



PRE-QUALIFICATION CRITERIA (PQC)

for Current Sensor (1000A) for Hotel Load Converter

GROUP: TRACTION ENGINEERING

Ref.: HLC/PQC/CS1000

Rev. No.: 00

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1. Pre-qualification Criteria

- 1.1 The bidder should be manufacturer/supplier of current sensors for use in rolling stock application (locomotive/EMU/Metro) in India or abroad.
- 1.2 The bidder should be an "Approved" vendor of RDSO/CLW/Indian Railways. If not, the bidder shall approach and submit its credentials to RDSO/CLW/Indian railways and obtain approval within a period of one month from the date of tender opening. The approval shall be for usage of offered item in Hotel Load Converter project. If approval is not received within this period, BHEL shall treat the offer as "Not meeting Pre-qualification criteria" and offer shall be rejected.
Extension beyond one month will not be given for whatsoever reason.
- 1.3 It is preferred that the bidder is the manufacturer of this item. If the bidder is importing the item, then minimum value addition in India shall be 20%. Bidder to confirm this in the offer. Value addition less than 20% is not acceptable.
- 1.4 Bidder should possess valid type test report for the item not older than five years, conducted at an accredited laboratory as per standards mentioned in the specification at the time of bid submission.

2. Documents to be submitted:

- 2.1 Proof of manufacture/supply of the item for rolling stock application (locomotive/EMU/Metro) in India or abroad directly or through any agency.
- 2.2 Copy of type test report.
- 2.3 Clause by clause compliance to technical specification as mentioned in clause no. 3.1.

3. Reference documents:

Purchase-cum-Technical Specification No.: PS/445/2758, Rev. 00 for Current Sensor (1000A) for Hotel Load Converter

Rev. 00

Approved by:

Venkateshalu K

Prepared by:

Girish Chand

Department:

Traction Engg.

Date:

22.02.2022



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Purchase Specification for Current Sensors (1000A) for Hotel Load Converter

REVISION HISTORY SHEET

Rev. No.	DATE	Nature of Change	Reason	Prepared	Checked	Approved
00	19.02.2022	FIRST ISSUE	-	SRM	KLN	VK

REVISION: 00 19.02.2022

Prepared

SACHIN R M

Checked

LAKSHMI
NARAYANA
KATHARI

Approved

VENKATESHALU
K



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CURRENT SENSORS FOR HLC**

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1. INTRODUCTION

The Current sensors proposed to be procured against this specification are intended to be used in the Hotel Load Converters (HLC). The HLCs are used in IR (Indian Railways) locomotives.

The sensors shall be of traction grade and shall have proper insulation between primary, secondary and control supplies.

1. INTRODUCTION

The sensor shall be of traction grade and shall have proper insulation between primary, secondary and control supplies.

2. FUNCTION

Input current sensor (1000A rms):

One number of current sensor is used to measure the single phase input current of the Hotel Load Converter.

3. POWER SUPPLY

Power supply of +/-15V DC, to activate the sensors shall be provided from the interface card present in the HLC.

4. TECHNICAL DETAILS

PART 1: INPUT CURRENT SENSOR (1000A rms)

Primary Current (Nominal) I_{PN}	: 1000 A rms
Measuring range @ $\pm 15V$ ($\pm 5\%$)	: ± 1200 A peak
Secondary current (at I_{PN})	: 200 mA rms
Supply voltage	: $\pm 15V$ (tolerance $\pm 5\%$)
Conversion ratio	: 1:5000
Error (as % of I_{PN})	: $\leq \pm 0.5$ at $25^\circ C$ $\leq \pm 1$ at range of $-40^\circ C$ to $85^\circ C$
Dielectric strength (at 50Hz for 1 minute)	: $\geq 12kV$ (Primary/secondary)
Measuring resistance (Minimum)	: 0Ω
Measuring resistance used in circuit	: 11Ω
Maximum operating temperature	: $85^\circ C$



