



PRE QUALIFICATION REQUIREMENTS – GENERIC

PQC/415/0009  
Rev No: 00

PAGE 1 OF 3

**COPY RIGHT AND CONFIDENTIAL**  
The information on this document is the property of Bharat Heavy Electricals Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

# PRE QUALIFICATION REQUIREMENTS- GENERIC

<b>DRAWN BY</b>	<b>DATE</b>	<b>NAME</b>		<b>BHARAT HEAVY ELECTRICAL LTD</b>	<b>SHEET 1 OF 3</b>
				<b>ELECTRONICS DIVISION BENGALURU</b>	
DESIGN BY	13.06.2024	VP	<b>TITLE: PRE QUALIFICATION REQUIREMENTS- GENERIC</b>		
CHECKED BY	13.06.2024	KKJ			
APPROVED BY	13.06.2024	TS			



PRE QUALIFICATION REQUIREMENTS – GENERIC

PQC/415/0009  
Rev No: 00

PAGE 2 OF 3

REVISION HISTORY SHEET

Revision Number	DATE	NATURE OF CHANGE	REASON	PREPARED	CHECKED	APPROVED
00	13/06/2024	FIRST ISSUE	----	VP	KKJ	TS

**COPY RIGHT AND CONFIDENTIAL**  
The information on this document is the property of Bharat Heavy Electricals Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.



**Pre-Qualification Requirements (PQR) – General**

1. Bidder are required to be Original Equipment Manufacturer(OEM)/ Authorized Distributor of OEM for the offered item.
2. If bidder is not Original Equipment Manufacturer (OEM), then bidder to include authorization letter from OEM for supply and servicing of the offered product. This authorization letter provided by OEM to Bidder shall indicate the Type and Duration of the agreement.
3. The bidder shall offer **only the specified part number** if mentioned in the technical/purchase specification.
4. If the bidder is supplying the offered item to BHEL-Electronics Division(BHEL-EDN) for the first time, then a copy of PO of the item (not earlier than 3 years from the date of RFQ) supplied to Power Plant/Process Industry/Automation Industry/Control Equipment Industry to be submitted by the bidder.
5. Details of Manufacturing, testing & inspection facility.
6. Bidder shall have facility for servicing of offered product, Stocking of Spares etc. In addition, details of the same has to be submitted.
7. Test Certificate(TC) /Certificate of Conformance(COC) to be submitted during material supply indicating serial number of the item and date of test as per Standards.
8. If there are any queries regarding specification, it is bidder's responsibility to get the same clarified from the purchaser before submitting the offer.

**COPY RIGHT AND CONFIDENTIAL**  
The information on this document is the property of Bharat Heavy Electricals Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

**Important note:**

Technical offers/proposals will not be evaluated and the offer will be rejected on the following conditions:

- i) If Bidder does not submit, the details mentioned in above clauses.
- ii) If Bidder does not meet the requirements of technical specification (or) GeM-category parameters.



EDN BANGALORE

## PURCHASE SPECIFICATION

PS/415/2239

Rev. No.: 03

PAGE No. : 01 OF 04

**COPY RIGHT AND CONFIDENTIAL**  
The information on this document is the property of Bharat Heavy Electrical Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

# PURCHASE SPECIFICATION OF AC-DC (24V/10A) SWITCHED MODE POWER SUPPLY

APPROVED

S.Seetharaman

PREPARED BY

CHECKED

ISSUED

DATE

BY

BY

Manik Naiya/ S Banik/ N Pandey

N Vaidehi

ENGG

08/10/2014



## PURCHASE SPECIFICATION

PS/415/2239

Rev. No.: 03

PAGE No. : 02 OF 04

### REVISION HISTORY SHEET

Rev No	Date	Nature of change	Reasons	Prepared By	Checked By	Approved By
00	08/10/2014	First Issue	----	MN	NV	SS
01	04/11/2014	DC input has been removed	----	MN	NV	SS
02	24/07/2019	Paralleling operation clarified	----	BSS/DD	DPM	DPM
03	08/12/2021	SMPS Dimensions included	----	VP	BR	DD

**COPY RIGHT AND CONFIDENTIAL**  
The information on this document is the property of Bharat Heavy Electrical Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

APPROVED

S.Seetharaman

PREPARED BY

CHECKED

ISSUED

DATE

BY

BY

Manik Naiya/ S Banik/ N Pandey

N Vaidehi

ENGG

08/10/2014



EDN BANGALORE

## PURCHASE SPECIFICATION

PS/415/2239

Rev. No.: 03

PAGE No. : 03 OF 04

**COPY RIGHT AND CONFIDENTIAL**  
The information on this document is the property of Bharat Heavy Electrical Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

### A. Scope:

This specification covers the technical requirements for AC-DC Switched Mode Power Supply.

### B. Purpose:

AC-DC Switched Mode Power Supply Units are used in DCS Control Cabinets (24x7 operations) for System / Field Supply. Item shall be mounted in Control panel on Din Rail.

### C. Technical Specification:

The power supply unit shall meet the following minimum requirements.

