

SPECIFICATIONS OF DC POWER MODULE

S.No.	Description	Requirement
1	Input voltage	3- ϕ , 415 V +/- 10%
2	Input Frequency	50 Hz
3	Input power factor	≥ 0.95
4	Input current harmonic distortion	$\leq 5\%$
5	Efficiency	≥ 0.95
6	Maximum output Power	≥ 15 kW
7	Output voltage range and maximum output current rating of the module shall meet either (a) or (b)	a) 200 V - 500V DC and ≥ 40 A b) 200 V - 1000V DC and ≥ 25 A
8	Voltage regulation accuracy	$< 0.5\%$
9	Current regulation accuracy	$< 1\%$
10	Peak-to-Peak ripple voltage of DC output	$\leq 1\%$
11	Peak-to-Peak ripple current of DC output	≤ 5 A
12	Start-up & Shutdown overshoot	$< 10\%$
13	Soft start time	≤ 5 Sec
14	Ambient temperature	50°C
15	Dimension(W*D*H) mm	$\leq 250*500*100$
16	Weight	≤ 12 kg
17	Cooling	Forced air cooling
18	Communication Interface	CAN
19	Isolation Resistance	> 50 M Ω @ 500VDC
20	Protection	Input AC Fuse, Output DC Fuse, Over Voltage, Under Voltage, Over Current, Short Circuit, Surge Protection, Over Temperature
21	EMI Conducted	EN 55022 Class A
22	Safety Standards	Shall meet IEC 60950, IEC 61851-1, CSA-C22.2

The power module can be connected in series/parallel combination to meet the higher voltage and higher current requirements. These modules should share the current equally. The percentage of imbalance in current shall be mentioned. The power module shall be configured in master/slave mode to share the current equally in case of parallel connection. The total current/voltage reference command shall be received through CAN interface from the BHEL controller. The data to be communicated, address information and other relevant information for the CAN communication shall be shared.

S. Gauram Kumar
25/02/2020

S. Eswara Rao
25/2/2020

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PRICE BID FORMAT

Enquiry Short Description:

Enquiry No:

Enquiry Date:

S.No.	Item description	Unit	Quantity (A)	Unit Rate (B)	Amount (C=A*B)
1.1	DC Power Module	No	10		
1.2	Sub-Total				
Applicable Taxes					
2.1	HSN Code:		and GST	% on S.No. 1.1	
2.2	HSN Code:		and GST	% on S.No. 1.2	
	Total Amount(D= S.No.1.2+2.1+2.2)				

Note:

1. Rates to be quoted in figures with corresponding words.
2. All taxes and duties to be submitted in price bid also.
3. Vendor's Undertaking: I/We have read and understood the NIT/Enquiry terms and conditions.
4. Submission of GST registration details along with the price bid is required for consideration of the offer.
5. Kindly provide the HSN code/ SAC code.
6. The vendor has to fill the applicable HSN code/ SAC code and break-up of the tariff/taxes (CGST/ SGST/ IGST/ UGST) based on from and to location with individual components.
7. Strict adherence to new provision by vendor like timely supply/services, submission of invoices, tax payments, filling of returns – GSTR-1 etc will form base of new regime for release of payment from BHEL. Hence, any financial loss occurred due to non-compliance of the GST provision would be endured at defaulter's end.
8. This price bid should be submitted along with Techno-Commercial bid.

SIGNATURE OF THE BIDDER WITH SEAL

S. Gautam Kumar
25/02/2020

S. Swamy
25/2/2020

UN-PRICE BID FORMAT

Enquiry Short Description:

Enquiry No:

Enquiry Date:

S.No.	Item description	Unit	Quantity (A)	Unit Rate (B)	Amount (C=A*B)
1.1	DC Power Module	No	10	QUOTED	QUOTED
1.2	Sub-Total				QUOTED
Applicable Taxes					
2.1	HSN Code:		and GST	% on S.No. 1.1	QUOTED
2.2	HSN Code:		and GST	% on S.No. 1.2	QUOTED
	Total Amount(D= S.No.1.2+2.1+2.2)				QUOTED

Note:

1. Rates to be quoted in figures with corresponding words.
2. All taxes and duties to be submitted in price bid also.
3. Vendor's Undertaking: I/We have read and understood the NIT/Enquiry terms and conditions.
4. Submission of GST registration details along with the price bid is required for consideration of the offer.
5. Kindly provide the HSN code/ SAC code.
6. The vendor has to fill the applicable HSN code/ SAC code and break-up of the tariff/taxes (CGST/ SGST/ IGST/ UGST) based on from and to location with individual components.
7. Strict adherence to new provision by vendor like timely supply/services, submission of invoices, tax payments, filling of returns – GSTR-1 etc will form base of new regime for release of payment from BHEL. Hence, any financial loss occurred due to non-compliance of the GST provision would be endured at defaulter's end.
8. This price bid should be submitted along with Techno-Commercial bid.

SIGNATURE OF THE BIDDER WITH SEAL

S. Gautam Kumar
25/02/2020

S. Anwer Ras
25/2/2020