



सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान सूरत-३९५००७.  
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY SURAT-395007.

No. DoEE/SERB/EEQ/1213/2022-23

Date: 08/08/2022

To,

**Sub: Enquiry for Supply and installation of the following item:**

1) DC-DC Converters

You are requested to quote your prices for supply of the stores listed overleaf. The quotations may be sent to the undersigned in a sealed envelope and subscribed as: "Quotation with reference to Enquiry No: DoEE/SERB/EEQ/1213/2022-23. Dated: 08/08/2022 for Department of Electrical Engineering" Your quotation should reach the undersigned on or before **Date: 29/08/2022 at 5:00 PM.**

The quotations should be furnished with the following information.

1. The **Make or Brand/Model** of each item should be specifically stated and wherever necessary, complete set of specifications and dimensions should be given.
2. If asked, samples should accompany the quotations or provide the demonstration in the department at any stage of purchase without claiming any financial benefits.
3. GST, Sales tax, Insurance charges, Packing and Transportation charges, General tax, Central Sales tax, Custom duty, Installation & commissioning Charges & any additional charges should be **clearly specified in Annexure II.**
4. The period of validity of the quotation should be at least **60 Days**. Offers subject to prior sale may please be avoided.
5. The delivery period is to be clearly mentioned in the quotation.
6. The mode of delivery of the stores may be mentioned. The delivery should be F.O.R. Surat and at **specified laboratory** of the Department of Electrical Engineering of SVNIT, Surat.
7. All concessions available to an educational institution should be specified and also taken into account while quoting.
8. This Institute is located within the limits of Surat Municipal Corporation (SMC) & exempted from the paying of Octroi duty on incoming goods from outside limits of SMC.
9. This Institute is registered with the Dept. of Scientific & Industrial Research (DSIR) for the purpose of availing custom duty exemption & central excise duty exemption, and hence the certificate to this effect will be issued wherever it is necessary on demand.



10. Payment is normally made by cheque drawn on the S.V.N.I.T Branch Office of State Bank of India, Surat-395007 after satisfactory installation, successful testing of stores and official procedure from account section of the institute.
11. Your Specification & terms-conditions should be as per the format attached **Annexure-I & II** must be on your company letterhead & signed by an authorized person.
12. Offered quotation may be rejected if any ambiguity is found in offered specification, terms & conditions supplied by the party specified in the tabular format.
13. Preference may be given to the supplier having status of authorized dealer of manufacturer, with a view to ensure reliable **after sales service** for the item.
14. **Provide photograph of quoted item with specifications.**
15. **Items accepted after satisfactory performance in our laboratory according to our requirement.**
16. The Director reserves the right to accept stores, which are not strictly in conforming to the specifications but otherwise, found suitable. If stores do not comply with specifications or found in non-working condition, the same is to be taken from the institute, at the cost and responsibility of the supplier.
17. Any enquiry may send in the following address:

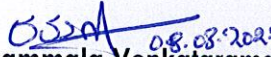
To

The Director,

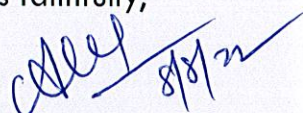
(Kind attention, Head, Department of Electrical Engineering)

SVNIT Surat, Ichchhanath, Surat-395007, Gujarat

Ph 0261-2201561, 2201562 (office, DoEE)

  
Dr. Jammala Venkataramanaiah  
Assistant Professor  
Dept. of Electrical Engineering  
SVNIT, Surat

Yours faithfully,

  
Prof. A. K. Panchal  
Head, DoEE



**DETAILED SPECIFICATIONS**

(This must be typed on supplier's letterhead &amp; submitted along with the offer &amp; separate sheet for items)

