



भारतीय प्रौद्योगिकी संस्थान मद्रास, चेन्नै / 600 036
INDIAN INSTITUTE OF TECHNOLOGY MADRAS, CHENNAI 600 036
केन्द्रीय इलेक्ट्रॉनिक्स केंद्र
CENTRAL ELECTRONICS CENTRE

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दिनांक/Dated: 07/08/2018

प्रो. वी. जगदीश कुमार
Prof. V. Jagadeesh Kumar
अध्यक्ष/Head

INVITING QUOTATIONS for CURRENT SHUNTS

Ref.No.

CEC	18-19	004	VJK	CURRENT SHUNTS	SPL
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DUE DATE : 20.08.2018

1. Quotations are invited in duplicate for the **CURRENT SHUNTS** in Two Bid System (specification attached).
2. The Quotations are to be in **Two bid system** as: Technical bid and Commercial bid. Two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in a separate envelop must enclosed in the one bigger envelop duly sealed and superscribed with reference number and due date and, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. A blank price quote (identical to the Commercial bid with numbers removed) should be enclosed with the Technical Part.
3. The Quotations should be valid for Ninety days (90 days) from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. Local Firms: Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
7. Firms Outside Madras : Quotations should be for CIF/F.O.R. Madras. If CIF/F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
8. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
9. In case of import, the insurance & Freight charges should not exceed 6% of FOB value. You are requested to quote FOB price as well as CIF, CHENNAI mentioning Freight & Insurance charges separately. No Ex-works pricing is considered.
10. **No Advance Payment will be made for Indigenous purchase.** 100% Payment against Delivery on satisfactory installation for local purchase can be agreed to. For Imports normally payment will be made by Letter of Credit only (**Terms 90 % Payment will be released against dispatch of shipping documents and 10 % will be released after satisfactory installation**). Sometimes The Rule 159 GFR may be allowed (i.e.) 30 % Advance Payment against B.G. (Bank Guarantee) and 70 % Payment after supply (All the B.G. Charges will be borne by the supplier only). **Demurrage charges (if any) will be borne by the supplier & it will be deducted from the balance 10%**. Initial opening of Letter of Credit charges will be borne by us. If any amendment is requested for, the charges for the amendment will be borne by the supplier only. Hence, care should be taken in all respects before opening of Letter of Credit.
11. Goods should be supplied carriage paid and insured.
12. Goods shall not be supplied without an official supply order.
13. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

Yours faithfully,

Prof. V. Jagadeesh Kumar
Head, Central Electronics Centre

प्रो. वी. जगदीश कुमार
Prof. V. JAGADEESH KUMAR

अध्यक्ष / Head

केन्द्रीय इलेक्ट्रॉनिक्स केंद्र

Central Electronics Centre

आई आई टी मद्रास, चेन्नई-600 036
IIT Madras, Chennai - 600 036

Specification:

S.No	Current Shunts		
1	Should have 1-year absolute accuracy specification stated at k=2, approximately 95 % confidence for the calibrated value. The specifications should include 1-year stability, temperature effects over TCal ± 1 °C, and the measurement uncertainty of the calibrated value.		
	Specification $\pm \mu\text{A/A}$, TCal ± 1 °C,		
	Shunt Nominal Current:	DC	1 kHz
	1 mA	20	55
	20 mA	20	26
	200 mA	20	26
	2: A	21	27
	10: A	26	37
	20: A	26	43
2	Maximum AC-DC Difference		
	Shunt Nominal Current:	Maximum AC-DC Difference (\pm ppm)	
		1 kHz	100 kHz
	1 mA	53	150
	20 mA	18	30
	200 mA	17	28
	2: A	17	44
	10: A	28	98
	20: A	37	150
3	Resistance value stability:	>18ppm, typically < 5 ppm/year	
4	Temperature coefficient :	< 2.5 to 4.5 ppm / °C	
5	Calibration Documentation	17025 accredited report of calibration should be provided	

cc [Signature]