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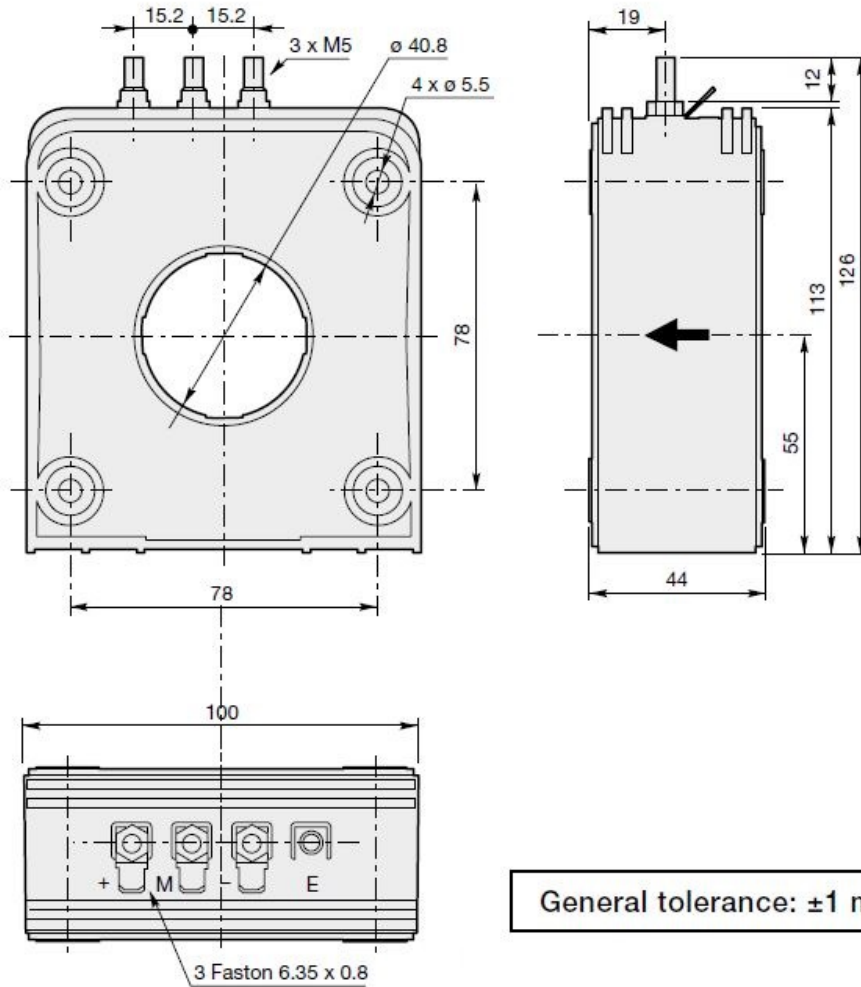
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5. DIMENSIONAL REQUIREMENT:



General tolerance: ± 1 mm

NOTE: Mounting dimensions have to be strictly within the general tolerance limit (± 1 mm)

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6. DOCUMENTATION

The supplier has to provide the following documents:

1. Datasheet of the sensor
2. 3D model in .stp /.igs format

7. APPLICABLE STANDARDS

EN 50155: Electronic equipment used in railway applications

EN 50121-3-2: Electromagnetic compatibility of equipment installed on board of railway vehicles

EN 50124-1: Insulation coordination


IEC 61373: Railway applications – Rolling stock equipment- Shock and vibration tests

-(Category 1- Class B equipment)



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REQUEST FOR QUOTATION - ONLINE BIDDING

	BHARAT HEAVY ELECTRICALS LIMITED Electronics Division PB No. 2606, Mysore Road Bangalore - 560026 INDIA	RFQ NUMBER: AKSE000617 RFQ DATE : 26.02.2022	Due Date/Day: 10.03.2022 THU Time : 13:00 HRS
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 : ABHISHEK Phone : 26998102 Fax : 00918026989215 E-mail: singh.abhishek@bhel.in
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Sl No.	Description	Qty	Unit	Delivery qty	Delivery Date
1	TI0668110779 Current Sensor 1000A  Current Sensor for Traction Application Primary nominal current 1000A rms Secondary nominal current 200mA rms Supply Voltage : +/- 15VDC,+/- 5%,	67	NO	67	

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. ABHISHEK Control Equipment
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