Name of items	Required specifications	No. of quantity
1) DC-DC Converters	<p><b>SiC MOSFET based DC-DC Converter (Buck):</b></p> <ul style="list-style-type: none"> <li>➤ Output Voltage : <del>400V</del> 230V</li> <li>➤ Output Power : 3kW</li> <li>➤ Switching Frequency : <math>\geq 35\text{kHz}</math></li> <li>➤ Driver circuits that can directly accept signals of 3.3V – 15V.</li> <li>➤ SiC MOSFET rating : 40A/1200V provided with snubbers &amp; mounted on suitable heat sink.</li> <li>➤ SiC MOSFET driver: Dual channel driver with inherent UVLO, Miller Clamp, Interlock protection between two channels and Shutdown pin option. Provision for configuration of gate on and gate off resistors as per required operating frequency and user request. Level shifters are built in as well. The drivers can accept signals of 3.3V – 15V directly from controller.</li> <li>➤ Inductor and Capacitor: as per specification of given input output voltages and operating frequency.</li> <li>➤ Bridge Rectifier : built in bridge rectifier, and provision for accessing bridge rectifier output terminals separately for other circuits</li> <li>➤ Each SiC MOSFET based DC-DC converter should have output voltage sensor</li> <li>➤ One current sensor for measuring inductor current</li> <li>➤ Each circuit is enclosed in a powder coated MS box with a polycarbonate front panel with access to terminals of all components. Suitable protection elements to be provided like fuses and MCB.</li> </ul>	03
	<p><b>IGBT based DC-DC Converter (Buck):</b></p> <ul style="list-style-type: none"> <li>➤ Output Voltage : 230V</li> <li>➤ Output Power : 3kW</li> <li>➤ Switching Frequency : 35kHz</li> <li>➤ Driver circuits that can directly accept signals of 3.3V – 15V.</li> <li>➤ IGBT rating – SEMIKRON IGBT module 75A/1200V provided with snubbers and mounted on suitable heatsink.</li> <li>➤ IGBT driver – SKYPER 32 based driver board. Built in level shifter to accept signals of 3.3V – 15V from any controller.</li> </ul>	03

	<ul style="list-style-type: none"> <li>➤ Inductor and Capacitor: as per specification of given input output voltages and operating frequency.</li> <li>➤ Bridge Rectifier : built in bridge rectifier, and provision for accessing bridge rectifier output terminals separately for other circuits</li> <li>➤ Each IGBT based DC-DC converter should have output voltage sensor</li> <li>➤ One current sensor for measuring inductor current</li> <li>➤ Each circuit is enclosed in a powder coated MS box with a polycarbonate front panel with access to terminals of all components. Suitable protection elements to be provided like fuses and MCB.</li> </ul>	
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. Instruction manual with complete specifications and mathematical calculations (parameters like inductance and leakage reactance of inductor, Rectifier diode and buck converter diode specifications, Buck converter input and output capacitor details (capacitance and leakage reactance), should be provided.</li> <li>2. Testing of converter should done at different loading conditions and CC &amp; DC modes.</li> </ol>	

Sign of Party/Firm

(With full Address & stamped)

**QUOTATION SUMMARY SHEET**

(This must be typed on supplier's letterhead & submitted along with the offer & separate sheet for items)

S. No.	ITEM NAME	UNIT PRICE	TOTAL PRICE
1	Make		
2	Modal		
3	Basic Price of the unit (Including accessories, spares etc.)		
4	GST/CST/VAT/Sales Tax etc.		
5	Packing & Forwarding charge		
6	Freight/Transportation charge (if any) (based on F.O.R destination at SVNIT, Surat)		
7	Insurance Charge, if Any( on Basic Price)		
8	Custom Duty/Excise Duty vide DSIR Certificate Only (Institute is exempted)		
9	Any additional charge, if any		
10	<b>TOTAL PRICE</b>		
11	Rebate/Concession for Academic Institute		
12	<b>TOTAL NET PRICE (Final)</b>		
	<b>Terms &amp; Conditions</b>		
13	Warranty( if Any)		
14	Validity of Quotation( Minimum 60 days)		
15	Delivery Period		
16	Mode of Delivery		
17	Any other condition (if Any)		

NOTE: Any ambiguity or incomplete filling of SUMMARY SHEET will lead to rejection of offer without any reasons. Write N.A where information demanded is not applicable.

**Sign of Party/Firm**

(With full Address & stamped)