Electrical Engineering Department
National Institute of technology Kurukshetra
Kurukshetra, Haryana-136119

EED/2024/ 1527 **Dated: 01/08/2024**

Sub: Invitation of Notice Inviting Quotations for Dc-Dc Bidirectional Converter.

1. You are invited to submit your most competitive quotation for the following item:

Sr. No.	Name & Specifications of Item	Quantity
1.	Dc-Dc Bidirectional Converter (Specification Attached)	01

2. Quotations are invited through notice inviting quotation under which you are invited to send your financial and technical quotations separately through email for the item mentioned above as per the specification attached.
   (Email ID: rahul0303@nitkkr.ac.in)
3. All duties taxes and other levies payable by the institute shall be included in the total price.
4. Payment will be made within 45 days after receipt of the material in good condition and according to the specifications.
5. The quotation should remain valid for a period not less than 45 days from the date of submission.
6. The right of accepting or rejecting any quotation without assigning any reason is reserved with the Institute.
7. The due date for receipt of quotation is **14/08/2024** and will be opened on same working day.

01/08/2024

Purchase Committee

01/8/24 1/8/24

Technical Specifications

Name of the Item: The set up "**Bidirectional DC-DC Converter Module**" consist of the following major components:

Sl. No.	Technical Specifications
1	1 No. OF SEMIKRON IGBT Rating @600v,75A ,20khz and One no 600v/75A Ultrafast high frequency diode with proper heat-sink and snubber circuit Used to form power circuit.
	BOOST MODE: ○ I/P voltage range - min : 60v Dc ○ O/P voltage range - max : 150V Dc
	BUCK MODE: ○ I/P voltage range - min : 150v Dc ○ O/P voltage range - max : 60V Dc
	• Output power : 1000W(max) • Switching Frequency : 5-20khz
2	• One no of inductor with 5mh/25A used as Boost inductor.
	• 1No. of SKYPER32R IC based Negative Turn Off with short circuit protection PWM driver circuit used
	• One no 680mfd/450v electrolytic capacitor used to filter the O/P voltage • One no 680mfd/450v electrolytic capacitor used to filter the I/P voltage
	• One no 0-100v dc voltmeter used to display the I/P voltage • One no 0-300v dc voltmeter used to display the O/P voltage
3	• One Hall Effect current sensor used to sense Inductor current and over load trip purpose.
	• One Hall Effect current sensor used to sense I/P current and over load trip purpose.
	• One Hall Effect current sensor used to sense LOAD current and over load trip purpose.
	• OneIC7840 Based voltage sensor used to sense the O/P voltage.
	• One IC7840 Based sensor used to sense the I/P voltage.
	• Voltage and current sensor o/pts terminated in front panel bs2 connector.
4	• Over temperature protection will be provided
5	• One no of 4 inch cooling fan used to dissipate switching device heat

- One year Complete Warranty of the Experimental Setup from date of Installation.
- Free of cost installation on the site.

11/6/24