional earth fault 5. Transient earth fault 6. Capacitor bank unbalance 7. Broken conductor 8. Cold load pick-up 9. Switch ON to fault (SOTF) 10. Breaker failure 11. Directional active underpower 12. Fault locator 21FL 13. Recloser 14. Phase undercurrent 15. Excessive starting time, locked rotor 16. Motor restart inhibition 17. Capacitor overvoltage 18. Negative sequence overcurrent 19. Overvoltage 20. Undervoltage 21. Positive sequence undervoltage 22. Earth fault overvoltage 23. Underfrequency 24. Rate of change of frequency 25. Synchro-check 26. Lockout relay 27. CT supervision 28. VT supervision 29. H2 detection 30. H5 detection 31. H5 detection 68H5 32. Programmable stages 33. Programmable curve 34. Switchgear control and monitoring 35. Programmable switchgear interlocking 36. Local control on single-line diagram 37. Local control with I/O keys 38. Local/remote control 39. 2 function keys 40. Mobile application with Easergy SmartApp 41. Web-server 42. Programmable logic


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Sl.No	Specifications	Details
3	Advanced Communication	<p>The relay should have the following advanced communication.</p> <ol style="list-style-type: none"> 1. RJ45 communication port with Ethernet for continuous monitor and control from a remote computer with SCADA system or PLC must be possible 2. Communication modules, usable for different and redundant protocols (IEC 61850 ed. 1, IEC 61850 ed.2, IEC 60870-5-101, DNP3 TCP, Modbus TCP and EtherNet/IP). 3. Hardware modules <ul style="list-style-type: none"> • Extension + Back up memory 4. Ethernet Protocols <ol style="list-style-type: none"> 1. IEC 61850 ed. 1 2. IEC 61850 ed. 2 3. IEC 60870-5-101 4. DNP3 TCP 5. Modbus TCP 6. EtherNet/IP
4	Metering and Monitoring	<p>The P3U30 relay should be capable of measuring and monitoring all the following components.</p> <ol style="list-style-type: none"> 1. Current 3-phase 2. Current zero sequence 3. Current positive sequence 4. Current negative sequence 5. Current ratio of negative and positive 6. Voltage phase to earth 7. Voltage phase to phase 8. Voltage zero sequence 9. Voltage positive sequence 10. Voltage negative sequence 11. Voltage ratio of negative and positive 12. Short circuit fault reactance 13. Fault location current 14. Earth fault reactance 15. Frequency 16. Active power 17. RMS active power 18. Reactive power 19. RMS reactive power 20. Apparent power 21. RMS apparent power 22. Active energy 23. Reactive energy 24. Cos ϕ 25. Tan ϕ 26. Power angle 27. Power factor 28. Voltage phasor diagram view 29. Current phasor diagram view 30. Current 2nd, 15th harmonics with THD 31. Voltage 2nd, 15th harmonics with THD

(Signature)
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		<ol style="list-style-type: none">32. Voltage interruption33. Condition monitoring CB wear34. Trip circuit supervision35. Circuit breaker monitoring36. Relay self-monitoring
5	Logs and records	<ol style="list-style-type: none">1. Event recording2. Disturbance recording3. Tripping context
6	Technical Features	<ol style="list-style-type: none">1. To allow continuous operation even in high temperature ambient (up to 60 degrees centigrade), within the whole voltage range2. High level of electrical insulation between input and output circuits3. It should have Self-cleaning contacts.4. High-speed operation.5. Simple design and less maintenance.6. IP degree of protection IP54 conforming to IEC 605297. In compliance with the most demanding test standards: IEC, EN, IEEE and bearing the CE mark8. Simplicity of installation (plug-in relays in a wide range of sockets with different installation configurations)9. The contact reset should be of Hand reset and electrical reset.10. When the relay operate coil is energized, the flag indicator should display. The indicator should remain visible until it is reset by a mechanical lever operated by hand from the front cover of the relay.


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