- 1) Input Range:  
AC I/P range: 93-264 VAC (or) as a suitably split range (s) of 110VAC  $\pm$  15% and 230VAC  $\pm$  15%. Input operating voltage selection: Auto Select
- 2) Output: 24 VDC, 10A
- 3) Load sharing >85% when paralleling upto 4 units
- 4) Maximum dimensions of the item suitable for mounting on a 35mm DIN rail shall be W\*H\*D = 110mm\*150mm\*160mm and maximum weight = 1.4kg approx.
- 5) For all connections including Input/Output/monitoring, suitable provisions shall be provided on the front side for top/bottom cable entry.
- 6) Enclosure: Ventilated, Natural air-cooling when housed in Control cabinet of IP42 protection.
- 7) Operating temperature = 0~60 degC
- 8) Indications: LED indications for AC input, DC OK and DC Low preferred. Supplier to indicate the details of LED indications in the PS offered.
- 9) I/P Protection: Fuse.
- 10) I/P Surge protection for compliance: as per EN61000-4-5, level 3
- 11) Inrush current: <60A for 230VAC
- 12) Line Regulation:  $\leq \pm 1\%$
- 13) Load Regulation:  $\leq \pm 1\%$
- 14) Efficiency  $\geq 85\%$  over the range 20% to full 100% Load.
- 15) O/P settable from 23 to 28VDC through potentiometer on front.
- 16) Ripple  $\leq 100\text{mV p-p max.}$
- 17) O/P Protection: overload, short-circuit protection with output power limitation.
- 18) The Power Supply module should have batch number/month & year of manufacturing printed on it.
- 19) Remote Power Supply alarm: Potential-free contact (Common-NO) shall be provided to facilitate remote monitoring of power supply output error condition.



EDN BANGALORE

## PURCHASE SPECIFICATION

PS/415/2239

Rev. No.: 03

PAGE No. : 04 OF 04

**COPY RIGHT AND CONFIDENTIAL**

The information on this document is the property of Bharat Heavy Electrical Limited.  
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

20) **HV Test Capability:** The unit shall withstand HV/IR test as per the details indicated below and this shall be carried out by supplier on 100% of the modules.

- a) Input/Output: 2kV minimum voltage for 1 min.
- b) Input/Earth: 2kV minimum voltage for 1 min.
- c) Output/Earth : 0.5kV minimum voltage for 1 min
- d) Output Relay contact/Earth: 0.5kV minimum voltage for 1 min.

*Note:* (IR value before and after HV test shall be within  $\pm 10\%$  of each other)

21) **Test report:** Supplier shall submit Test Report / Compliance report for all the above-mentioned features indicating serial number of the PS module and date of test.

### **D. Documents / Certificates to be submitted along with Technical Offer:**

22) **Type Test Certificate:** Type Test Certificates for the PS model being supplied & conducted in a Govt Approved Lab/ Internationally reputed Test Lab & within the last five years shall be submitted along with offer to enable technical evaluation.

- ESD Immunity: EN61000-4-2, level 3 Perf Criteria B
- Radiated Immunity: EN61000-4-3, level 3 Perf Criteria A
- EFT/Burst: EN61000-4-4, level 3 Perf Criteria A
- Surge: EN61000-4-5, level 3 Perf Criteria B

23) **Approvals:** The Power Supply Unit shall have the required CE/UL certification.

24) **Catalogue:** Supplier to submit catalogue / performance curves for the model being offered

- Efficiency Vs Load
- Op. Temperature Vs Load Current etc.

25) **Confirmation:** Supplier shall indicate clause-wise confirmation.

## REQUEST FOR QUOTATION - ONLINE BIDDING



BHARAT HEAVY ELECTRICALS LIMITED  
Electronics Division  
PB No. 2606, Mysore Road Bangalore - 560026  
INDIA

RFQ NUMBER:  
SSNE000164

Due Date/Day: [REDACTED]  
Time : [REDACTED]

RFQ DATE :  
[REDACTED]

MMI:PU:RF:003

Please submit your lowest quotation subject to our terms and conditions attached for the material mentioned below. "Quotation to be submitted in E Procurement portal only"

(for all correspondence)  
Purchase Executive : Saurabh Niranjn  
Phone : 080-26998935  
Fax :  
E-mail: saurabhniranjn@bhel.in

SI No.	Description	Qty	Unit	Delivery qty	Delivery Date
1	SN0659386623 Switched Mode Power Supply Unit: AC-DC * HSN/SAC : 9032 Doc No.- PQC4150009 Rev - 00 Doc No.- PS4152239 Rev - 00 Test Certificate Switched Mode Power Supply Unit: AC-DC 10A, 24VDC  Input Range:  i) AC I/P range: 93-264 VAC (or) as a suitably  split range(s) of 110VAC ± 15% and 230VAC ± 15%.  Input operating voltage selection: Auto Select  As per PS/415/2239 and PQC/415/0009	[REDACTED]	NO	[REDACTED]	[REDACTED]

Total Number of Items - 1

- 1.
- 2.

**NOTES:**

1. This RFQ is governed by:
    - a) INSTRUCTIONS TO BIDDERS/SELLERS and GENERAL CONDITIONS OF CONTRACT FOR PURCHASE available at <http://edn.bhel.com> (**RFQ-PO Terms & Conditions**)
    - b) Any other specific Terms and Conditions mentioned. of offers are required to furnish authorization letter for the same.
  2. Tender Result can be viewed in the website.
- \* The HSN/SAC no mentioned against the line items in the RFQ are indicative only.

For and On behalf of BHEL.

Saurabh Niranjn  
Control Equipment